# Virtual spaces in Literacy Studies

Julia Gillen

Draft version. To appear in Rowsell, J. & Pahl, K. (eds) The Routledge Handbook of Literacy Studies

## Introduction

In chapter 2 (p. x), Gee argued that the New Literacies Studies “simply carries over the NLS argument about written language to new digital technologies.” This is a useful starting point, emphasising a conceptual and methodological continuity of Literacy Studies when moving to online and related territories. However, also aligned with pioneering work by Gee, such as his polemical book, *What video games have to teach us about learning literacy* (Gee 2003) is an argument that the world has changed so much over the last twenty years that literacies are necessarily radically transforming too (Coiro et al. 2008).

Moving into virtual spaces, Literacy Studies found itself traversing highly contested realms, where rival paradigms of research were more diverse than the discipline of traditional psychology that Gee identified as the first opponent of NLS (p. x). Research into the texts and practices of virtual spaces has permeated the social sciences and far beyond, such as human-computer interaction, science and technology studies and indeed computer science itself. The years following the millennium can perhaps best be characterised as involving the spread of digital technologies, - while still leaving far too many globally on the wrong side of “the divide”, a contested but material set of obstacles. So there is a vast amount to study, whatever the disciplinary home a researcher emerges from.

As I will explore below, Literacy Studies draws from relatively cognate areas of Applied Linguistics, Computer-Mediated Communication (CMC), Digital Anthropology, Media and Communication Studies and Education. Amid this wealth of disciplinary framings, key questions emerge. What key contributions is Literacy Studies making to the study of virtual spaces? What further opportunities lie open? And what does moving into virtual spaces offer the Literacy Studies researcher?

Before moving on, it is necessary to pay attention to terminology. As already mentioned, Gee has suggested that this area be termed New Literacies Studies. This keys into a recognition that what is significant about Literacy Studies in virtual spaces is not *simply* or *only* or *always* a move online. Literacy Studies researchers discussed here do not conceive of cyberspace as a world apart. What is “new” about New Literacies is not a hard and fast binary distinction between the offline and online but a recognition of new practices with enhanced interactivity and new ways of combining writing and reading. Alternatively, if, for example, one accesses an informative text online, that allows no opportunities for interaction, direct response or modification, then the text will be read in much the same way as one might read a leaflet. That is, Literacy Studies approaches show the complexities around understanding such situated acts of reading, always in a social, historically informed and spatialized context (see Mills and Comber, this volume); but the fact that the text is rendered digital is not necessarily the most important characteristic for a Literacy Studies analysis.

For new literacy practices have emerged in what Kress (1998; 2003) terms the “new communications landscape” are new literacy practices. There are new opportunities for collaboration involving new materialities, new configurations of time and space that simply did not exist before. These are often associated with exciting affordances of the Internet as perceived and acted upon by people. However, as Lankshear and Knobel (2013) assert, new literacy practices can also be perceived in other contexts, exhibiting connections between highly disparate settings and new patterns of collaboration.

This chapter is not called “virtual spaces” through disagreement with Gee’s preferred term “New Literacies Studies” but rather because of the potential for confusion with “New Literacy Studies”. The term virtual spaces refers to a cluster of research areas and overlaps with terms such as *online*, *digital, Web 2.0 new media*. These are useful ways of drawing attention to relevant phenomena, but, arguably, tend to dichotomize relationships, with, for example, the *offline* or *analogue,* wheresemantic opposition is not the main point of issue. *Web 2.0* refers to highly interactive, participatory spaces on the internet, especially as created from the first decade of the twenty-first century onwards. Yet it may well exclude some virtual worlds, online gaming spaces, apps and other environments many literacy scholars may be concerned with. The term new media, as indeed New Literacy Studies(see Introduction, this volume) suffers from an intrinsic lack of historicity but if the "new" is removed then all kinds of traditional media will be indistinctively incorporated.

The notion of virtual spaces connotes a continuity with other spaces that the literate imagination has always been able to travel to; as, while still and always embodied, we can move through texts to alternative, even fictional realms. So the term virtual spaces is not necessarily better than alternative or at least overlapping terms:

All have currency and appear to address similar issues, namely the ability to decode, encode and make meaning using a range of modes of communication including print, still and moving image, sound and gesture, all mediated by new technologies (Larson and Marsh 2005: 69).

In this chapter I argue that there are three key ways in which Literacy Studies offers a specific and indeed unique way of considering texts and practices in virtual spaces. The first of these is a commitment to an ecological or holistic orientation to literacy practices; here is the greatest element of continuity with foundational and subsequent works in Literacy Studies.

The second characteristic is a commitment to studying vernacular or everyday practices in a rapidly changing and contested world, with a broad social justice agenda. As Hawisher and Selfe (2000: 15) point out, the Web:

is far from world-wide.....it is not a culturally neutral or innocent communications landscape open to the literacy practices and values of all global citizens.

Third, a tremendous asset that Literacy Studies brings to work on texts and practices in virtual spaces is a recognition that while activities in various modes, such as writing, reading and talking may occur in conjunction, and have various relationships with one another, there is value in *analytically* distinguishing between them, as we unpick the subtle details of what people do.

Linked with these characteristics of Literacy Studies’ approaches to virtual spaces is a frequently shared purpose. Recognising the associations between developments in literacy practices, learning and identity, many Literacy Studies scholars have deployed insights to challenge a generally hegemonic discourse in education that has undervalued the potential roles of popular culture and, in particular, online and digital leisure pursuits (Jenkins 2006; Willett, Robinson and Marsh 2008; Carrington and Robinson 2009). Experience of popular culture texts provides students with semiotic and rhetorical resources they feel empowered to use (Williams 2009).

An ecological orientation to activities in virtual spaces recognizes connections between textual interactions, identity and learning, all interwoven with their social and cultural context (see Bloome and Greene this volume; Nichols this volume). Ito et al (2009: 31) refer to media ecology “to emphasize the characteristics of an overall technical, social, cultural and place-based system in which components are not decomposable or separable.” Opportunities are squandered if educators do not realise that young people themselves will make connections between their experiences in different kinds of domains (Barron 2006).

## Historical perspectives

Online spaces are extremely diverse today in terms of ownership, accessibility, purpose and other dimensions of inequality that do not disappear when we act online. Davies (2006: 64) points out that the Internet was

originally designed for privileged individuals to communicate about war; it is contemporaneously and mundanely used for capitalist exchange, socialising, and much more....it serves multifarious purposes for all kinds of people.

The World Wide Web allowed new possibilities for activities online: the formations of new kinds of fluid networks, a breakdown of firm distinctions between production and consumption, and the possibilities of new ways of projecting individual and collective identity. Thus, far more than mere technological changes, the turn of the century saw social, cultural and political shifts (Castells 2001).

Leu (2000: 743) asserted:

Change increasingly defines the nature of literacy in an information age. Literacy is rapidly and continuously changing as new technologies for information and communication repeatedly appear and new envisionments for exploiting these technologies are continuously crafted by users. Moreover, these new technologies for information and communication permit the immediate exchange of even newer technologies and envisionments for their use. This speeds up the already rapid pace of change in the forms and functions of literacy, increasing the complexity of the challenges we face as we consider how best to prepare students for their literacy futures.

Some educationalists were already alive to such challenges. Deploying the memorable phrase *Page to Screen*, Synder (1998: xxi) alerted literacy teachers and scholars to the "metamorphosis" of literacies in connection with the possibilities of new technologies. In respect of literacies, notions of ‘reading’ and ‘writing’ appeared inadequately thin to deal with the new kinds of interactions of texts. ‘Design’ was a more appropriate concept to cover meaning-making processes, as people combine resources for their own purposes (Kress and Jewitt 2003; Domingo Jewitt and Kress this volume).

Particularly influential has been the work of the New London Group (1996), committed to rethinking the whole purpose of literacy education within a broader agenda. Recognising growing interconnections and flows between people, language and technologies, they proposed a framework of multiliteracies to underpin new pedagogies. This broadens attention from reading and writing print texts to a richer set of concepts around meaning- making through Design. A summary of the multiliteracies framework appears as Figure 1.

Figure 1 Four components of multiliteracies pedagogy proposed by the New London Group (Cope & Kalantzis, 2000, p. 7)

***Situated Practice,*** draws on the experience of meaning-making in everyday life, the public realm and workplaces

***Overt Instruction,*** through which pupils develop an explicit metalanguage of design

***Critical Framing,*** interprets the social context and purpose of designs of meaning

***Transformed Practice,*** in which pupils, as meaning-makers, become designers of social futures.

These ideas promote attention to empowering students, working out from their own experiences, facilitated by teachers sharing a commitment to the design of social futures. The critical dimension is essential, being:

the ability not only to use such resources and to participate effectively and creatively in their associated cultures, but also to critique them, to read and use them against the grain, to appropriate and even re-design them (Snyder 2003: 270)

Many Literacy Studies researchers and others working in cognate areas were alive to the expanding literacy-related activities children and young people were engaging in during their leisure time. Rather than the linear world of print texts, relations of elements of web spaces are constituted by “bricolage or juxtaposition” (Livingstone 2002: 224). Alvermann, Moon and Hagood (1999) pointed out that pupils were growing up in a world radically different from those their teachers had known, and yet showed how discourses of popular culture could be used fruitfully in the classroom (see also Marsh and Millard 2000).

Reviews of Literacy Studies research in online spaces have concurred in identifying these as major concerns with implications for education (Tusting 2008; Burnett 2010; Mills 2010). How can we use or at least draw on in some way the vernacular practices and expertise that children and young people (in relatively privileged contexts at least) develop in order to assist their education?

## Critical issues and topics

Inequality of access is the most vital area for action and research on literacy in virtual spaces. As Area and Pessoa (2012: 13) contend,

New literacies amount to a civic right and a necessary condition for social development and a more democratic society in the 21st century.

The notion of a ‘digital divide’, conceptualised as either having access to online technology, or not, has been shown to be far more complex (Dobson and Willinsky 2009; Selwyn and Facer 2013). Differences in access can be experienced as fundamental in a variety of dimensions, such as the technological, for example whether access is broadband, wireless or via slow, older channels. Divides can also be identified at the national level, or as gendered, as age-related, and so on; all these can be understood as political and economic realities.

Responding to Warschauer’s (2009) call for more research on digital literacies in diverse global contexts, Prinsloo and Rowsell (2012) have introduced a landmark collection of papers on “digital literacies as placed resources in the globalised periphery.” Rather than begin with a focus on deficit or disadvantage, the researchers co-construct situated understandings that nonetheless examine how semiotic resources travel and are refigured locally (Achen and Ladaah Openjuru 2012; Auld, Snyder and Henderson 2012; Bulfin and Koutsogiannis 2012; Green 2012; Kendrick, Chemjor and Early 2012; Norton and Williams 2012; Walton and Pallitt 2012). They demonstrate “how space and place are shaped from without as well as from within, and from above as well as from below” (Prinsloo and Rowsell 2012: 273). Engendered differences in uses of digital technologies become inequalities that can evoke acts of resistance or creativity, in activities integral to performances of identity.

A complementary notion to that of the ‘translocal’ shared in the collection just discussed, is provided by Wellman’s (2002: 13) definition of glocalization as:

…a dynamic negotiation between the global and the local, with the local appropriating elements of the global that it finds useful, at the same time employing strategies to retain its identity.

A crucial issue for Literacy Studies research grappling with changing phenomena of language online is to understand the effects of greater migration and opportunities for more connections between people of diverse backgrounds. Pennycook's (2007) concept of transcultural flows addresses the ways that cultural forms including language flow in ever-hybridized productions as people, themselves often mobile, draw on different linguistic repertoires available to them. Working across a range of contexts, scholars such as Lam (2009) investigate how youths make creative selections among the language varieties and orthographic systems available to them. Such work reshapes previous ideas of quite what ‘bilingualism’ or ‘multilingualism’ might mean as language use becomes increasingly fluid in many online platforms (Lee and Barton 2011; Androutsopoulos 2013). The essential understanding of language as code is being shaken, as ideas of superdiversity (Vertovec 2007; Blommaert and Rampton, 2011) are exhibited in flexible combinations of online textual practices.

Literacy practices in virtual spaces entail new opportunities then for the performance of identity in “affinity spaces” (Gee 2004; Davies 2004). An appreciation of the specific qualities and characteristics of such spaces can be combined with postmodern approaches to issues of subjectivity and desire, in conceiving of the self as projected or reflected on the Internet, including through avatars. Thomas (2007) explores the authoring of such identities in diverse virtual spaces, engaging with children as they refashion and reflect on their passionate engagements.

Many teachers, teacher educators and researchers have sought to build bridges between the expertise connected with children’s passionate engagements in virtual spaces, and the potential to draw on this fruitfully within schools. Further, for many, a contribution of Literacy Studies can be to dig deeper into these issues: In what ways precisely are the everyday, generally leisure practices of young people online of value? Do they actually have any salience in considering learning, beyond the obvious and perhaps seemingly trivial factor of enabling participation in a specific leisure activity itself? How can we persuade policymakers and those in charge of delivering education, where this is necessary, that these are questions that can be answered far more fruitfully than if we stick with the status quo, the styles, aims and values of education worked out in the late twentieth century (and even before)?

Bringing new literacies into the classroom, even when teachers may be alive to its possibilities and enthusiastic, is a risky and difficult affair, as documented sensitively by Leander (2007). In his study, laptops were brought into the classroom in an initiative targeted at improving the ICT knowledge and skills of girls. Leander’s detailed analysis unravels the process through which a well-meaning initiative fails, exposing the misfit between schooled organisation of space-time and those common to everyday online practices.

Such are the key challenges taken on by Literacy Studies in virtual spaces which are likely to resonate for years to come.

## Current contributions and research

As one would expect from the emphasis in Literacy Studies on learning from careful studies of authentic activities by people in their everyday lives, this remains the case in investigations concerned with virtual spaces. Online environments are ideological spaces (Squire 2006). Children, as other people, make sense of them drawing from discourses and relationships they engage with in their everyday environments, including offline spaces (Marsh 2011; Barton and Lee 2013). Some online spaces that can provide highly motivating spaces for children, can at the same time be critiqued for narrowness in such features as gender proscription or emphasis on consumerism in the interests of multinational corporations (Evans 2005; Carrington and Hodgetts 2010).

Lam and Warriner (2012) offer a well-synthesised review of transnationalism and literacy, identifying the ways in which new media are taken up by people in contexts of migration. Rather than the earlier prevailing term of globalisation, translocalism better captures how people shape their communications so that they move effectively between specific contexts that matter to them. Researching Nepalese undergraduate students, Sharma (2012: 485) demonstrates how “social media offer affordances for the construction of cosmopolitan personae by certain kinds of people in the world periphery”.

As already discussed, many scholars have recognised that for many children the literacy expertise they develop through popular culture interests is rarely drawn upon in school. Investigations of the literacy practices of schools and indeed subsequent stages of education can often show missed opportunities in terms of the potentials of virtual spaces. (Greenhow Robelia and Hughes 2009; Burnett 2010). It is challenging to incorporate new literacies in the classroom. Merchant (2013) deploys a financial metaphor in his analysis of what it takes to change practice effectively. Required are learner buy-in, teacher buy-in, entry costs and continuing investment; only after a great deal of effort is interest accrued.

One approach is to use online games or virtual worlds that have explicit goals towards multiliteracies (Cope and Kalantzis 2000; see Chik this volume; Schamroth-Abrams this volume). *Global Conflict: Palestine* for example has been taken up by school teachers in Scandinavia seeking to make use of a combination of gaming activities, complex narratives and literacy-related tasks that involve perspective-taking and the development of understanding of genres (Silseth 2012). *Quest Atlantis* and its successor, *Atlantis Remixed (ARX)*, are projects that have brought together online and offline media of diverse kinds. Commencing with an ethnographic engagement with the experiences of young people at school and at leisure, *Quest Atlantis/ARX* is a bold, international endeavour to combine education, fun and promote social justice. Research into the designers' concept of "socially responsive design" argued for the effectiveness of "types of participatory design that are "iterative, distributed, and locally owned, evolving as does a bazaar, rather than being constructed, like a cathedral" (Barab et al. 2005).

After several substantial projects in Australia, Beavis (2013a; 2013b) cautioned that it is difficult to domesticate online leisure pursuits and assume it is possible to incorporate them into the curriculum unproblematically. It may be more feasible to consider how they can be made use of in the classroom, for example as sources for investigation into different kinds of texts. She found, as Barab et al. (2005), that paratexts can take a very useful role. Reflective texts authored in spaces beyond the original locale can promote students' sense of agency, immersion and perspective-taking through which they produce effective and persuasive texts. Digital storytelling initiatives at their most effective can be strongly locally-oriented, and socially committed, while drawing on innovative blends of semiotic possibilities (Hull and Nelson 2005; Erstad and Silseth 2008).

Although such consciously designed educational interventions may be one way of promoting a sense of community that then underpins the collaborative production of elaborate texts, such an ethos can arise from commercial enterprises and virtual spaces that are chiefly constituted by volunteer labour. Hunter (2011) finds that notions of authorship can be redefined to more communal dispositions or "habits of mind", bringing about very successful collaborations on a World of Warcraft wiki. Black (2008) shows how fan fiction writers can organise themselves into highly effective differentiated roles with respect to authoring, editing, peer review, mentoring etc.

Some successful transformations of practice in schools have drawn on the ethos of such authentic genres of participation (Ito et al. 2009). This and similar approaches have been reported as fruitful in accounts of empirical research aimed at transforming practice in schools and tertiary institutions. Lankshear, Snyder and Green (2000) devised a three dimensional approach to literacy, analytically distinguishing between operational, cultural and critical facets. Their case studies aim at sustainability in the use of technology in education and speaking effectively to practical policy decisions. Pierroux (2012) explores the possibilities created through students being able to move across spaces, physical and online, while carrying their mobile phones. She describes students’ meaning-making in encounters with contemporary art: in museums, a virtual world, and interactive web spaces. Her analyses recognise the complexity of their activities in the face of the school curriculum, literacies demanded by the virtual spaces, and the specific knowledge domain of contemporary art.

The multiliteracies framework for pedagogy underpinning Pierroux’s work has also been extended to tertiary education. Hafner (2013) describes an undergraduate course in English for science at a university in Hong Kong. Students were tasked to report their experimental findings through making a multimodal documentary, shared with an audience of nonspecialists via YouTube. They blogged about their work in progress. Surmounting the challenges of writing and creating videos for authentic audiences drew on practices they valued and found intrinsically motivating. Importantly, they also dovetailed with the course objectives.

Such alignments can be carried further. Vasquez, Tate and Harste (2013) crafted an inspiring bridge between critical literacy and teacher education. They created opportunities for training and in-service teachers to experience for themselves the kinds of passionate learning experiences that their students enjoy, in, for example, online affinity spaces.

## Main research methods

Literacy studies in virtual spaces are distinguished from much other scholarship in less cognate disciplines in that researchers usually display an overall interpretive stance, deploying a mixture of methods. Often with explicit sociocultural framings, study designs tend to be open and flexible to some degree, providing opportunities to investigate the unexpected as it is encountered in the field. Further, Literacy Studies researchers do not render themselves invisible in subsequent writing up; the recognition of personal perspective taking is usually made explicit (Bloome and Green this volume).

Research instruments associated with ethnography, such as longitudinal participant observation, interviews, examinations of textual and other artefacts, are often drawn upon, aligning as they do with the umbrella notion of an ecological approach to literacies (Barton 2007). For example, Rowsell (2013) investigates expertise in the production of multimodal texts in a wide range of professional design disciplines. Her holistic approach integrates online and offline domains as specifically appropriate to each of her interviewees. Marsh (2011) used a funnelling approach, combining a relatively large-scale survey, with interviewing a smaller number of students and then intensively video-taping the interactions of three children while playing in a virtual world.

Other researchers signal adherence to an ethnographic sensitivity, the longitudinal dovetailing of emic and etic perspectives, while signalling a restriction in scope in some way. For example Androutsopoulos’ (2008) discourse-centred online ethnography, combining textual analysis with interviews has been influential within and beyond Literacy Studies. Gillen (2009) terms her exploration of the diverse virtual spaces associated with an virtual worlds project a virtual literacy ethnography, to underline the fact that all interactions with participants took place online, with identities projected through avatars with self-selected names. Barton and Lee (2013) combine the study of multilingual and multisemiotic sites on Flickr with online interview data.

Computer-mediated discourse analysis (Herring 2004; 2013) provides a four level framework for investigation: structure; meaning; interaction management and social phenomena, while embracing an array of linguistic tools. The term grew from an initial focus on early internet genres, yet is now potentially applicable to other domains. Connective ethnography, as proposed by Dirksen Huizing and Smit (2010) for the study of professional contexts, includes the discourse analysis of data from interviews, texts and communicative artefacts as well as findings from participant observation and a social network analysis of log file data. This would seem very appropriate for more overtly literacy-focussed studies of such complex (online) environments.

Social anthropology, with its long tradition of ethnography, has been a very significant influence on the development of Literacy Studies in virtual spaces. Miller and Slater (2000) undertook comparative ethnographies involving Trinidadians and Philippino familes both online and physically situated in migrant and home locations, tracing how meaning-making practices and cultural understandings were deployed in their online interactions. Much contemporary work on transnational literacies aligns with this work in purpose, theoretical insight and methodology (Lam and Warriner 2012).

Other work emanating from social anthropology and influential on Literacy Studies demonstrated that longitudinal, immersive research limited purely to online interactions, did not entail any avoidance of the complexities of meaning-making, performance of identity and issues of social interaction that may be familiar in the ‘physical world’ Boellstorf’s (2008) pioneering ethnography of the virtual world *Second Life* claims a social anthropology heritage all the way back to Malinowski. The handbook of ethnographic methodology in virtual worlds he wrote with other investigators (Boellstorff et al., 2012) does not include "literacy" in its index, but is nonetheless valuable for its ideas, range of tools and attention to ethics.

Ethnography can be applied at various scales; from a microgenetic case study (Martin et al. 2013) to the unprecedentedly vast and yet still detailed investigation of young people's digital media practises captured in the Digital Youth Network project (Ito et al. 2009).

## Recommendations for practice

In researching literacy practices in virtual spaces, three key principles should be borne in mind.

Recognizing connections between textual interactions, identity and learning, it is desirable to consider carefully how research methods can capture some of this interplay. Depending on the research field, aims and scope of the study, it may not be possible to design a study as holistically as one would want. For example, when working online with young people, the necessity of keeping safety at the forefront of attention may preclude any kind of questioning directed at their offline lives. Nevertheless, retaining an ecological orientation to activities online, all approached with recognition of a dynamic relation between activities and their social and cultural context, should be fruitful. This is likely to mean using a combination of research methods.

A capacity to distinguish *analytically* between distinct activities such as "reading", "writing" and "speech" is a distinct contribution of literacy studies that should be maintained. Such activities are practiced and interwoven in new ways, as users shape their practices in response to the affordances of technologies. Some work by notable CMC specialists is extremely helpful to literacy researchers, making use of careful linguistically based frameworks while also paying attention to issues of material affordances and social context (Herring 2004; 2013). The analytic separability that is needed in order to investigate the details of specific actions should not prevent the recognition of the interrelations between activities, nor the social and collaborative aspects of literacy in virtual spaces (Gillen 2014).

Extending the traditional Literacy Studies' focus on everyday and vernacular activities will continue to be productive. Many people will continue to bring their knowledge, experience and values gained in vernacular contexts to bear in other settings they meet including technical and professional contexts. For example Papen (2012) takes a Literacy Studies perspective to find out how adults incorporate learning from the internet into their understandings of medical issues. Jones and Hafner (2012) lay out a promising agenda for more study of new literacies in diverse locations such as workplaces. Channelling attention to bottom-up practices rather than top-down assertions enables a questioning of hegemonic discourses, and can be used to question effects of power in local settings.

## Future Directions

I have argued above that most attention by Literacy Studies research to virtual spaces has been concerned with learning and education. This is for good reason as these continue to be vital arenas of contestation. In my own local context, England, for example, the Government has recently published new consultation specifications for public examinations in English language specifying, “Digital texts must not be included” (Department for Education 2013: 4). The same restriction applied to the English literature specification. I could not help but think immediately of the imaginative ways Shakespeare’s Macbeth, for example, has been engaged with in virtual worlds (Unsworth and Thomas 2014).

As recent research shows, time and time again, excluding the changing world with its pervasive digital spaces from the realms of school and further education, is an enterprise that is doomed to fail, and that deserves to fail. As Schetzer and Warschauer (2000: 172) propose, “literacy is a shifting target, and we have to prepare our students for their future rather than our past”.

This requires a rethinking of all aspects of education. The professional practice of teachers in classrooms, however enlightened it may be, is, as all human activity, constrained by the nature of goals and targets that are set outside the classroom. As Yelland (2006: 1) asserts, “We should not be mapping the use of new technologies onto old curricula.” Curricula are tied into assessment; not only the propositional content but also the mode of assessments are instantiations the values of those who devise educational policies. If assessments are thought of as demonstrations of the individual acquisition of knowledge, this is a wholly different paradigm from understandings of learning as processes of participation in purposeful, collaborative endeavours. In a carefully situated study of assessment policies and practices in Nova Scotia, Van Zoost (2011) argues that these can be analysed to provide a basis for the negotiation of the imagined futures of young people.

Literacy studies in virtual spaces has the potential to offer a great deal of benefit to the arts and humanities as well as social sciences by expanding research endeavours in several directions. One crucial trajectory must be to expand work with policy makers, technology specialists and others to tackle issues of inequity and access. Working with other professionals on the design of assistive technologies and environments can enhance lives, especially as broadband access and mobile technologies continue to expand.

Methodologically, developing more holistic studies that simultaneously study embodiment as well as interactions online is a desirable expansion of current methods. Literacy studies can draw from cognate disciplines in content, methodology and concepts. For example, within digital anthropology, Madianou and Miller have developed an empirically-based concept of polymedia:

an emerging environment of communicative opportunities that functions as an ‘integrated structure’ within which each individual medium is defined in relational terms in the context of all other media (Madianou and Miller 2012: 170).

Their comparative ethnography examined long distanced communication between migrants to the UK and their family members in the Philippines and Trinidad. A key finding was that, consequent with convergent technologies, choices between platforms depended centrally on the exploitation of affordances in order to manage emotions and relationships. The centrality of media selection to the maintenance and shaping of relationships has been captured by the notion in digital humanities of living “in media” rather than “with media” (Deuze Blank and Speers 2012).

In turn, Literacy Studies has the capacity to contribute to a broader range of issues and settings than so far achieved. In particular, there is much scope for bringing Literacy Studies to more settings, including the workplace. The combination of emic and etic viewpoints that Literacy Studies researchers deploy, combined with a keen reflexivity and commitment to positive action, has the potential to benefit other domains of inquiry concerned with literacy in virtual spaces.

## RELATED TOPICS

computer-mediated communication

diversity

education

ethnography

materiality

## Further reading

Ho, C.M.L., Anderson, K.T. and Leong, A.P. (2011) (eds) Transforming Literacies and Language: Multimodality and literacy in the new media age. London: Continuum.

This book brings many practical lessons from research in Singapore, Japan, Australia, UK, US and Canada; theoretically, a consistent theme is that of the notion of transformation from the multiliteracies approach.

Ito, M. et al., (2009) Hanging out, messing around, geeking out: Living and learning with new media. Cambridge, MA: MIT Press.

Wonderfully rich in empirical detail and also contributing to theories about media ecology, this is a very readable work. Its collaborative writing format also enacts a contribution to new literacies dissemination.

Knobel, M. and Lankshear, C. (2008) (eds) *A New Literacies Sampler*. New York: Peter Lang.

It is very difficult to select any single title involving these prolific authors and editors, but I find myself frequently turning back to this superb collection of writings, united by a sociocultural orientation to new literacies.

Merchant, G., Gillen, J., Marsh, J. and Davies, J (eds). (2012) *Virtual Literacies: Interactive spaces for children and young people*. New York: Routledge.

A collection of recent research in virtual worlds and other online spaces for children and young people, tackling challenging issues for educators and researchers.

Østerud, S., Gentikow, B. & Skogseth, E. (2012) Literacy Practices in late modernity: mastering technological and cultural convergence. New York: Hampton Press.

The contributors to this book have responded seriously to the call of the New London Group (1996: 60) that the goal of education is to ensure that all students become able to ”participate fully in public, community, and economic life”.

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Dr Julia Gillen is Director, Literacy Research Centre, and Senior Lecturer in Digital Literacies in the Department of Linguistics and English Language, Lancaster University. Her recent publications include *Digital Literacies* (Routledge, 2014).