

Student author as actor network? Using ANT to explore digital literacies in higher education

Lesley Gourlay

Department of Culture, Communication and Media, Institution of Education, University of London
l.gourlay@ioe.ac.uk

Abstract

The concept of 'digital literacies' is indeterminate and contested, arising from contrasting theoretical positions and traditions of practice and enquiry. 'Literacies' - particularly the plural - is a term which has come to be associated with New Literacies Studies (e.g. Barton 1994) and the resultant critique of the notion of generic, transferable 'skills' (e.g. Lea & Street 1998, Wingate 2006). The literacies perspective sees writing as situated social practice, and seeks to blur the categories of 'content' and writing process, arguing that they are inextricably linked. Writer subjectivity is also foregrounded and dominant forms of representation are critiqued as implicated in the reproduction of social privilege. Focusing on academic writing in particular, this paper will argue that this critique has only been partially successful in terms of influence across the sector, and that 'digital literacies' has in many contexts simply become the new term for 'IT skills'. The persistence of the 'skills' lens - with its implicit techno-rationalist focus on decontextualised procedure - can be seen in hybrid formulations such as 'digital literacy skills'. The picture is further complicated by the widespread use in popular culture of 'literacy' to denote a form of 'know-how', such as 'computer literacy'. I will argue that the fundamental shift in understanding demanded by the original (once-disruptive) 'literacies' critique has been largely lost through a process of domestication of the term. In response, actor-network theory (ANT) (Latour 2005) is proposed as a complimentary orientation which may allow new understandings of relationships between texts, contexts and practices, recasting the author and reader as enmeshed in complex posthuman (e.g. Hayles 1999) networks of human and non-human actors. This standpoint may serve to creatively undermine seemingly stable categories such as 'text', 'author' and 'machine' in generative ways when seeking to explore networked, digitally-mediated forms of writing and representation. This will be illustrated with reference to a JISC-funded study (JISC 2011) in which multimodal journaling will be deployed to explore these networks in day-to-day student practice in a specialist postgraduate institution. It will conclude with suggested implications for researchers and practitioners concerned with writing and representation in higher education.

Keywords

Digital literacies, academic writing, actor-network theory, multimodality.

Introduction

This paper explores the ways in which the term 'digital literacies' has come to be used in research and development in higher education, looking in particular at the theoretical underpinnings of the original New Literacies critique. It will argue that the critical essence of this perspective - with its focus on writing as socially-situated practice - has been eroded, and that the lens of 'IT skills' is still dominant in higher education, perpetuating notions of transferable, technical skills in a model which implicitly privileges cognitive learning by the autonomous individual. Actor-network-theory (ANT) is discussed and proposed as a potentially useful orientation towards digitally-mediated writing and representation within higher education, with its recognition of the complex, networked nature of social practice and its acknowledgement of the agency of non-human actors. This will be illustrated with a current study into the digital practices of postgraduate students at a specialist HEI, using multimodal journaling to document and explore their experiences as day-to-day practice in complex networks of actors.

'Digital Literacies'

The provenance of the term 'digital literacies' is complex, but can be associated with a broader move in the higher education sector to recast capabilities which were more commonly referred to as 'skills'. However, the term digital literacies - in the plural - is particularly complex when applied to higher education as it arises not only in the context of this general tendency, but also in relation to the notion of 'academic literacies'. This section will begin by giving a brief overview of the research / theoretical basis of this key notion.

Influential ethnographic studies on reading and writing conducted in social anthropology in the 1980s began to call into question accepted models of 'literacy', which at that time was conceived of as an 'either-or' cognitive ability residing in the mind of the individual. Brice-Heath's (1983) longitudinal study of children's language and reading practices in two communities in the US was a key work in uncovering some of lived complexities of literacy as social practice, and was seminal in its introduction of the term 'literacy event' to describe a complex social situation which centres on reading and writing. Crucially, these events involved multiple social actors in a range of informal settings. In the same period, Street (1984) reported on his extended fieldwork in Iran where various kinds of socially-situated literacies were observed among groups of people officially considered to be 'illiterate'. On the basis of detailed analysis of various forms of literacy practice in communities, Street elaborated a new conception of literacy which situated it in ideological and social contexts. He argues that '...what the particular practices of reading and writing are for a given society depends on the context; that they are already embedded in an ideology and cannot be isolated or treated as 'neutral' or merely 'technical' (1984: 1). This conception of literacy continues to be influential in what came to be known as New Literacy Studies (e.g. Barton 1994). In the context of higher education, it came to prominence through Lea and Street's critique of dominant models of student writing (1998). In their paper, they critically examine the assumptions of the 'study skills' model of student writing, in particular its reliance on a deficit conception of the student and the associated notion that there is a clear 'transferable' model of writing which students should strive to replicate. They argue instead that writing is contested, complex, context-embedded and bound up with identities and the exercise of power. They propose 'academic literacies' as an alternative to models based either on skills or on 'socialisation' towards a monolithic model of acceptability. This perspective has become very influential among researchers investigating student writing in the academy, and has led to a range of studies focusing in particular on the experiences and attitudes of students who have tended to be marginalised (e.g. Ivanic 1998, Lillis 2001). These studies focused on writing as part of identity construction, and saw the author and text as co-constitutive.

Despite a strong recognition of the importance of contexts, these foundational studies did not focus particularly on the technologies being used by the writers, although recent work in this area has sought to link an academic literacies perspective with technologies and 'e-learning' (e.g. Goodfellow & Lea 2007). However, researchers and practitioners working within this perspective have arguably aided the uptake of the term 'digital literacies', in particular the plural version, which aims to denote the multiple and irreducible nature of literacies in their many contexts. The emphasis here tends to move away from the 'academic literacies' focus on the production of print literacy artefacts such as essays, towards a 'digital literacies' focus on practices in a range of multimodal online formats such as videos, blogs, virtual worlds and games, particularly in studies of primary and secondary education and adolescents (e.g. Carrington & Robinson 2009, Steinkueler 2006). However, in higher education, although innovative media and activities are also used, the term tends to be applied with implicit reference to technologies required for success in HE-level study and assessment, such as use of library catalogue systems, databases, virtual learning environments and other interfaces. The focus here is frequently on the production of knowledge in relatively traditional text-based formats such as essays, using digital media. Additionally, in the context of increased focus on 'employability' on the part of government and the sector, the notion of digital literacies in higher education is further complicated by the perceived need to prepare students for the world of employment, via curriculum models focused on graduate attributes. In the fundamentally individual-focused world of assessment and credentialing of graduates, it is not perhaps surprising that a tension then arises. In this context, there may be some slippage in the detour of the term 'digital literacies' away from an ethnographic, networked conception - sensitive towards identities and pluralities - towards a model which values the accumulation of a 'skills set' within the individual - this can be glimpsed in formulations such as 'digital literacies skills'. This concern with credentialing may lead to an erosion of the hard-won insights of New Literacies Studies and could risk a return to a less-than-nuanced 'skills' focus with new name, as the term 'literacies' becomes abstracted, 'domesticated', losing its critical edge and rootedness in lived practices. As Clarke points out:

‘...there is a problem with the singular/plural argument that it particularly apparent in the recent proliferation of references to *literacies* in the educational discourses of participation and social inclusion. Computer literacy is commonplace. In England there is a campaign to promote emotional literacy as a ‘Fourth R’ in schools...with ‘financial literacy and citizenship’ included among the *Skills for Life* prescribed for adults. The moral and functional sense of ‘literacies’ in these examples may have little to do with reading and writing, they are conceptualised as autonomous, generic and transferable basic skills’. (Clarke 2002: 110)

The next section will propose actor-network-theory (ANT) as an orientation towards meaning-making in the academy which may serve to refocus researchers and practitioners on the complex nature of these practices.

Actor-network theory and digital literacies

ANT arose from work in the field of science and technology studies in the early 1980s, was elaborated in a series of influential works (Callon 1986, Law & Hassard 1999, Latour 2005), and has more recently begun to be applied to educational contexts (e.g. Clarke 2002, Fenwick & Edwards 2010, Fenwick 2010, Tummons 2010). ANT is not a monolithic set of ideas or approaches, and has been applied in a range of contexts. However, three main features can be drawn out here to characterise this orientation. First is its recognition of the importance of nonhuman actors (such as objects or animals) as members of networks. In this regard it is related to concept of the ‘posthuman’ (e.g. Haraway 1991, Hayles 1999, 2006) in which supposedly stable categories - such as those of human and machine - are seen as intertwined in complex networks of social practice. As Latour puts it, in defence of a focus on objects as actors:

If you can, with a straight face, maintain that hitting a nail with and without a hammer, boiling water with and without a kettle, fetching provisions with or without a basket, walking in the street with or without clothes, zapping a TV with or without a remote, slowing down a car with or without a speed-bump, keeping track of your inventory with or without bookkeeping, are exactly the same activities, that the introduction of these mundane implements change ‘nothing important’ to the realisation of tasks, then you are ready to transmigrate to the Far Land of the Social and disappear from this lowly one. (Latour 2005: 71)

In an educational setting, ANT would see students, emails, teachers, computers, whiteboards and books all as agentive actors in a network. Secondly, ANT rejects what it sees as essentialist *a priori* categories drawn from conventional sociology, but instead sees social action as constantly enacted and maintained moment-to-moment by social actors through detailed, networked practices. In this regard, it has much in common with ethnomethodology (e.g. Garfinkel 1967) and its focus on common actions and procedures as the site of construction of social process. Thirdly, although named a ‘theory’, ANT does not seek to present underlying causes for the emergence of networks of social practice, but is more focused on how networks are created and maintained from the point of view of social actors themselves. In these three respects, I would like to argue that ANT may be of utility in seeking to investigate student digital literacies.

As argued above, despite advances in the last three decades in our understandings of the complex, socially-situated nature of text production, representation and identities, there is still a tendency in higher education to collapse into an abstracted, cognitive and autonomous ‘skills’ model when considering the construction of meaning online. In this conception, technologies may be reduced to a set of interchangeable, neutral and supposedly transparent ‘tools’ to be manipulated by ‘the user’. In this view, agency is placed with the student, with the implication that the technology is there to ‘serve’ or cater to the user’s demands. Alternatively - and equally problematically - a deterministic view of the technology in terms of ‘affordances’ can be overplayed; in extreme cases placing the student in the role of a hapless pawn of the digital environment at hand. The reality of practice is likely to involve a combination of agency on both sides - that of technology and user - which ANT seems well-suited to theorise with its focus on nonhuman actors in networks. Perhaps for this reason, it has already been used in studies of technologies (e.g. Enriquez 2009, Tatnall 2010). This perspective offers a lens on student meaning-making practices which may reconnect us in a new way to ethnographic observations and participant accounts in digitally mediated contexts which are simultaneously material and virtual, synchronous and asynchronous, present and distant.

ANT's focus on day-to-day practice as the key site of social construction has been critiqued as apolitical and neglectful of larger social structures of power - this critique may be helpful, and should be borne in mind. As Nesper points out, the social world '...flows at times in very deeply worn channels' (1994:15). However, from the point of view of informing current knowledge of student digital literacies, this micro focus may provide us with a fresh perspective, minimising *a priori* assumptions about particular types of students which may be based on questionable binaries, such as the age-based notion of the 'digital native' and 'digital immigrant'. ANT, in its avoidance of predictive categories of social actors, arguably provides a space for multiple, hybrid or even seemingly contradictory digital practices and identities to be expressed. Clarke explicitly proposes ANT to address what new Literacy Studies has not:

'...work in New Literacy Studies has tended to reply on pre-defined categories, which assume some of the things we want to explain. It then becomes difficult to show how literacy itself acquires attributes that set it above other forms of cognition, expression and communication. In conceptualising the relationship between local events and the special order 'out there', actor-network theory gets rid of 'out there' altogether...instead of assuming that we are observing traces of a macro-social system in a local context, the ANT ethnographer starts from the assumption that the local is all there is.' (Clarke 2002: 111)

Despite caveats, this seems to be a generative standpoint for a study of complex social practices such as technology use which is likely to blur boundaries of home, university, work and leisure; mobilising a range of platforms, practices and identities. A research perspective which focuses on evolving practice as opposed to superordinate analytical categories seems to offer much to this type of enquiry. As Fenwick and Edwards point out, '...ANT's key contribution is to suggest analytic methods that honour the mess, disorder and ambivalences that order phenomena, including education' (2010: 1). Crucially, practices are also not viewed in isolation but as part of a set of overlapping and interlinked networks - this concept also seems well-suited to an analysis of engagement in digital technologies for meaning-making, involving practices known to be highly complex in terms of networks and interconnectedness. Arguably, in this conception, the individual alone cannot be a meaningful unit of analysis but must be seen within complex webs of actors.

The third point is also pertinent here; that ANT focuses on social actors' own perceptions and constructions of meaning, as opposed to imposing codes or categories on them. Although all research procedures inevitably involve some degree of mediation and reconstruction / interpretation on the part of the researchers, ANT seems to offer us an opportunity to prioritise and place at the centre of the study student perspectives towards digital literacies and technologies.

Multimodal journaling as ANT enquiry?

The previous section has argued that ANT may further our understandings of student digital literacies, regaining an ethnographic perspective which has perhaps been partially lost, also acknowledging the complex and multiple networks formed and maintained between human and nonhuman actors in the context of digitally mediated university engagement. As Clarke suggests, there is a need to move the research agenda beyond New Literacy Studies. She broadens out the scope of legitimate enquiry, asking: 'What human, technological, conceptual or material resources can be substituted for the written word, and what would be the effects of enrolling these resources in a particular network?' (Clarke 2002: 119) She also advocates visual approaches to research, focusing on both literacy and 'non-literacy' events in ethnographic studies of adults. This section will describe how the early stages of a JISC-funded study at a specialist HEI in the UK might be seen to exemplify this orientation.

The student body at the HEI in question is predominantly postgraduate, with the vast majority returning to study as mature students after some time in work / professional practice. Many are studying part-time, and are combining study with professional work and family responsibilities. A proportion of the study body is international, and many come from what might be characterised as 'non-traditional' backgrounds, with few role models from their social backgrounds with experience of higher education. For these reasons, the student body is particularly complex and diverse - more so in many ways than an undergraduate student body. The institution has the development of 'Open Mode' as a key strategic priority, but possesses scant meaningful data pertaining to students and technologies. The aim of the present study is to explore and understand these students'

experiences of technology and digital literacies in more depth and complexity, beginning with a broader focus, and moving on to focus on a small number of students over several months.

The research design - which has recently received ethical clearance - involves a reanalysis of existing data sets, focusing on the UK national iGraduate survey qualitative data in particular, followed by focus groups with the four main groups of postgraduates at the institution: doctoral students, Masters students, distance learners and those working towards a vocational postgraduate qualification (PGCE). Initial findings from the focus groups have revealed significant difference between the three groups in terms of their networks, domains, uses and relationship towards technologies, and relationship towards the institution. These show a greater orientation towards electronic journals and the library on the part of the PhD students, while the Masters students data suggested a more central position for the VLE in their practices. The geographically disparate international distance students focused strongly on notions of connectivity, community and isolation, while the PGCE students' accounts suggested a complex set of domains, with the school placement representing an important site of learning and technological engagement. Students have been recruited from these focus groups to take part in a 6-month journaling study focused on their experiences of using technologies in their studies. 12 students will be given an iPod Touch handheld device with guidance on how to document their experiences multimodally, using a combination of photos, video, sound files and notes, with broad themes and foci suggested. Clarke points out that ANT research may be criticised for a lack of reflexivity, while New Literacies Studies research has often utilised collaborative approaches in which participants contribute to interpretation and analysis. She suggests combining elements of both approaches, in order that '...the lessons we can draw from each would underpin a research agenda which combines the detachment and symmetry of ANT ethnography with a commitment to reflexivity and collaboration' (Clarke 2002: 120). In the present study, participants will be interviewed three times throughout the journaling period, with the multimodal journal assemblages forming the basis of the interviews. The participants will be encouraged to focus on 'messy' micro-level day-to-day lived action, networks and the material / spatial aspects of practice - element of digital literacy practices which may be 'tidied up' by more conventional forms of data collection, in particular by stand-alone interviews which rely on self-report and may lead to abstraction as opposed to accounts anchored in practices (Gourlay 2010). The multimodal nature of the data is also designed to maximise rootedness in the particular through a focus on images or recordings of everyday objects and processes. However, these images and other artefacts should serve not only as objects of analysis, but also as stimulus for in-depth exploration of identities, challenges and issues in the interviews - ultimately providing a rich set of participant accounts of technological engagement. The aim is that the data should also provide nuanced implications to the institution on how to proceed in terms of technologies and the development of digital literacies. The analysis will seek to understand how students' networks are formed and maintained in day-to-day practice, which will provide valuable insights into how the institution and its constituent parts - as actors in these networks - can create conditions for students to thrive, and minimise barriers to engagement. Initial multimodal data will be presented and analysed, with the utility of ANT will be discussed and critically analysed. In particular, the notion of the student author as an actor-network / member of multiple actor-networks will be proposed and explored. The focus group data plus initial findings from the journaling will be analysed in the presentation, drawing on ANT.

Conclusions

This paper has provided a brief overview of New Literacies Studies and its critiques of remedial, deficit models focused on 'transferable skills', arguing that the term 'digital literacies' - despite its roots in ethnographic studies and critical standpoints - is in danger of losing its critical, practice-based edge, becoming the new term for 'IT skills'. It has argued that ANT, with its emphasis on day-to-day practices, networks of human and nonhuman actors and participant viewpoints, may provide a fruitful new perspective in seeking to understand student digital engagement in depth. It has described a study which is at an early stage at the time of writing, and has proposed that it displays some of the key features of an ANT orientation, in particular via the use of participant-curated multimodal journaling as the basis of the study. It is hoped that this study will provide a successful example of the application of ANT to a research agenda more recently dominated by New Literacies Studies, and that the two approaches may be combined to reiterate a more nuanced and insightful approach to enquiry in this complex area of social / semiotic practice.

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