Writing and the Virtual Environment

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Introduction

At the heart of this chapter, as with the rest of the book, is the student. This chapter intends to explore how students utilise technology for writing in an academic world, and how that usage might change (or not) when the student transfers it to from their personal world. The advent of technology and its increasing use by so many people in an academic context has meant that literacy practices which are viewed in a socio-cultural context must also include that of the digital world, where many students spend a proportion of their time. If we view language as a resource to make meaning depending on the context in which we use it, then this must also apply to digital literacy which arises from the use of language in the virtual world.

Learning to write virtually requires new literacy skills for new audiences, an ability to read critically and synthesise research, an ability to navigate the Web and an ability to understand how to use multi-media in our learning, teaching and assessment, which are supported within virtual spaces. These new skills are increasingly being referred to as network literacy, digital literacy and information literacy, which are defined in the next section.

This chapter is written at a time when students born after 1990 are viewed by some as the 'Net generation' (Tapscott, 1998) 'Millenials' (Howe & Strauss, 2000) or 'Digital Natives' (Prensky, 2001) and seen as immersed in a culture which is rich in technology. More recently there has been a recognition that this immersion in technology is related mainly to the use of communication technologies rather than a high level of technology that may be viewed as academically related (Bennett, Maton, & Kervin, 2008) hence the need to consider carefully any technical skills that may be required by tutors and/or students prior to using some of the technologies referred to in this chapter (Sharma, 2010).

The purpose of this chapter is to provide the reader with a grounded understanding of how students construct communications using technologies, and how they build relationships, connecting to each other virtually, and continue with their studies online, in a virtual environment. It examines the way attitudes may or may not change, and with them, the physical practice of writing in a virtual environment when students move between the two worlds of academia and personal. It also considers the consequences for both students and tutors as we move into an progressively virtual world where students are increasing using multi-modal text.

This chapter will examine virtual spaces and their relationship with writing. In the face of the growth in Web 2.0 technologies and mobile technology and the increasing use of 'text' language, it will consider the impact these are having on student writing styles and discuss both what might be considered acceptable in Higher Education and how tutors might encourage learners to develop appropriate writing skills for their audience.

The start of the chapter covers how language might alter when students use virtual technology for communications and whether or not this affects the language they use for their academic work. The chapter also includes a comparison of social writing with standard academic writing in Higher Education by examining language and literacy as it changes when we write in virtual spaces. The chapter then moves on to the types of virtual spaces that students might use, what they are, and how are they defined as such. From here, we move on to discuss the mobile types of virtual spaces, the ones that allow you to take and use them anywhere, and how this affects the way they are used, and

why. The chapter then considers the use of web logs, particularly with a view to developing reflective writing skills, and how learners are using wikis for collaborative, social learning and considers the language they need to develop for this activity. The chapter then move on to examine ePortfolios which are still relatively new in Higher Education and consider how ePortfolios help students to develop their writing and individual identity which they can then choose to share with the external world.

Languages of technology

Today's students can be thought of as being 'transliterate', that is, they can communicate and learn across the boundaries of multi modal technologies (McDougall & Potamitis, 2010). Tutors who are unable to keep up with this pace of technology, often find themselves unable to relate to, and engage, such students. Even when teachers receive training in curricular uses of technology, they do not necessarily receive training about new mind-sets, identities and practices that come with new technologies and forms of communication (Lewis, 2007). This matters most when their teaching relationship breaks down as a result of their inability to communicate on the same level in the virtual environment as their students.

It is agreed by some that information communications technology (ICT) is insulated from all else, and that the same applies to literacy, and that in sending a message from a mobile device, we are concerned only with pushing buttons, not how the technology actually works (McDougall & Potamitis, 2010). Should we therefore apply this to how we view technology in teaching and learning? Should we view ICT as a range of easy to use tools perhaps, and not be concerned about how it affects the actual teaching and learning, rather bringing technology to the classroom in the form of mobile devices, instead of booking physical IT rooms? This chapter focusses on the social constructivist aspects of using ICT in teaching and learning, rather than the more insulative aspects. Should we, as some think, view information technology (IT) as media things, not as technologies, but as ways of representing the world, and communicating within it, rather than primarily as technical? (Buckingham, 2007). In doing so, we might be allowing ourselves to relate more to our students and thus enable the teaching learning relationship with our students to keep up with the speed of change.

In the previous section the terms 'network literacy', 'digital literacy' and 'information-literacy' were introduced . If we are to define a specific set of capabilities as a 'literacy' we are claiming that they are needed for other capabilities, are critical in life, essential to making and sharing culturally significant meanings and consequently, at some level, there should be a society wide entitlement to these capabilities. When we think about literacy, we generally tend to think in a traditionalist way, with 'being literate' being defined as being able to read and write. When we think of literacy in terms of ICT, however, this can take many forms and there is a whole range of adjectives that can be applied, such as ICT literacy, using or programming computers, digital literacy, using digital information, multimedia literacy, moving between text, graphics and sound, and network literacy, accessing and creating and interpreting web based documents, to name a few (Weigerif & Dawes, 2004). As argued by Buckingham, (2008) a much broader reconceptualisation of what we mean by literacy in a world that is increasingly dominated by electronic media is needed (Buckingham, 2008).

Digital literacy can also be thought to define those capabilities which fit an individual for living, learning and working in a digital society. There are various definitions of digital literacy, such as that provided by JISC which states that 'digital literacy defines those capabilities which fit an individual for living, learning and working in a digital society' (Beetham, 2010). The now widespread use of web 2.0 technologies and accompanying social practices have shifted the focus somewhat of what we might mean by digital literacy, such that any current definition should now include participation in social networks as a pivotal part of knowledge acquisition and transfer (Beetham, 2010). Eisenberg (2008, 39) defines information literacy as 'a set of skills and knowledge that

allows us to find, evaluate, and use the information we need, as well as to filter out the information we don't need' (Eisenberg, 2008). This definition by Eisenberg links closely to that of Beetham above, who makes the transition of these skills to digital media.

For each of the literacies described above, however, a basic level of classic literary competence is required, the language for which is developed through listening and speaking. Taking this further, one might argue that the capacity for developing this literacy in this way is arguably being detrimentally affected by the use of the virtual world. If students prefer to communicate online through text, which in itself is frequently not written in a grammatically correct way, rather than through speaking and listening, then they are unlikely to further develop their literacy skills beyond that of the primary classroom.

The internet allows users to create text that is accessible by millions, (if not billions) and it has the potential to influence them all, with a capacity for a sort of power (Weigerif & Dawes, 2004). For example, think about how students look to see how many 'friends' they have on Facebook [©] or, how many followers they have for their latest tweet or blog entry. The capacity for 'power', conceivably, is that which facilitates online popularity through the means of having followers in their virtual spaces. To acquire this type of agency in the virtual world, stems, arguably, from a meta-awareness of how your domain works and how you might work it (Lewis, 2007).

This type of sharing enabled by ICT is a crucial aspect of ICT literacy and is almost entirely dependent on a students' ability or capacity to collaborate with others through this medium (Weigerif & Dawes, 2004). The more you can share with others through a variety of media, applications, sites, and so on, the more others can share with you, and arguably, the capacity for this sort of power increases. There are three aspects that computers offer learners that can arguably be said to be the key to literacy online:

1. The opportunities to create and modify text easily – unlike pen and paper, digital text can be written and changed repeatedly with ease.
2. The opportunities to engage in dialogue (learning or social) with others – text is used across many different types of media from many different types of devices enabling communication to be far easier than it used to be.
3. The opportunities to read and write with a high level of support from software – spell and grammar checks, specialist software packages that type while you speak, and so on, offer tremendous support for digital text.

Captured text, be it shared on a blog, wiki, discussion forum, (see later in this chapter for explanations of these terms) and so on, is then available for discussion, reflection and evaluation, which could lead to the thought processes often associated with higher order thinking such as synthesis and evaluation (Weigerif & Dawes, 2004). Thus an increase in ICT literacy, while it has its negative connotations, also has its positives for students, as long as tutors engage with it in teaching, learning and assessment.

In terms of language, students do write differently depending on the type of virtual space they are using. Student blogs, texts, messages on MSN [©] or Facebook [©] do not (rarely) contain the same level or type of language that is handed in with their assignments (Irwin & Boulton, 2010). Virtual space is generally viewed as informal space, and as such the language used is adapted to this. As we hear and use words creatively in new combinations to express ideas and thoughts our vocabulary shifts, adapting itself along the way. One aspect of becoming literate is our contribution to this change, and the increased use of ICT has created its own language with new words and words with extended meanings being produced (Weigerif & Dawes, 2004), for example, login and download are new words, whilst buttons and surfing have taken on new meanings. In addition to this, hybrid forms of words have also been developed, as these are easier and quicker to use when writing informally through the medium of text,

instant messaging, or Twitter© for example, 2nite (tonight) and lol (laugh out loud), ur (your) and so on.

Such exchanges of language are characterised by a lack of conventional grammar and spelling, and by a mutual understanding of other conventions; developed to increase the rate of interaction so that it almost matches the speed of talk (Weigerif & Dawes, 2004). This mutual understanding does not always cross generations, or even the roles in teaching and learning, and it might be that parents are unable to read (and write) text messages that can be understood by their children. It might also be the case that academic tutors are unable to do the same if students are themselves unable to differentiate between academic and informal social practices when it comes to reading and writing. This shift in registers, between academic and personal writing, as suggested by some writers, often parallels the way in which students change the way they shift their speech between talking to tutors and talking to peers (Crystal, 2001).

Exchanges between students on phones, MSN © and so on, contain erratic instances of grammar, punctuation and spelling, and do not always take sequential turns, they do, however, have their own rationale of syntax and grammar. As such, these exchanges, so common amongst students, have created their own online language and dialogue, and as with all languages, the best way to learn them is to immerse oneself in them, by being involved in its community of use. This is in no way to suggest that all tutors should suddenly get on Facebook©, text or tweet during lectures and so on, however, it might be useful if they could learn some of the key phrases, and words, if only to correct them in academic assignments. If we understand more about our students, we can help them differentiate if they are having problems doing so in the virtual spaces they inhabit.

Participants in such exchanges, for example, between students on Facebook© organising a social gathering of some kind, draw on their understanding of their own culture, on the cultural models of their peers (and possibly the celebrities of the day) and also draw on their developing classic and ICT literacy to generate this exchange (Weigerif & Dawes, 2004). Having done this, and made the transition to 'text speak' students may require academic writing support to help them to revert to a 'proper form' of writing for academic purposes such as essay writing. There may therefore be a need for higher education institutions to assist learners to bridge the gap between their informal practices with ICT, (and the accompanying informal knowledge practices that run in parallel with these) and the demands of academic study that incorporate ICT. However, some learners may actively choose not to engage totally with technology for either social or academic practices, for whatever reason, they may prefer face to face learning and socialising. Learners also expect to use technology for academic purposes in very different ways from that in which they use it for other (social) settings, preferring to keep the two separate, and are very dependent on their experience of the use in academic settings – led by tutors, course structures and quality assurance requirements, to determine their expectations. This preference may be due to students being aware of the different contexts in which communication happens, adjusting their patterns of communication in line with this awareness. That would be consistent with a socio-cultural approach to writing

In adapting their classic literacy for electronic media, we are expecting students to put literacy to use for its own purposes, and the form that this takes depends on the medium in which it was created and the context of the communication and community in which it was written. It may be that as this adaptation by students develops, the problem may become one of meeting students half way rather than trying to push them back towards an ideal academic literacy which may be less used than the language of text in their everyday lives. Work by JISC on student expectations found that prospective students were not certain about what role ICT would play in their academic work, (Beetham, 2010). The general picture however, seems to be one of rising expectations that technology will be used appropriately and well. This includes their expectations of

their tutors' capabilities and skills with technology which are expected, by students, to be high.

As a society, we are knowledge and discourse based, with people increasingly so, in their expectations about how people should lead their private lives and conduct their personal relationships (Simpson & Mayr, 2010). Indeed, one might argue that privacy itself has become a rarity rather than the norm because of the ease with which, (and the inclination with which) personal information can be and is shared through online media. Students, like the rest of the population, have an expectation to live and lead much of their lives online (often during lectures!). The knowledge(s) and discourses which have the capacity to shape people's lives are disseminated through texts of various sorts and transmitted through the media and modern ICTs (Simpson & Mayr, 2010). Applying this to students, we might be unable to deny that some adaptation is also required on our part, as academic tutors, if we are to maintain good working relationships with our students. It might not, given the speed of change and the increasing usage of online media for text (for reading and writing maybe not so much in classic literacy terms, but an ICT based one that reaches them in their everyday lives) be acceptable for us to demand correct English grammar and spelling for all pieces of work. We may, one day, (if we do not do so already) have to meet our students part or half way on some assessments if we are to continue to interact with them in a mutually beneficial way.

Having covered aspects of the language used in virtual spaces, we now move on to look at the types of spaces in which this language is used and changes.

Types of virtual spaces

What is a virtual space? Defined by some as 'cyberspace', virtual space is space that does not physically exist, rather, it exists in the 'ether', as part of a virtual world; a connection of wires and cables, or via other means such as Wi-Fi that enables us to have a presence online. Virtual space is that which we use when we go online, when we use the internet to connect to others from within our and their virtual worlds. As such, currently, virtual space, as with real space, is infinite, and because of this, its possibilities are also arguably seen as endless by users of this type of world. Students are no exception to this, and with open arms, have embraced the technology that allows them such freedom.

Virtual space is not easy to define, and not easy to look up in order to find a definitive definition – many exist, but none seem to focus in on the space aspect of this term. More so, definitions focus on virtual worlds and what we can do in these. The purpose of this chapter, however, is to give the reader an overview of the types of virtual spaces that exist, as they apply to students.

The kinds of virtual spaces that students use include Facebook[©], MSN[©] instant messaging, YouTube[©], MySpace[©], Twitter[©] and so on, (the list is not exhaustive). These are generally deemed to be 'social spaces' for students, not necessarily to be confused with the type of spaces that they might use for academic purposes. That is, spaces where students can meet and communicate in the virtual world to talk about the personal rather than the academic parts of their lives. The types of virtual spaces that students associate with academic work and life, would be those such as virtual learning environments (VLEs) used by universities to communicate with students, common ones are those such as Moodle[©] and BlackBoard[©].

Some research has shown that students do not like to necessarily mix academic and social spaces (Crook & Cluley, 2009), despite a current trend within some Higher Education Institutions (HEIs) to reach out to students, before and after they begin their studies, using social networking sites such as Facebook[©] and so on. For most students, their social networking sites are purely for the purpose of connecting to others and having conversations via the Web, rather than for academic work. Often on courses,

students will contribute to a VLE, via discussion boards, blogs, wikis and so on, but would rarely use this to arrange their social life or give much away about themselves on such sites to their peers. They prefer, instead, to create a separate world for this in what are 'traditionally' seen as spaces for social networking as listed above. The consequences of this might be that for some courses, the balance between contributing online to social and academic leans more to one side than the other, and students might prefer to use their time to socialise virtually rather than contribute to a VLE. Given that students only have so much time to spend online, tutors who run interactive VLE sites, might discover that online contributions and interactions for academic work suffer when this balance moves to social sites - possibly more so as students become more familiar and friendly with one another as a course progresses. In such cases, academics may need to resort to a more mandatory aspect for contributions online and associate them with assessments and other features of the course in order to engage the students in using the VLE as they would like.

From here we move on to look mobile virtual spaces, the type of virtual space that is accessible wherever you might be via mobile technologies.

Mobile virtual spaces

The virtual spaces represented above might arguably be considered less mobile than others. Adding to the university VLE, for example, whether it be for a blog or a discussion forum, might be something done at home or in a library (learning resource centre) rather than on the move. However as mobile technology develops universities are investing in applications ('Apps') to enable learners to access these on the move. What we aim to do in this section is to look at smaller technological devices that can be used to access virtual spaces, including the ones described above, from wherever you are.

Technology is getting smaller, devices such as iPODs [©], iPADS [©], mobile phones, Notebooks [©], iPhones [©] and so on, mean that accessing web sites for social networking and communications is getting easier. There is now, as they say, 'an app for everything' and as such, access is no longer a barrier. The rise of 'Twitter[©]' and the decrease in the costs of using phones for texting means that students can embrace this technology without fear of cost or inconvenience. If, for example, you stood at the rear of a lecture room or classroom, and observed students, how many, do you think, would you see using a small mobile device, and not necessarily for taking notes?

This in itself can cause problems for academic staff as students feel they can skip listening to the lecture, get onto Facebook [©] or MSN [©], and still catch up on the content as the notes will be on the VLE for them to cut and paste and use at leisure. In doing so, however, a step in thought processing is missed, and arguably some understanding is lost. When taking notes and then writing them up, we force ourselves to reread, reword and understand content in order to make sense of it for future reference. When that step is lost because we cut and paste, then print or save, with no real reading because we don't need to reword, vital understanding is lost along the way. While mobile devices and the applications they contain are not totally to blame, they could be argued to be part of the problem rather than part of the solution.

What might also conceivably be viewed as part of the problem and not the solution - in terms of the totality of the technology available through which to deliver the written word - is the lack of boundaries. The choice available could be viewed as a double edged sword in that boundaries tend to disappear with virtual text. The use of hyperlinks, cutting and pasting between applications, different mobile spaces, and the sections within them makes it difficult to differentiate where text came from and who wrote it in the first place. The same text, for example, can look different depending on which application you view it from – compare, for example, how text looks on various Twitter[©] feeds. Add to this the transient, almost 'half-life' quality of the texts, which disappear,

for example, to the bottom of a long list of entries in a blog or email, and suddenly, a different approach might be needed for academics and students alike.

The issues, described above, can cause problems to academic tutors and may lead to what is termed 'slippery' text – text which mutates and evolves across different media (Mackey, 2007) being handed in as part of assignment work. Literacies are changing, and the ever changing combination of literate capacities exhibited by contemporary media users is not the same as, and not as simple as a collection of personalised skills (Mackey, 2007 p319). It may be that academic tutors will have to learn a new vocabulary for these combined skills and attitudes, before our students leave us behind. New developments in this area are looking at ways in which such 'patchwork' texts (also referred to as intertextuality) might be assessed, (Wolverhampton, 2011) thus moving with the times rather than against the tide.

In the early parts of this chapter we made reference to a range of learning and teaching technologies. These are explained more fully in the following sections of this chapter which focuses on blogs, wikis and ePortfolios. These three aspects have been chosen as the focus for this chapter following discussions with academic colleagues from 5 universities as the technologies they would most like to know more about with a view to using in their teaching.

Using Blogs for Reflective Writing

Web logs (blogs) are defined as allowing 'individuals to chronologically record their writing and reflections' using online digital media (Sharma, 2010). Each entry into a blog is stored in chronological order, hence the likeness to a journal; originally the term 'log' was taken from a ship's log with daily entries made and recorded in chronological order. Blogs look quite different from a web page and may be 'owned' by an individual or a community. One definition describes blogs as 'an easily created, easily updatable Web site that allows an author (or authors) to publish instantly to the internet from any Internet connection' (Richardson, 2010).

The benefit of a blog over the more traditional written journal is the way it can be accessed and shared with others, that is, it can remain private to the owner/creator of the blog, opened to a closed community such as a tutor group, or opened to the world accessible via the Web. In terms of learning and developing academic writing skills this can make a blog a powerful tool for students who can access each other's blogs and share thoughts, resources, ideas, and so on. Another benefit, particularly in terms of learning, teaching and assessment in Higher Education is that students or tutors can use a variety of multi-modal formats such as text, voice, image and video. Increasingly in practice, such as in teacher training and medical education, but the tool can equally be used to create communities of learning through sharing reflections. By using blogs tutors are often able to capitalise on students' desire to be online while developing their style of writing and the depth of their reflections; 'people like contributing and sharing … ideas' (Rettberg, 2008).

Tutors are also joining the world wide bloggers. Indeed, increasingly tutors in Higher Education are embracing blogs to share their thoughts and opinions with their students, often beyond their immediate student group(s) to engage in discussions on specific discipline areas enabling wider discussions, across geographical and cultural boundaries, and introducing their students to new ideas, thus optimising the power of this tool.

Reflection, based on Schon's theories has long formed part of assessment in Higher Education courses, particularly those associated with professional training and development such as teacher training, and training for the health professions(Schon, 1983). Traditionally journals were kept by students but as Web 2.0 technologies have emerged these are providing alternatives to reflective journals, (Bain, Mills, Ballantyne, & Packer, 2002) and are proving to engage some students more than the traditional methods of keeping reflective journals (Hramiak, Boulton, & Irwin, 2009). The

increasing use of blogs for reflection and wider sharing of reflections, enables a greater sharing of experiences and perspectives through the virtual and on-line nature of the blogs; 'When we write and reflect with others we can gain multiple perspectives' (Alterio, 2004). The process of opening blogs to others links to research by Rocco who found that 'Making reflection public seems to have had a positive impact on the quality and style of reflection and interactions' (Rocco, 2010).

There are many blogging providers who host blog spaces, which are generally free, such as www.livejournal.co.uk, www.edublogger.com, www.blogger.com, [www.wordpress.org.](http://www.wordpress.org) and www.edmodo.com. Some university VLEs may also have a blog tool, although if used for reflections it is good practice to find out who has access to the blogs, which may often have private content. The types of blogs that can be used for reflection fall mainly into two categories: private blogs owned by individual students, and community blogs. Generally, students will set up their own private blog but may need technical support with this (Sharma, 2010). The student then 'owns' their space and can give access to those they choose to give access to. A community blog, used in academic contexts, would usually be set up by the tutor, or administrator, to provide access to one blog shared by many which allows individual blog writing or the development of shared ideas within one blog area (Hramiak & Boulton, 2012).

Students will often have experienced blogs prior to university, but this may be limited to finding blogs as part of their personal research or through their on-line social communities. While there are some pioneering teachers in secondary education and further education who do draw on blog technology within the classroom, they are still in limited numbers. Introducing blogs as part of a learning experience to students may therefore require some technical support and an understanding of how the blog will help to engage them in their learning and writing.

As with all Web.2 technologies there is emerging research into how blogs are used in academic settings producing mixed experiences and findings. For example Martindale and Wiley used blogs as non-private spaces with their students and had some success, reporting that students' writing became more thoughtful and longer as the course progressed (Martindale & Wiley, 2005). However, some research on supporting teacher education learning in the field using blogs reports limited use of blogs by students, and even more limited use of the blog as a reflective diary (Divintini, Haugalokken, & Morken, 2005). Other investigations explored the use of blogs as public reflective journals, which resulted in concerns from students around privacy and confidentiality, and that online reflective journals can be more time consuming for some students (Oti & Clarke, 2007). One study reports that blogs allow a broad spectrum of non-technical users to publish easily to a wide audience, giving examples of educational uses that include communication from the classroom/school to parents and the community, students practicing writing online, and students communicating with students in different cultures (Catalano, 2005).

More recently Kerawalla et al (2008) identified six factors that influenced blogging, in terms of the way students approached using the blog, and their learning experience. These were perceptions of, and the need for community, perceptions of and the need for audience, the utility of, and need for comments, presentational style of the blog content, overarching factors related to the technological context and the pedagogical context of the course. The researchers also found that the blogging behaviours of their students were varied and depended on the way in which they addressed the factors identified, for example, some students chose not to blog at all, preferring to communicate with others via other means, while others used their blog simply because it was a convenient tool for making notes and so on, while others found the blogs increased their awareness of the technology and enabled them to devise strategies for using blogs in their own teaching, (Kerawalla, Minocha, Kirkup, & Conole, 2008). Similar research by Churchill (2009) indicates that one of the main aspects of blogging that contributed most to students'

learning was that of accessing and reading the blogs of others (Churchill, 2009). Sharma (2010) reported that her participants valued blogs finding that it helped them to think more deeply as well as articulate their ideas.

In terms of developing literacy within blogs, blogs will reveal the process of students' development and provide a virtual space where learning can be simply organised, can be easily shared and is searchable. As stated above blogs generally comprise personal reflections and/or conversations that are regularly updated. These may be experiences of work based learning, or reflections related to topics addressed in lectures, seminars, workshops, and can also include summaries of reading, and so on. Students will therefore need support to develop skills in reflecting critically in developing skills that enable them to write with clarity and coherence. Students also need to be aware of how wide an audience their blogs can reach if they choose to make them public; this can be an empowering experience for students and enable them to reach out to new audiences and develop a wider community of practice than may have been possible through other forms of writing. Thus blogs can be viewed as a form of connective writing. As students seek out and read the blogs of other bloggers they will need to develop their reading skills and learn to be critical of what they are reading, thus again developing their literacy skills.

Students who are reluctant contributors in class may be much more willing to join discussions via blogs where they can compose and reflect on their contribution before uploading and sharing with others. Students therefore need to be very aware of the purpose of their writing, and of the audience for their blogs. Hence the role of the tutor may change to ensure equality of contribution more than may happen in class. Tutors will need to support the development of literacy skills such as research, synthesising ideas, organising reflections, and analysis, as well as encouraging the development of skills in reading. As the number of blogs increases across the world students will need to develop a good level of searching, and learn to read quickly and critically, learning to discard things which are inappropriate to their learning. As students develop their own blogs they will also need to develop good organisational skills so that they can continue to develop and manage their blogs to become databases of learning with links outwards to other useful virtual resources. This genre of literacy will continue to develop as students receive responses to their blogs and may want to go back and review what they have written in the light of comments, developing knowledge and a deeper understanding.

Earlier in this chapter we referred to the increasing use of blog writing by tutors. Some tutors regularly blog, for example one tutor at Nottingham Trent University who teaches politics writes a minimum of 500 words each day reflecting on the day's political developments. The tutor encourages his students to follow and contribute to the blogs and also engages comment from beyond the university thus enabling a wider discourse than would generally be experienced by his students. The blog can therefore take learning beyond the university walls and connect groups of students and tutors who can share learning and experiences such as experiments and field trips in disparate geographical areas, inviting the input of discipline experts to share their learning, resulting in a higher level of metacognitive analysis and reflection. Richardson (2010, 30) draws together the differences in the genre of blogging to that of more traditional academic writing

'Writing stops; blogging continues.
Writing is inside; blogging is outside.
Writing is monologue; blogging is conversation.
Writing is thesis; blogging is synthesis'.

From blogs we now move on to wikis and how they are used in collaborative ways to encourage students to work together to develop their writing online.

Wikis for Collaborative Writing

Wikis date back to the mid-1990s when they were seen as 'an easy authoring tool that might spur people to publish' (Richardson, 2010, 55). The term 'wiki' is a shortened form of 'wiki-wiki', a Hawaiian word which means quick. Wikis are now freely available social networking tools which are increasingly being used in higher education as on-line collaborative learning spaces. One of the most well-known wiki spaces, which tutors in higher education often advise students not to quote from in assignments, is Wikipedia (www.wikipedia.org). While this particular wiki may not be close to the hearts of higher education tutors, and is criticised in academic circles because anyone can edit the content, the notion of students collaboratively creating a course or module wiki containing explanations of key terms is often used, based on the principle that anyone who has access to the wiki can edit it.

There are many free wiki host sites such as www.pbwiki.com, www.wetpaint.com, www.wordpress.com, www.elgg.com, which also integrates with the Moodle VLE, www.sharepoint.com and Google's© wiki available at www.sites.google.com. An alternative to a wiki is Google Docs© which enables collaboration in document creating, provides a history, and provides simple publishing to the world, but is less versatile than a wiki. Many VLEs also have their own wiki tool such as Blackboard©. As with blogs, wikis can be kept private to a group or community or made open to the world.

As we move more towards online collaboration and knowledge creation a wiki is a tool that has great potential for powerful, collaborative learning in higher education. Pausing to consider the term 'collaborative learning', Dillenbourg (1999, 4) makes the distinction between the pedagogical and psychological aspects; viewing the pedagogical as being 'prescriptive' in requiring learners to work together with the expectation that they will therefore 'learn efficiently'; and he views the psychological as being 'descriptive' in that it is the 'mechanism which caused learning' (Dillenbourg, 1999). Pedagogically the tutor needs to support students in developing collaborative writing skills which include negotiation, editing synthesis, relevance and so on.

According to some researchers, wikis are one of the most increasingly used Web 2.0 technologies in higher education, particularly within 'post-92 institutions (73%), but less so for Pre-92 (59%) and HE colleges (56%') (Brown, Jenkins, & Walker, 2006). Available to students 24/7 enables students to plan their time more effectively and access their learning at a time to suit their, often pressured, lives without being bound by geographical distance or time.

Increasingly wikis are being used not only for collaborative learning and group work assessments, but also for pre-course engagement activities. It is possible to use other free media within a wiki; for example at Nottingham Trent University Google Maps has been integrated into a wiki to create a flexible resource for modern foreign language students; students are collaboratively developing this virtual space to provide information on potential work experience placements abroad.

In higher education, wikis are most frequently used as a collaborative tool which can easily be used to plan, create, edit, revise, synthesise, append, critically reflect on learning processes, and create links to articles or other multi-media that already exist, thus providing a tool for distance-learners but also to complement face-to-face learning and teaching. As opposed to blogs, where users mainly have a personal identity, wikis can encourage contributors to become anonymous.

Through a wiki students can contribute to building knowledge and co-construct learning towards specific learning outcomes. Considerations in writing style, etiquette and group responsibility are often pre-requirements when introducing wikis for learning and teaching (Hemmi, Bayne, & Landt, 2009). As students create a wiki they become actively engaged through interaction with content, and through interaction with tutors or

other learners. A wiki can therefore also provide opportunity for peer review and peer feedback, for example a student can write an assignment and ask others to comment on his writing style or other aspects; at Leicester University staff in the Law faculty have been using wikis with first year undergraduate law students encouraging them to work in groups, supported by a tutor, to develop a writing style appropriate to the law discipline's writing conventions. Another example of collaborative learning and co-construction of knowledge is at Nottingham Trent University where first year undergraduates following a joint honours programme build a wiki comprising key terminology which they continue to build throughout their course, thus enabling a higher level of understanding of terminology as well as a quick reference. Some researchers report using wikis in Israel across three universities resulting in a wikitextbook with 564 sub-chapters, co-authored by undergraduate and graduate
students in more than 20 classes offered by seven academic departments over two years (Ravid, Kalman, & Rafaeli, 2008).

Peer assessment processes using a wiki can provide opportunity to foster metacognition and reflexivity, (Kirschner, 2004) as well as how to be creative when working collaboratively as a community, and 'operate in a world where the creation of knowledge and information is more and more becoming a group effort' (Richardson, 2010, 69). These abilities are considered to be crucial for being successful in our modern knowledge and information society (Ebner, Kickmeier-Rust, & Holzinger, 2008). This type of learning experience can deepen levels of learners' engagement and collaborative writing within a digital learning environment. Hence the utilisation of wikis provides opportunity for social constructivist learning as purported by Vygotsky, (Vygotsky, 1978). Cole summarises the critical features of constructivist learning as:

1. All knowledge is constructed through a process of reflective abstraction.
2. Cognitive structures within the learner facilitate the process of learning.
3. The cognitive structures in individuals are in a process of constant development.
4. If the notion of constructivist learning is accepted, then the methods of learning and teaching must agree (Cole, 2009).

Vygotsky believed that individuals learn better if they do so with and through others such as their peers, or teachers (Tudge, 1990). In learning collaboratively through a wiki learners are able to participate in such a style of learning through creating knowledge, reflecting and discussing with peers and thus mediating their own learning and progression as individuals. Vygotsky's ideas on the zone of proximal development (ZPD) also arguably align themselves with the idea of knowledge development through community (Vygotsky, 1978). The ZPD is defined as 'the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving in collaboration with more capable peers' (Vygotsky, 1978). Thus, in relation to the use of a wiki in learning, teaching and assessment we would argue that by creating knowledge as part of a community, that is, with their peers, learners are capable of achieving more in terms of their development than if they had created knowledge working individually. Alongside this is the development of their writing through feedback and working collaboratively.

A wiki would usually be set up by a tutor, administrator, or member of a collaborative project team. Once a wiki has been created individual pages and layers can be created which can be hyperlinked to a 'home page'. Tutors without access to a VLE might adopt a wiki to share resources with their students. As with blogs, a range of media can be uploaded to a wiki such as text, voice, video and images. The use of images can provide a visually rich environment for students. One of the key features of a wiki when used collaboratively is that a page history can be viewed – this provides information on when changes were made, who made them, and what was changed. While useful for tutors and collaborative groups to see who has edited content, this feature also provides support for tutors when assessing and needing to see what contributions individuals

have made to group work projects. Most wikis will also have a 'discussion' area where group members working remotely can have a 'virtual conversation' relating to the project.

The main focus in writing using a wiki other than the collaborative aspect is that learners 'become publishers rather than merely consumers of information' (Cole, 2009, 141). A wiki not only enables learners to create, edit, and reflect on materials either created by themselves or others, but this form of collaborative knowledge creation and sharing provides tutors with an opportunity to create tasks that can result in a higher level of social engagement than other, more traditional, forms of learning and teaching.

The following section examines how ePortfolios are providing a virtual space for students, which they own and control access to, to develop their own identity and writing which they can then choose to share with others.

EPortfolios

Paper-based portfolios have been part of higher education for many years; used by students to provide evidence for assignments or in developing evidence for competency-based programmes such as teacher training, or in developing evidence for key professional skills. With the increase in the use of new technologies ePortfolios are gradually replacing the traditional portfolio. This development is engaging students who prefer online multi-modal technology and are increasingly aware of the environment, the green agenda and sustainability issues. The ePortfolio provides an opportunity for students to have a virtual space that they 'own' where they can develop individual identity which they can then choose to share with the external world. Students are able to critically reflect on aspects such as professional development and formative feedback, and evidence individual development. Arguably, it may be that as the ePortfolio tool develops it will become a virtual space used by individuals to provide authentic multi-modal evidence of personal and professional development.

The term 'ePortfolio' has various definitions such as JISC's: 'An e-portfolio is the product, created by the learner, a collection of digital artefacts articulating experiences, achievements and learning' (JISC, 2008). Some research suggests that there are three different types of portfolio: an exemplary portfolio where students place their best pieces of work; a process portfolio which demonstrates the developmental process of the student's learning and a combined portfolio which contains examples of both exemplary work and developmental work (Falchikov, 2005). The authors' experience of using ePortfolios for a range of undergraduate and post-graduate courses in Higher Education would suggest a fourth type, that required for evidence in support of professional competencies such as those required by Professional Bodies. This fourth type would also reflect an ePortfolio for accreditation for prior learning where evidence is provided to support achievement of course learning outcomes, and that of students working towards National Vocational qualifications who provide evidence of competencies. Others suggest different purposes of the ePortfolio, acknowledging the adaptation from the traditional 'portfolio' into the electronic domain, listing the different purposes such as 'developmental', 'presentation', and 'assessment', (Mason, Pegler, & Weller, 2004) while others identify a 'dossier portfolio', a 'training portfolio', a 'reflective portfolio', and a 'personal development portfolio' (Roberts, 2009).

In considering the introduction of an ePortfolio to any programme the tutor team need to carefully consider the purpose(s). Once the purpose has been agreed a list of requirements can be drawn up so that a suitable ePortfolio tool can be identified. Many universities already have an ePortfolio tool within its Virtual Learning Environment such as PepplePad© or Desire2Learn©, but it may not necessarily suit the needs of the course. Tutors may need to trial the chosen tool and evaluate with students. It may be that course teams decide to turn to open-source, free software which is more suitable to the

needs of their students such as ELGG© within Moodle© or Posterous©. Involving students at an early stage in the introduction of an ePortfolio is therefore advantageous

Ownership of the ePortfolio is an important aspect. With most systems the student is the 'owner' of this virtual space although the tutor team will have input into the content of the ePortfolio. It will depend on the purpose(s) of the ePortfolio identified in the initial planning stages of using this tool as to whether the documents within this space are to be integrated into the course's assessment and feedback. Most ePortfolios will enable students to give access to the whole of their ePortfolio, or elements of their artefacts (an artefact is generally a document such as a video-clip, a text-based document, a sound file, and so on) to anyone whether inside or outside the University. Many students report that they give a wide range of people access to different elements such as potential employers, friends, relatives, peers, their tutors, and so on – as the 'owners' of the space this is their decision (Boulton, 2011).

Students will usually need support from tutors in how to set up and organise their ePortfolio. When the authors first started using ePortfolios with different groups of students there was an assumption that as the ePortfolio would be owned and controlled by the students they would want to organise it in their own way. This has not proved to be the case; the authors' experience is that students find it difficult to visualise how the ePortfolio might develop and therefore welcome support in the early stages of creating, structuring and organising their artefacts.

One of the main benefits of the ePortfolio is the range of multi-modal authentic artefacts that students can choose to put in their ePortfolios, (Boulton 2011). This multi-modal feature enables students to really think about how they want to present themselves and develop their identity through the ePortfolio. Most ePortfolios will provide an area where students can add commentary, often in the form of reflections, to link the different artefacts together. As they develop their ePortfolio it starts to take on a Web-based 'look' and tend to be navigated through different elements via hyperlinks.

Students may have used ePortfolios prior to starting in Higher Education but this will depend on their experience of ICT in their previous education institution. EPortfolios are not part of the secondary schools' National Curriculum but some examination boards have built them into their assessment systems such as EdExcel who assess their Diploma in Digital Applications through an ePortfolio. However, as an ePortfolio tool is not viewed as a social networking tool wide experience of an ePortfolio by students prior to university is not common. Even on post-graduate courses it is common to find students have not used an ePortfolio tool and need an introduction to what it is, how to use it, organisation, and how to draw documents together through reflective commentary.

As with wikis and blogs students are able to share artefacts and develop collaborative writing skills including negotiation, editing synthesis, and relevance. Through sharing their work through their ePortfolio they are able to receive peer and tutor feedback to develop their writing skills. The ePortfolio enables them to publish their work but only with those they give access to, rather than publishing to the world as with blogs and wikis. Skills in writing for different audiences, as discussed earlier in this chapter, is a further skill that can be developed and encouraged by tutors who may suggest specific persons such as employers to share their artefacts with for feedback and development purposes.

Conclusion
As Higher Education moves towards a more student-centred learning environment, we are increasingly encouraging students to write using a range of virtual tools designed to encourage achievement of learning outcomes rather than content and increasingly considering different styles of learning (Kolb, 1984). The practice and use of Web 2.0 technologies such as those described in this chapter are very likely to have an impact on

education in the future. Anderson (2007) predicts a number of ways in which this might happen. Firstly, there is the notion of the wisdom of crowds and the power of groups through the emergence of, and increase in size of online social networking groups. These may come to threaten universities as traditional places for wisdom and knowledge creation – especially if it is perceived that you can so easily get this elsewhere. Secondly, there is the rise of user-generated content which increases the rise of the amateur, and a culture of do-it-yourself, and this in turn, may also challenge the status of the academy as the elite source of knowledge (Anderson, 2007). The role of new technologies is providing new ways of learning and sharing, (Johannesen & Habib, 2010). Encouragement of sharing virtual spaces to provide peer support to enhance student learning and gain multiple perspectives is also becoming more prevalent in higher education (Alterio, 2004; Rocco, 2010). We should therefore identify where new tools will enhance the experience of students and engage them in collaborative co-construction of new knowledge through virtual spaces.

Literacy in the virtual world is increasing, and with it, changes are coming that may or may not be welcomed by everyone, bringing with them, as they do, challenges to the old world order in education. It is up to those in higher education to embrace these changes and in doing so rise to the challenges they bring. This will enable tutors to continue to support students in these new virtual ways of written communication and in doing so, consistently keep learners at the heart of Higher Education. In a world that is moving towards a model of collaborative learning and the social construction of knowledge, which is increasingly being reflected in higher education as transition to roles of facilitator and co-constructors of knowledge with their students, the virtual learning environment is becoming increasingly powerful and is beginning to develop a new cultural literacy. Shared virtual spaces which provide opportunity for collaborative learning such as wikis, blogs and ePortfolios can also provide a far greater opportunity for students to really take ownership of their own learning in a way in which tutors are only just beginning to explore.

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