Curriculum Innovation: Living and Working on the Web

Lisa Harris[1], Cristina Costa[2], Fiona Harvey[1], Graeme Earl[1]

[1] University of Southampton, [2] University of Strathclyde

ABSTRACT: Curriculum innovation with the support of the web implies rethinking of forms of participation and engagement as part of both the learning and teaching experiences in wider contexts than that of the classroom. The web has entered our daily life for a great variety of reasons, but it is as yet far from being fully integrated into the way we learn in formal settings. Higher Education institutions have a duty to promote such innovations as part of their teaching and learning strategy if they wish to answer to the demands of the digital economy. None the least because Universities recruit students from a wide range of backgrounds who exhibit distinctive abilities, dispositions and attitudes towards the web as a tool for learning, networking and active presence. Thus it is of paramount importance to socialise all students in new ways of learning that will feed into modern ways of working and problem solving.

This paper will present preliminary findings about the design and implementation of an innovative module at the University of Southampton in the UK that aims to address these issues and put students at an advantage in a digitally focused, highly competitive job market. The initial findings show that the student population participating in this study is diverse in the skills and approaches displayed with regard to digital forms of working and learning. At this stage, we can infer that this might be related to the way they have been socialised into learning, and also to the impact their own cultural capital may have had in influencing their digital habits.

Introduction

Curriculum innovation is necessary to meet the demands of a society in change where we are preparing students for jobs that in many cases do not yet exist. The digital economy requires much more than graduates who simply act as sponges for information. Interactive and real-time learning is vital in an environment that is increasingly global, where information is the most valuable asset, and effective collaboration is a tool which is increasingly valued by employers (Krause and Coates, 2008). And beyond employability, the broader issue of living in an increasingly digital society requires an appreciation of participation, social justice, personal safety, ethical behaviours and the management of identity and reputation.

These developments have fostered a new culture of living, working and problem solving that needs to be matched by the way we teach. Being resourceful in terms of the continual development of practice is now a more important skill for learners and teachers to acquire than any static knowledge they might hold. Wesch (2009) talks about the difference between being "knowledgeable" and "knowledge-able", and putting this distinction into practice seems to be the obvious yet challenging step in the preparation of the next generation of knowledge workers.

This paper evaluates the development and delivery of an innovative module at the University of Southampton during the 2012-13 academic year within a Curriculum Innovation (CI) programme. Currently there are four new CI modules on offer to students at the University with an interdisciplinary digital theme. These modules have been developed by a group of academics who belong to the University's Digital Economy Research Group. A key focus of this group over the past two years has been to encourage the application of technology-rich education tied to leading edge digital economy research. The development process has been informed by extensive interaction with industry to ensure employability, and input from our group of Student Digital Champions

The module we focus on here provides an interdisciplinary perspective to students on the fundamental ways in which the digital world is changing how we live, interact and learn. Fundamentally, it is about building the capacity to respond positively and flexibly to change

through the critical evaluation and agile adoption of new practices. The module is both innovative in its content and also in its format – students work collaboratively and largely online by answering set questions, commenting on the answers provided by their colleagues, mentoring each other and summarising their key learning points from each week in a reflective diary. Such "life-wide" learning (Jackson, 2010; 2011) recognises that life experience and extracurricular activities can differentiate students from others who have completed similar degrees. Students were encouraged to participate in university life outside the classroom, reflect on what they contribute to these communities, and what they have learned as a result of their participation. They were also invited to present their feedback on their learning experience with this module to a major Digital Literacy conference that took place at the university in the Spring of 2013.

By facilitating this blended approach for students from across the whole university, what lessons can we learn about a) the value to students of the skills acquired and b) the implications for curriculum development within the University more generally? Our data was obtained by incorporating relevant questions into the students' reflective accounts of their learning and from focus group discussions with teaching staff. Content analysis of this and the students' various contributions to the module was carried out and some preliminary findings are presented in the sections below.

Life wide learning

Life wide learning regards learning as an unpredictable life long journey by putting an emphasis on the serendipity of experiences as meaningful learning opportunities. Learning is seen as non sequential, context dependent, and drawing on learners' multiple experiences. Hence, learning should also encompass learners' life experiences as a useful resource.

The growing emphasis of learning technology in curriculum design has come to question how, when and where learning is facilitated. Hence, it is important to understand the evolution of technology through the years and the impact it has had on wider society so we can best exploit it for contemporary teaching and learning practices.

In the 90s educational technology was celebrated with taglines such as "anywhere, anytime". It promised to revolutionise formal education. The revolution stretched as far as the "technical fix" (Gouseti, 2010) allowed, with access to information being the main feature of the new technological infrastructure in place. It resulted in a mere transference of practices from an analogue to a digital system that to some extent is still present in formal education.

In the subsequent decades, however, the Web progressed to become a space of participation, presenting features beyond the technological ability of retrieving information. The web is now also an infrastructure known for the socialisation of multiple practices available to a large percentage of society. This global phenomenon has been appropriated by different sectors and layers of society, resulting in the change of practices through new forms of co-constructing, sharing, and communicating knowledge in distributed spaces. Businesses have started to enhance their online presence with interactive platforms (Kaplan and Hanelein, 2010). Video and audio channels have promoted a culture of remixing (Lessig, 2009) and digital presence thus encouraging digital forms of creativity. Employers are assessing the digital footprints of their future employees and individuals are starting to develop their own personal branding to promote themselves, network and make their services more visible (Harris and Rae, 2011).

In short, this Do It Yourself (DIY) approach to information and communication has informed new ways of working and has influenced society accordingly. People shop, study, bank and carry out business online. The web is now integrated in people's lives, and ingrained in their social and professional habits. It is also argued that it should be part of the formal education offer (Greenhow et al, 2009; Juwah, 2013) in order to grant authenticity to higher education learning.

The habits developed on the social web present a new level of complexity to education and the institutions who aim to cater for the requirements and expectations of a changing society.

There is a pressing need to prepare learners with skills and competences that will enable them to face up to a future not yet known (Pence, 2007; Qualman, 2012). Thus, there is a need to promote curriculum innovation to include life wide learning.

Today, the web has become a meaningful resource for information seeking, and also for the creation and crowdsourcing of information. The web has become a pool of current knowledge featuring different formats: text (websites, blogs, journal articles, etc.), audio (podcasts) and videos (tutorials, reviews, interviews, lectures, etc.), pictures (sharing of artefacts, etc.), and other knowledge sources (academic and popular opinion; live and recorded information; synchronous and asynchronous communication).

In implementing life wide learning, institutions need to rethink their curricula to include and privilege these unforeseen aspects of learning. This implies changes in practice for all parties involved:

- Curriculum designers: shifting from designing content to engineering contexts for learning (Dias de Figueiredo and Afonso, 2006)
- Educators: Shifting from teaching content to "animate" the learning experience with learning challenges (Bennett et al, 2012; Conole, 2012)
- Learners: shifting from processing content to "creating" their own learning experiences

Learning in real contexts and authentic settings

A life wide learning curriculum highlights the authenticity of learning experiences. It places learning in the contemporary social, cultural, and economic reality. It therefore requires the development of literacies that are situated in those contexts.

Web and digital literacies are core to curriculum innovation because of the needs of the digital economy. As Wesch (2009) reminds us, curriculum innovation in the digital age needs to foster the "knowledge-ability" of learners more than it should seek to create "knowledgeable" individuals. This translates into instigating the autonomy of learners and supporting them in mapping out their own learning journeys above and beyond any formal teaching and learning activity. And, in return, it also means to foster the development of situated skills that will help current learners to thrive in the unexpected contexts of the present and future digital world. This kind of curriculum innovation becomes even a bigger imperative when, according to the "Go-on" report, 16 million individuals in the UK alone still lack basic online skills (2012).

Life wide learning and digital and web literacies walk hand in hand in providing environments for authentic learning. Both focus on the "personal life course of an individual through which they learn" (Jackson, n/d, p.4). Learning on the web and learning how to be "digitally savvy" is a personalised learning experience. Nonetheless, it is not an isolated one. It is rather a shared venture. And curriculum design must take that into account and cater for situated learner and the skills that are relevant to help learners strive in a changing society.

Belshaw (2013) points out eight essential elements of digital literacies the 21st century learner should master: Cultural; Cognitive; Constructive; Communicative; Confident; Creative; Critical and Civic. Belshaw et al (2013) have also gone on to extend the concept of digital literacies to include the competences required to perform effectively on the web. The authors identified four areas in which those skills can be developed and applied: 1) Exploring; 2) creating; 3) Connecting; and 4) protecting.

Literacy is a social construction (Li, 2001); a product of social practices (Barton et al, 1999) that is "historically situated" (ibid, p8). For centuries, core literacies have been associated with reading and writing. Together with numeracy they were regarded as essential working skills. In the current age, however, digital and web literacies have not only come to join this group of important skills, they are also becoming essential life skills. Literacy needs change with the development of new social practices and conventions. Hence, it is important not to disregard the socio-cultural dimension in which the development of literacies is placed (Baynham, 1995).

In summary, although the web has become pervasive especially in the lives of knowledge workers, it is still often used in a rather rudimentary way, with information seeking being one of the main activities performed online for professional purposes. If Higher Education

institutions are to prepare the workers of the futures with adequate skills and attitudes, they will need to integrate the web in their curriculum and socialise their students into new forms of learning via online networking, online participation and creation of knowledge in collaborative environments. The knowledge worker of the 21st century is "digitally savvy" and has a reputable digital footprint that connects them to meaningful sources of static (resources) and interactive knowledge (specialised networks).

Curriculum innovation at the University of Southampton

Curriculum Innovation is preparing graduates for their future by offering new choices and options on many study programmes. The next generation of graduates will face future challenges that we haven't even imagined and take jobs that may not even exist yet. The increasing pace of change is such that they will need to develop new knowledge and skills throughout their working life.

An innovative approach to the curriculum is allowing the University to develop opportunities for students to exercise choice and personalise their learning, if they wish to do so. In February 2012 a set of new, interdisciplinary modules was introduced and this list was expanded at the start of 2013. One of the new modules – and the subject of this paper –is titled Living and Working on the Web (#UOSM2008)

As stated on the Curriculum Innovation website, key to the University's future success as an institution will be:

- Providing a world-class student experience that attracts the most talented students and staff
- Providing choice and flexibility which allows students to personalise their learning and maximise the value they get from their study at university
- Recognising the importance of employability to students and prospective students and doing everything we can to enhance this aspect of their education
- Continuing to grow research excellence across the disciplines and using this as a basis to develop new and innovative education programmes

The benefits of reforming the curriculum include:

- Students who are better prepared to excel in employment and enterprise
- Being able to clearly articulate the distinctive University of Southampton educational experience to current and future students
- Enabling the multi and interdisciplinary research ethos to be embedded into our education offering

Changes to the way their education is funded will only increase the trend for students to become more demanding in terms of their expectations of quality. Whilst there will always be students who will want to focus exclusively on their chosen degree subject, others will increasingly expect more choice in what and how they study. This could include choosing modules from outside of their discipline, modules which give them an interdisciplinary perspective or studying part-time.

Living and working on the web: module summary

After completion of this module, students should:

- be proactive, confident and flexible adopters of a range of web and mobile technologies for personal, academic and professional use
- use appropriate web and mobile technologies effectively to search for, store and curate relevant information
- be equipped to reflect upon and critically evaluate the information obtained
- engage creatively and productively in relevant online communities
- be familiar with the use of collaboration tools to facilitate networking, group work and project management

- be aware of the challenges inherent in ensuring online privacy and security
- have developed appropriate communication skills for peer and tutor interaction within an 'always on' environment

The module combines online interaction, self-study and face to face support workshops. The self-study materials introduce the full range of topics that need to be covered, and then additional details emerge through on-going discussion and collaboration with colleagues and tutors. One of the key features of a contemporary learning programme such as this is the high level of interaction where students are required to share their own insights and experiences for the benefit of the group as a whole. In addition, they are assessed on each topic as the module progresses while at the same time building their own professional online portfolio. In short, active learning is required throughout.

1. Online interactions (5 topics, each lasting 14 days)
For each topic students receive the following:

- Text-based topic summaries focused on the themes of each week
- Directions for the completion of assignments
- Links to web-based materials offering additional insights
- Supplementary reading

These materials include presentations, videos and audio clips, as well as short articles and academic papers. It is important to complete these tasks because the assessed online interactions directly depend on it. This is the process students follow for each of the five module topics:

1. Read the preparatory materials and respond to the set question by the deadline (7 days ahead). This task represents an opportunity to demonstrate the ability to research diverse sources, share personal experiences, and synthesise the knowledge collated into a clearly written and thought provoking posting that shows understanding of the material and its application to specific cases. In addition, the tutor will choose to comment on some of the postings in order to moderate the discussion. It is important to emphasise that the focus is on student contributions that share their opinions, experiences and additional resources. Knowledge is constructed and expanded as a result of the interactions with the taught materials, tutor and other class participants.
2. AFTER their first posting, students read the posts of fellow students, and respond to AT LEAST TWO of them in a meaningful and critical manner by a set deadline (3 days later). The author may then respond to contributions to their post, as might other students and/ or the tutor, so that a discussion thread develops. Students should contribute an original viewpoint, include new information, lead a discussion or point to new resources, not simply react to what others have said.
3. At the end of each topic (4 days later) students post a reflective summary of their learning from the materials they have consumed, the work of their colleagues and the interactions on the discussion board. By this point the whole class should have collaboratively discussed the materials, shared their experience and their insights, and improved their collective understanding of the subject.
4. The next topic then begins straight away, and students get individual feedback on their work within 2 days of completing the previous topic, so the comments can be factored into the approach they take next time.

Module Assessment Summary

1 Online interactions (50% of module assessment)

Set Question	Assessment	Answer set question on discussion board (by end of day 7) Guide: 300 words per topic	2 x comments on the work of other students (by end of day 10) Guide: 2 x 50 words per topic	Reflective summary (by end of day 14) Guide: 300 words per topic

Topic 1: Explain the concept of digital "visitors" and "residents" drawing upon your own online experiences to date	Formative	X	X	X
Topic 2: Discuss the arguments for and against having more than one online identity.	Summative	X	X	X
Topic 3: Discuss the ways in which an authentic online professional profile can be developed.	Summative	X	X	X
Topic 4: Evaluate the opportunities and threats raised by the use of social media to support live events.	Summative	X	X	X
Topic 5: Explain the advantages and disadvantages to a content producer of making their materials freely available online	Summative	X	X	X
Breakdown of marks as % of total module assessment		20%	10%	20%

2 **Development of the student's own digital portfolio (50% of overall assessment)**
    a) Provide the evidence base for the development of your own online presence during this module, through links to your blog, twitter account, LinkedIn profile and other relevant online content. Compare your position at the end of the module with your level and extent of activity on these channels before the module began.
    b) Reflect upon what you have learned during the module about living and working online and how you will take this forward into the future (500 words)

Findings and discussion: what have we learnt so far

The module tutor perspective

Due to administrative and promotional difficulties, we struggled to recruit students to the module for its first running in January 2013. We set a cap of 20 students and actually ended up with 17. Two of these were members of staff who wanted to study on an informal basis, and one was a student whose programme did not permit her to study the module formally, but who wanted to take it as an extra. Of the remaining 14 students who signed up, what was most striking was the wide range of attitudes and abilities. At one end of the scale, we had students who were already proficient online networkers and experienced in applying their social media skills to the development of their online professional profiles. Some already had digital marketing jobs lined up for after graduation, or they were already working in the industry on a part time basis. At the other end of the scale, we had two students who found it difficult to grasp the basic principles of professional social media use throughout the module.   In between these extremes, we had a core group of students from a range of disciplinary backgrounds who started off knowing very little about the subject, but they recognised its importance and wanted to take the module to improve their skills.

As module tutors, the first challenge we encountered was in getting the students used to a study environment that was very different from their learning experiences in other modules. For example, some students commented that they were not normally allowed to use phones or laptops in class, nor were they used to seeing, reading and feeding back on the work of other students. The online study environment allowed them great flexibility over when they actually worked on the module, and this was greatly appreciated by students who were combining work and study. It posed difficulties, however, for students with poor time management skills who were used to the routine of turning up for weekly lectures and then cramming for an end of module assessment such as an essay and/or exam. Without this structure, they struggled to meet deadlines and were uncomfortable that the on-going monitoring and assessment gave them nowhere to hide and forced them to participate (or made it obvious that they did not) throughout the module.

Secondly, the amount of work required of the tutors in reading, monitoring and responding to online discussions should not be underestimated. Obviously there are flexibility of timing advantages for the tutor too, but the approach far exceeds the level of commitment required in the traditional lecture model where you rarely get to see what students are capable of (in both a positive and negative sense) until after the module is completed and the assessments submitted. A lot of tutor time was also spent in sending out reminders of deadlines and chasing up late work.

It was very rewarding that the best students went far beyond the call of duty in terms of promoting the module to others, sharing useful resources and encouraging less committed students to participate. A group of 4 students produced a video about their experiences on the module which they played to very impressed delegates at our recent Digital Literacies Conference.

This activity has also done wonders for the profile of this group of students within their own departments: *I was amazed when on Thursday morning; the day after the Digital Literacy Conference, my Spanish Language teacher greeted me when I walked into class with 'nice video[1] Anna'. Although he had not been at the event himself, he had seen the video that we had shown at the conference as it had been retweeted by the @ModernLanguages twitter account. I doubt that if the social media stream on #sotonmooc wasn't there he would have even known there was a Digital Literacy Conference that day!*

The nature of this module and its requirements means that we have plenty of feedback from the engaged students, but those who did not engage are by definition almost silent. On the positive side, some interesting comments were made about the module format and structure, and its impact on employability: *The reflective summary allows you to think about where you've come from and where you are now and how useful it might be for you in the future - this is something you don't get on other modules*

One of our students was able directly to apply knowledge gained from the module more quickly than she expected, as explained on her blog: *Only a month ago I spent my Monday morning at university attending a workshop on creating and editing video on smartphones with David Willox and Simon Morice of icmReporting. After learning about conducting video interviews, we exchanged contact details and a month later I found myself working as a news reporter at Digital Media Europe 2013, an international conference on digital trends within the media industry. Given that I had absolutely no experience in reporting, I was somewhat surprised when I was sent off to interview business leaders with a smartphone, a microphone and lights on the first morning of the conference. However, their simple four question approach and their refreshing confidence in a student's maturity and capabilities enabled me to conduct 11 video interviews over the three days, with each one produced, edited and uploaded in about 30 minutes*

So for motivated active learners, the benefits are obvious. However, students who expected a module with no exam and limited attendance requirements to be easy were rather shocked to find their work scrutinised or their lack of participation highlighted from an early stage of the module. The requirement to engage in discussions and build a digital profile over a 4 month period meant that anyone expecting to operate in passive mode and then pull something together at the last minute would find themselves in an increasingly uncomfortable position as the module progressed. We also hoped it was obvious that the general title of "curriculum innovation" and the specific one of "living and working on the web" implied that the content and format would be rather different from the norm. Careful reading of the detailed study guide before starting the module might have been useful for the students who considered themselves (for a variety of interesting and/ or unfortunate reasons) to be unsuited to this approach. This may also hint at the cultural expectations of students who have been socialised into traditional forms of teaching and learning and who thrive in such conventional contexts. By comparison, the web, as a tool supporting life wide learning contexts calls for new teaching approaches that places students in command of their learning. There is a shift in practices that should translate into new teaching and learning habits across disciplines and areas of knowledge.

---

[1] Student feedback Student video: http://www.youtube.com/watch?v=nDvc3Vv5byQ&feature=youtu.be

In terms of the broader role of digital literacy in a university education, there were some interesting reflections from the students on this bigger picture: *Formal institutions (such as universities) are poorly placed to deal well with the social, cultural and economic changes that derive from the continuing use of these technologies. It's true and we've all suffered at the hands of a clunky SUSSED [University web portal], an antiquated Blackboard and a reluctance to embrace the academic and collaborative value of social media. With fees on the rise, universities must be mobile (excuse the pun) with regard to their digital development.*

Another student then replied to this: *Your attention to the potential trouble universities are facing in light of students' rapid digitalisation is of particular poignancy given our own position as students preparing to emerge into employment so I am glad you mentioned it. Over our 4 years of study, I feel we can definitely relate to the "technophobic faculty" the Small Steps Across the Chasm article refers to, struggling not only with SUSSED and Blackboard but also feeling completely out of touch with digital residency which could boast invaluable advantages for future employment. With the job market as it currently stands, I am thankful that we have been able to take part in UOSM2008, although it is unfortunate it has taken until our 4th and final year of study and feel the University should make these opportunities available earlier. I strongly agree with your closing statement that if students are going to start paying £9000, they should expect more for their money.*

Next steps and conclusions

Edudemic (2013) lists a number of characteristics of successful online students which are summarised below:
1. Being highly motivated to learn. In on ground classrooms, learning can be passive, while in online programmes, learning is active and the learner must be engaged at all times.
2. Having strong time management skills and self-discipline. The normal structure of getting to class on time is gone, requiring each student to set his or her own schedules to get the work done.
3. Being highly communicative. Communication and collaboration are critical to the student's success.
4. Demonstrating strong critical thinking skills and basic technology skills.

We had a number of students who fitted the above description and consequently did very well, requiring only a light steer and plenty of encouragement from their tutors. It was perfectly possible for others to give a superficial impression of engaging with the module while actually "piggy backing" off the work of others. However, it was very clear to the tutor simply by observing the tweets and blogposts of these individuals whether they were actually "walking the talk" or not. Additionally, all the discussion board posts were time-stamped so it was easy for everyone to see if a specific idea posted by one student at 10.36pm also emerged at 11.01pm and 11.23pm on the same day in the work of two other students (actual example).

But is it too much for us to expect students to learn social media tools from scratch AND how best to use them to build professional profiles, all within one module? We cannot assume that incoming students will have prior skills. Several of our students had not blogged or tweeted before at all. This meant that the level of skills was very variable to start with, and we made use of the most experienced students to help with mentoring of their less confident colleagues. Next time we plan to formalise this process by introducing group work bringing together students of mixed ability levels into support networks. This is proving successful on another CI module with which we are involved that focuses on the Digital Humanities. Of the students who started out with little knowledge, some worked hard and quickly made progress, others struggled throughout with the whole approach which was very different to the model of learning that they were familiar with. As discussed earlier in the paper, we believe that active life wide learning should ideally be built in throughout the educational programme so that students will experience less of a culture shock and more tolerance for change and/or ambiguity.

There are a number of opportunities for aspects of the module that worked well to be subsequently fed through into standard University procedures. For example, using Google docs was ideal for giving prompt and on-going feedback to students, rather than the standard manual processing of assignments at the end of a module. Offering modules through a curriculum innovation programme to students from across the whole university encourages structural change and flexibility, for example by enforcing the standardisation of modules around 15 credit points across all faculties. And of course by showcasing the importance of digital literacy through this module, we are actually saying that the principles should be applied much more broadly. In turn it is a stepping stone towards much more fundamental change in teaching and learning approaches for the digital age.

This paper has described the implementation of a new module at the University of Southampton, highlighting its innovative features and approaches to teaching and learning. The work presented aimed to highlight the need to make HE programmes relevant to the current job market that relies heavily on a digital economy. The preliminary research findings have indicated that there is a huge discrepancy amongst students' expectations and engagement in a module that aims to mirror the practices carried out in "the real world". Further analysis is needed to better understand this phenomenon. Using White and Cornu's (2011) interpretation of Digital Residents versus Digital Visitors might help us to understand better the social reality captured by this research. Such an approach presents a consciously binary interpretation of a much more complex reality. Hence, it might also be worth re-analysing this research though Bourdieu's key concepts and use social and cultural forms of capital (1985) as a useful research lens to understand the attitudes and dispositions of this group of students who display such varied approaches to the use of the web.

References

Barton, D., Hamilton, M., Ivanic, R., 1999. Situated Literacies: Theorising Reading and Writing in Context. Routledge.

Baynham, M., 1995. Literacy practices: Investigating literacy in social contexts. Mike Baynham. New York: Longman, 1995. Pp. xi + 283., in: Eskey, D.E. (Ed.), Studies in Second Language Acquisition. pp. 394–394.

Belshaw, D., Mozilla Team, Croudsource, 2013. Mozilla Web Literacies White Paper.

Bennett, S., Bishop, A., Dalgarno, B., Waycott, J., Kennedy, G., 2012. Implementing Web 2.0 technologies in higher education: A collective case study. Computers & Education 59, 524–534.

Bourdieu, P., 1985. Forms of Capital, in: Handbook of Theory of Research for the Sociology of Education. Greenwood Press, pp. 241–58.

Conole, G., 2012. Designing for Learning in an Open World, 2013th ed. Springer.

Dias de Figueiredo, A.D., Afonso, A.P., 2006. Context and Learning: A Philosophical Framework, in: Managing Learning in Virtual Settings: The Role of Context. Idea Group Inc (IGI).

Doug Belshaw, 2011. The Essential Elements of Digital Literacies.

Gouseti, A., 2010. Web 2.0 and Education: Not Just Another Case of Hype, Hope and Disappointment? Learning, Media and Technology 35, 351–356.

Greenhow, C., Robelia, B., Hughes, J.E., 2009. Learning, Teaching, and Scholarship in a Digital Age Web 2.0 and Classroom Research: What Path Should We Take Now? EDUCATIONAL RESEARCHER 38, 246–259.

Harris, L. and Rae, A. (2011) Building a personal brand through social networking, Journal of Business Strategy, Vol. 32 Iss: 5, pp.14 - 21

Jackson, N., n.d. From work integrated to life wide learning doc free ebook download.

Jackson, N.J., 2010. From a curriculum that integrates work to a curriculum that integrates life: changing a university's conceptions of curriculum. Higher Education Research & Development 29, 491–505.

Jackson, N.J., 2011. Learning for A Complex World: A Lifewide Concept of Learning, Education and Personal Development. AuthorHouse.

Juwah, C., 2013. Interactions in Online Education: Implications for Theory and Practice. Routledge.

Kaplan, A.M., Haenlein, M., 2010. Users of the world, unite! The challenges and opportunities of Social Media. Business Horizons 53, 59–68.

Lessig, L., 2009. Remix: Making Art and Commerce Thrive in the Hybrid Economy. Penguin Books.

Li, G., 2001. Literacy as Situated Practice: The World of a Pre-Schooler. Canadian Journal of Education 26, 57–75.

Mahiri, J., 2011. Digital Tools in Urban Schools: Mediating a Remix of Learning [WWW Document]. URL http://quod.lib.umich.edu/t/toi/10329379.0001.001/1:3/--digital-tools-in-urban-schools-mediating-a-remix-of-learning?g=dculture;rgn=div1;view=fulltext;xc=1 (accessed 4.9.13).

Pence, H., 2007. Preparing for the Real Web Generation. Journal of Educational Technology Systems 35, 347–356.

Peters, K., 2009. M-learning: Positioning Educators for a Mobile, Connected Future, in: Ally, M. (Ed.), Mobile Learning: Transforming the Delivery of Education and Training. Athabasca University Press.

Qualman, E., 2012. Socialnomics: How Social Media Transforms the Way We Live and Do Business. John Wiley & Sons.

Tanenbaum, A.S., Castañeda, V.M.C., Talamantes, A.M., 1991. Redes de ordenadores. Prentice-Hall Hispanoamericana.

Wesch, M., 2009. From knowledgable to knowledge-able: Learning in new media environments. Academic Commons 7.

White, D.S., Cornu, A.L., 2011. Visitors and Residents: A new typology for online engagement. First Monday 16.