Editorial

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Designing and evaluating social media for learning: shaping social networking into social learning?

Introduction: current status of social media and learning

Although the adoption of social media (or Web 2.0 technologies) within our everyday lives is relatively recent, many have attempted to embrace these technologies and related digital literacies for learning in educational institutions and the workplace. The state of the art in this respect before 2010 was reflected in two key publications edited by the editors of this Special Issue. These were a special issue in this journal on *social software, Web 2.0, and learning* (Ravenscroft 2009), and a *Handbook of Research on Social Software & Developing Community Ontologies* (Hatzipanagos & Warburton 2009). These covered a wide range of perspectives and projects that collectively conveyed the energy and enthusiasm for embracing more open and participative approaches to learning, mainly through applying and adapting existing social media technologies, such as weblogs (blogs), wikis, and popular social networking tools (e.g. Facebook). This collection of work also uncovered some deep misalignments and paradoxes in the context of traditional education:

> There is also the clear tension between the tradition of learning as a highly structured and organized experience, involving clear levels of authority, and, the more collaborative, volatile and anarchic nature of the social web. (Ravenscroft 2009, p. 5)

One particular factor in this respect was nicely pointed out by Clark *et al*. (2009):

> More needs to be understood about the transferability of Web 2.0 skill sets and ways in which these can be used to support formal learning. (Clark *et al*. 2009, p. 56)

This initial and somewhat fractured discourse is what this Special Issue aims to develop significantly as we arguably move to the next generation of initiatives that aim to support learning with social media. One of the key challenges in this respect that is represented by two articles in the Special Issue (Fitzgerald, Ravenscroft *et al*.) is to clarify and distinguish what we consider to be informal and formal learning, and what we consider to be important about relationships between the two. This is important because the claim that is often made about social media is that it is an effective bridge between informal and formal learning.

Reconciling informal and formal learning through design

One of the key ongoing agendas, across the European educational landscape in particular, is finding ways to capture meaningful informal learning experiences by explicitly linking these to formal structures, and providing frameworks within which informal learning can then be validated and accredited (Cedefop Report 2007). The idea is to harness individually motivated and interest-driven informal learning within wider and more standardized educational practices and organizations. This is recognized as especially pertinent given the prominence of the lifelong learning agenda and the diverse nature of student profiles, from adult, vocational, part-time, distance, digital natives, and so on. Social media technologies can offer significant potential if they can support informal and formal learning practices within the same digital space through the sharing of common digital literacies. Similarly, specially designed social software can focus on semi-formal learning practices (e.g. Ravenscroft *et al*. 2008) that deliberately bridge informal and formal dimensions of the learning process.

Nevertheless, given the pace of change in the possible social media configurations, or 'digital ecosystems', that can be deployed in support of informal and formal learning, it is clear that we need to focus on a more future-proof concept than the technologies themselves, which will assist us in both better understanding and realizing learning, or new forms of learning. So the frame adopted in this Special Issue collection is the argument that 'design' is a suitably rich, flexible, and

yet formal enough concept to help us engineer, or at least favour, better learning with social media while also supporting a better understanding of the underlying social processes at play. The articles by Fitzgerald and Ravenscroft are particularly clear in illustrating this theme of using design frameworks to specifically promote informal learning with social media, in two contrasting contexts, creating user-generated content for location-based learning and informal learning and knowledge maturing in the workplace, respectively. This stance (of focusing on design) is also partly a reaction to research in the technology-enhanced learning (TEL) field that has been overly predicated on technologies, as this reliance is no longer feasible given the continued speed of technology development.

The interplay of problematization, design, and evaluation

Interestingly, the fact that social media can potentially encompass social networking and social learning within the same technological spaces raises specific problems as well as providing unique opportunities. If we conceive of design as increasingly becoming a process of intervention within emerging or existing digital cultures that are difficult to clearly define, as they are usually open, participative, and constantly evolving, this raises significant problems in promoting clearly defined learning processes and outcomes. Indeed, design becomes as much about understanding and promoting the desired technology-mediated processes and practices as the implementation of a specific technology or orchestration of technologies to address a defined problem or opportunity. Further, deploying and embedding social media innovations then changes the nature of the underlying learning and communicative practices that are at play. We argue that the way to address these complexities is to have a more explicit and closer linkage among problematization,[1] design, and evaluation. This means that we need to pay careful attention to addressing the interplay of (1) understanding the learning problem and context, and how it evolves; (2) designing social media interventions; and (3) ongoing evaluations. Within this approach, these three processes (problematization, design and evaluation) constantly feed into one another in an ongoing spiral-like fashion and are not discrete phases of a staged design process. These perspectives can all be articulated within a holistic design approach that conjoins Design-based Research with Action Research. The articles in this collection advance our understanding of social media and learning through being applicable to features of this frame of 'Design-based Research in Action', where design and evaluation of social media are seen as clearly interconnected processes. This stance is clearly illustrated through the design approach that is adopted by Ravenscroft *et al*. Similarly, the emphasis on problematization (of the learning situation) is shown by Huang & Lo in relation to a thorough examination of 'what makes blogging attractive to bloggers?', and the link between problematization and evaluation is systematically articulated by Jimoyiannis and Angelaina in relation to their investigation of engagement and learning within educational blogs.

Towards a more critical discourse and new methodologies

The implications of the challenges and perspectives that are raised earlier are that we need to move away from the hype and overblown expectations about social media and learning, and instead adopt a more critical discourse. This discourse needs to include thorough empirical examinations of social media for learning, and accommodate new or revised methodologies for the development, deployment, and evaluation of social media for learning.

The first article by Friesen and Lowe provides a powerful critique of the alleged promise of exploiting the most commonplace and popular social media, such as Google and Facebook. They do this through adapting the work of the media theorist, Raymond Williams, who originally wrote about the relationship between advertising and television. They argue that Williams (1974) notions of *information design*, *architecture*, and *algorithm* that applied to television also apply to commercial social media (such as Google and Facebook). These authors point out:

> In recent years, new Web-based social media have been portrayed as placing the learner at the centre of networks of knowledge and expertise that potentially lead to new forms of learning and education despite the fact that these media themselves make no educational promises.

They follow this by pointing out that not only are social media not designed for learning and education, but that the commercial model behind popular social

media actually prohibits learning because they fundamentally promote 'conviviality' and deliberately exclude 'fostering the capacity for debate and disagreement'. The latter is considered fundamental to learning and has a long pedigree from dialogic (e.g. Bahktin 1986; Wegerif 2007) and dialectic (e.g. Ravenscroft *et al*. 2007; Ravenscroft & McAlister 2008) perspectives and social constructivist approaches to learning (e.g. Vygotsky 1978; Wertsch 1991). Although recent work (Ravenscroft 2010) has deliberately addressed this apparent contradiction between social media-driven connectivist theory (Siemens 2006) and social constructivism, a specific and important point is clearly and resonantly made by Friesen and Lowe:

> We work toward this conclusion by making the case that social networking offers only a truncated capacity to foster disagreement and debate because dominant programmes and models primarily foster conviviality and 'liking'.

This position is then powerfully developed through a comparison with television and advertising, and seriously questions whether existing social media can provide new 'versions' of learning and education that its proponents claim (e.g. Downes 2005; Siemens 2006; Selwyn 2008). Their concluding position is concisely and powerfully proposed:

> Education is clearly a social process but it is probably much closer to an ongoing discussion or debate than an extended celebration with an ever-expanding network of friends.

This initial account, that is constructively polemical, provides an excellent starting point and platform for the rest of the collection. A previous special issue (Ravenscroft 2009) has also highlighted the misalignment of social process for 'networking' with those for 'learning' from a pedagogical perspective. This fresh approach predicated on the implications of implicit business models adds more strength to the argument that learning with social media requires clearer understanding and analysis of the underlying social processes at play, designing to promote social interactions specifically for learning, and addressing the current paucity of methodologies that truly embrace the implications arising from these first two points.

The second article by Fitzgerald advances this debate by proposing an authoring framework specifically for learning with user-generated content within location-based learning contexts. The study places itself at the intersection of informal learning and location-aware mobile technology. Fitzgerald recognizes, as with Friesan and Lowe in their article, that the opportunities for access and content creation afforded by new technologies and a social Web do not translate readily into interactions that might be deemed pedagogically valuable. As she states:

> The integration of the mobile and social web presents us with particular challenges as well as new and innovative mechanisms for learning. In particular, when designing user-generated content specifically for teaching and learning, how can we ensure we are providing information in an appropriate way?

In response, the author has examined a particular context for informal learning that is mediated through location-based technologies to support learning at specific physical locations, for example a nature reserve or a heritage site. The envisaged scenario is that of browsing or creating geolocated content by visitors to such a site using mobile devices to learn or inform about the surroundings from a number of different disciplinary perspectives.

Fitzgerald devised the framework by combining several distinct domains of expertise that include environmental aesthetics, human–computer interaction, and pedagogy. Subsequent testing has been carried out by performing content analysis on three authoritative websites where identified content has been matched to the framework's classification system.

The results demonstrate that the framework proves itself as analytically sound, and therefore can potentially provide a base for future scaffolding of user-generated content where informal learning is a desired outcome. Their approach to building the framework also provides a methodology for others working in different fields to develop ways of directing content production by informal non-specialist providers to gain maximum value from each item. In the conclusions drawn from the work, it is clear that by problematizing informal processes of social knowledge production, we should consider what type of steer we can provide to user-generated content. The paper cleverly highlights the delicate balance that exists between ensuring continued sharing and engagement within a particular domain of activity, and disrupting that engagement by overformalizing and impeding the natural curiosity and pleasure that stems from informal interactions. As the author comments:

> The phenomenon of stigmergy – where a trace left in the environment by a particular action invokes a similar action resulting in indirect and spontaneous co-ordination – can also be applied here.

The third article by Huang and Lo provides another perspective on design through a focus on extracting design features through an evaluation of a particular and well-known social networking tool, the blog. They identify weblog design features that should or should not be emphasized based on blog participants' interests. Employing a learner-centred weblog evaluation, they investigate a set of criteria that attract blog participants to engage in blogging in a higher education context. The study determines which blogging practices improve blog quality, management, and educational effectiveness, and makes two contributions. First, the extracted weight values of the critical factors from the proposed framework serve as guidelines for enhancing the robustness and attractiveness of weblog content. Second, the evaluation process provides insights for managing weblog quality and effectiveness. This study also provides a clear example of enhancing bloggers' motivation to participate in and remain a part of blog communities. Furthermore, they show that blog participants expect a flexible learning environment that encourages and provides a general forum for self-expression.

This study indicates that effective design criteria require continual revision to adapt to changes in the online community. When blog authors and operators correctly implement the appropriate design features, they can gain substantial advantages. Essentially, to ensure the quality of blogs, learner-centred blog design should satisfy the user, guide the author, and improve the relationships among students and between instructors and students, to collectively promote blog participation. In other words, blogs should promote the constructive 'coming together' of content and learning community.

Similar to Huang and Lo, the fourth article by Jimoyiannis and Angelaina presents an approach to evaluation that emerges insights into pedagogical design through providing an in-depth examination of blogs. They ask whether we can effectively determine student engagement with their learning when using blogs in an educational context. As the authors note at the beginning of their article:

> Despite the promising uses of blogs in educational and professional settings, empirical research on investigating students' participation and the consequent assessment of the impact of blogs on students' learning is rather limited.

In addressing this, the authors have taken an ambitious approach that combines analyses from two theoretical perspectives based on the community of inquiry (COI) model developed by Garrison and Anderson (2003) and social network analysis (SNA). These have both come to prominence in the past few years and have been used to analyse TEL and connectedness in a variety of online spaces – including discussion boards and virtual worlds. They have also been used as a tool for investigating relations in active communities that operate as networks.

The relevance of these two approaches to an empirical case study of blogging within a K-9 project-based learning course is illustrated and well justified. The course itself followed a blended learning philosophy by including classroom sessions and face-to-face discussions between the teacher and the students with specific project activities that helped embed the student blogs and promote dynamic interrelationships. Following the analysis using COI and SNA models, the authors were able to confidently conclude that the investigation:

> Showed evidence that project-based blogs can support online learning groups where students are able to share content and ideas, and construct knowledge within a supportive community of inquiry. Properly designed blogs can extend students' learning space beyond the classroom boundaries to home or personal environments, and combine formal, non formal and informal learning.

This also echoes the notion implied by Huang and Lo that, if blog spaces are suitably designed, they can provide a space for the constructive coming together of content and community within flexible and accessible spaces. Importantly, what this paper also indicates is that using multiple methodological approaches are a powerful way of developing insights into the effectiveness of deploying social media tools for learning and teaching. Here, the combination of COI and SNA analyses has provided a refreshing analytical approach, and, as the authors demonstrate, analysing social media tools and concomitantly designing for social media use requires considerations that are both qualitative and quantitative in nature.

The need for new and mixed methodologies that embrace problematization and evaluation in the design process, and the need to embrace the emergent and

evolving nature of social media practices are further emphasized in the final article by Ravenscroft *et al*. They report on the use of social media for informal learning and knowledge maturing in the workplace, and propose an original design approach for achieving this. The role of social media to support informal learning at work is an important and topical area of research, especially as contemporary thinking is moving away from formal training and more towards employees learning and developing competencies informally 'on the job'. They describe the link between individual (informal) learning processes and collaborative (organizational) learning and knowledge management processes. In particular, they report on the work that has been undertaken as part of a European Commission-funded integrated project called MATURE (Continuous Social Learning in Knowledge Networks), which is investigating how technology-mediated informal learning leads to improved knowledge practices in the digital workplace that, in turn, lead to better collaborative working and organizational performance. They adapted design-based research approaches to develop and evaluate four social media prototypes supporting various forms of informal learning and knowledge maturing in the digital workplace. They highlight one of these in their article, a 'people-tagging' tool that enables employees to find out and tag who has what expertise in the organization. They point out that:

> A main finding was that it was difficult to anticipate how the effects of the system will 'play out' across different people and practices, and instead, the impact needs to be carefully observed during the introduction phases.

And conclude:

> . . . this means that future TEL design will nearly always co-evolve with related human learning practices, so that conceptualisation, development, use and evaluation will be a constant and ongoing spiral-like process, and no longer discrete steps towards a 'final' design. Perpetual beta is no longer a fashionable slogan, but now the widespread design reality that involves an ongoing dialogue amongst all stakeholders.

Discussion and implications: embracing the interplay of the technological and the human

Although the widespread use of social media reflects how Web 2.0 technologies have become embedded in our lives, there are still significant challenges in harnessing these and their related practices for learning and education. This collection has examined whether we can shape social networking into social learning from various perspectives related to the idea that we need to design social media and related pedagogies specifically for learning. This stance has been illustrated through a collection with varying but related emphases: the limitations of commercial social media (Friesen & Lowe); new design frameworks for social media-mediated learning (Fitzgerald and Ravenscroft *et al*.); the importance of understanding the new or emerging learning problems or situations (Huang & Lo and Ravenscroft *et al*.); and the need for analysis frameworks that allow us to thoroughly evaluate and understand social media interactions (Jimoyiannis & Angelaina). Taking these contributions collectively, they confirm with some confidence that we cannot simply 'hijack' new digital literacies for learning, and instead need a much deeper and more critical discourse about design that fully embraces the need to carefully understand and conceptualize (or problematize) the technology-rich social learning context and emerging technology-mediated learning ecosystems; make clearer and more sophisticated characterizations of informal learning and the transitions to more formal forms of learning; rethink design methodologies to embrace the particularities of social media interaction and the rapid pace of evolution and change in this respect; and be mindful of the business paradigms behind certain social media and how these might constrain or prejudice critical learning.

This complexity should not be overlooked or even be surprising, as often as social media technologies and their proponents can distract us from two fundamental and related points: human beings are complex social animals with lots of individual differences in why they communicate and share, and what they communicate and share; and social media is still 'just' a variation on what is fundamentally people communicating with people. We argue that accepting a more implicitly psychological and linguistic frame (e.g. Ravenscroft 2010), to complement a socio-technical one, will provide methodologies and tools that can more effectively realize learning and education through social media.

Note

[1]We use the term problematization to denote the conceptual and empirical investigation of the contextualized problem landscape, using whatever methods are

appropriate to sufficiently characterize and understand the problem, opportunity, or situation in question. A key point being that it is a process of critically understanding a situation in order to change it for the better.

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