

Towards a Social Learning Space for Open Educational Resources

Simon Buckingham Shum,* Rebecca Ferguson**

* Senior Lecturer in Knowledge Media, Knowledge Media Institute, UK Open University.

** Research Fellow, Institute of Educational Technology, UK Open University.

Abstract

We identify a number of meanings of “*Open*”, as part of the motivating rationale for a social media space tuned for learning, called *SocialLearn*. We discuss why online social learning seems to be emerging so strongly at this point, explore features of social learning, and identify some of the dimensions that we believe characterize the social learning design space, before describing the emerging design concept and implementation.

Tweet

Open University’s SocialLearn project: rationale and features

Recommended citation:

Buckingham, S.; Ferguson, R. (2010). Towards a Social Learning Space for Open Educational Resources.

In Open ED 2010 Proceedings. Barcelona: UOC, OU, BYU.

[Accessed: dd/mm/yy].< <http://hdl.handle.net/10609/5086> >

Introduction

We are in a period of transition, as we realise how deeply the Enlightenment, industrial era has shaped our worldviews, and specifically, our educational practices. For many, this is the opportunity for new policies, pedagogies and practices to emerge which more aptly reflect what we now understand about how we learn, what we should learn, and who may access learning. The Open Educational Resource (OER) movement is a significant part of the reshaping of the landscape, challenging taken-for-granted assumptions as part of the “*Open*” movement. Four disruptive dimensions of *Open* as a paradigm shift are summarized in Figure 1: *Open Intellectual Property*, *Open Economics*, *Open Communities* and *Open Data Standards*.

The OER movement has made significant progress in raising awareness around new kinds of licensing models (*Open IP*), aided by developments such as *Creative Commons*, and to the extent that OER is financially free, OER engages with *Open Economics* (it is early days yet in evolving long term business models). OER connects with *Open Communities* and *Open Data Standards* in varying degrees, depending on technical platforms and the degree of learner/educator engagement that a given initiative catalyses.

The Open University’s *OpenLearn* OER programme integrates OU course material, iTunesU, BBC, and all other free/open media offerings (www.open.ac.uk/openlearn), and we continue to document its impact (Lane; Lane & McAndrew, In Press). Within Figure 1’s framework, the full text of OpenLearn course units connects strongly with *OpenIP* (Creative Commons BY-NC-SA licence), and with *Open Standards* (publishing in a wide range of XML formats including Moodle, IMS-CC+CP, SCORM), with growing *Open Communities* activity amongst educators and learners. *Open Economics* is addressed primarily through funding from the university and initial Hewlett Foundation grant. While iTunesU has proprietary aspects, all media and metadata are co-published in *Open Standard* formats.¹

Complementing this institutional, multi-channel publishing operation, the *SocialLearn* project has been investigating the more radical possibilities that *Open* presents. As Weller (2009) observed in discussing traditional learning management systems in the context of the Web 2.0 mindshift, “the online learning environment can be seen as a metaphor for how universities respond to the requirements and challenges of the digital age”.

In this paper we put to one side the intriguing revenue-generation possibilities of *Open Economics* (e.g. Andersen, 2009). Assuming, therefore, that we are in a position to encourage *free* interaction and media sharing by learners, our focus is particularly on the *Open Communities* phenomenon, such as social networking platforms (e.g. Facebook and LinkedIn), and social media sharing (e.g. YouTube, Flickr, Slideshare). The common denominator here is of course the word *Social* — but the other key word is *Learn*.

We will touch on four areas:

- Why online social learning now?
- What do we mean by social learning?
- What distinguishes a social media space tuned for learning?
- The emerging design concept

Why online social learning now?

We briefly consider three answers, referring readers to the many other commentaries that have been written on “Learning 2.0” for other perspectives.

Technology

One part of the answer to this question is clearly technology-driven: only now do we have the right ingredients in our infrastructure to provide almost ubiquitous internet access in wealthy countries, mobile access in many more, user interfaces that have evolved through intensive use, digital literacy from an early age, standards enabling interoperability and commerce across diverse platforms, and scaleable computing architectures capable of servicing billions of real time users, and mining that data. However, unless we accept that technology simplistically determines our lives, we need to look elsewhere to balance this account.

Shifts in social values

Technology is always appropriated to serve the needs and values that people have (or are persuaded they have). Beyond what we can observe for ourselves informally, there is a significant body of research that the period in which we find ourselves is transitional towards a set of values mirrored closely by the affordances of social media. In 1997, the World Values Survey covered 43 societies, representing 70% of the world’s population. Inglehart (1997) has argued that the shift to “postmaterialism” [a finding from earlier surveys] was confirmed and he offered a new framework he called “postmodernization.” He suggested that modernization had helped society move from poverty to economic security, and that the success of this had then led to a shift in ‘what people want out of life.’ In postmodernity, as he used the term, people valued autonomy and diversity over authority, hierarchy, and conformity. According to Inglehart, ‘postmodern values bring declining confidence in religious, political, and even scientific authority; they also bring a growing mass desire for participation and self-expression.’

We find these results interesting, on the one hand recognising this shift in wealthy nations, but also surprised to see this shift even in regions surveyed where poverty is still clearly a daily reality.

Innovation for emergent problems requires social knowledge

The conditions for online social learning draw also from the pressing need for effective innovation strategy. In a succinct synthesis of the literature, Hegel, *et al.* (2010) have argued that social

learning is really the only way that we can cope in today's fast changing world. As summarized in the argument map below, they invoke the concept of "pull" as an umbrella term to signal some fundamental shifts in the way in which we catalyse learning and innovation, highlighting *quality of interpersonal relationships, tacit knowing, discourse and personal passion* as key ingredients.

Reframing educational institutions

The contours of the new educational landscape are uncertain, but we need maps to give us a sense of trajectory, even if these are regularly scrapped amidst the turbulence (business regularly fails to predict the future or cope with change: Hegel, *et al.* 2010, and Christensen, 1997). Heppell (2007), amongst many, paints a picture of the future shape of universities. The transition from the industrial era university is summarised in Figure 3. Naturally, these shifts do not start suddenly at higher education, but are impacting educational institutions of all sorts.

Features of social learning

Why has someone sawn down half of the beautiful cedar tree outside my office window? I can't find this out from a book, and I don't know anyone with the precise knowledge that I am looking for. It is as I engage in conversations with different people that my understanding of what I see outside my window increases, and I learn more about the tree's history, health, ecosystem and future possibilities.

It is not just the social construction of understanding that is important here, since this is a part of most human interactions. My intention to learn is part of what makes this social learning, as are interactions with others. This is not a one-sided engagement with books or online content — it involves social relationships. As such, it has lots of 'affective' aspects: people must be motivated to engage with me and I must have the confidence to ask questions in the first place, as well as some way of assessing the expertise of the people I'm talking to. (from the SocialLearn blog)

Our conception of learning is succinctly summarized by Seely Brown & Adler (2008), being... "based on the premise that our understanding of content is socially constructed through conversations about that content and through grounded interactions, especially with others, around problems or actions". Many others have of course argued for similar conceptions, unpacking this broad concept in great detail in the constructivist educational literature, and *computer-supported collaborative learning* (CSCL) research.

Social learning may, however, add an important dimension to CSCL, with particular interest in the non-academic context in which it takes place (including the home, social network, and workplace), the use of free, ready-to-hand online tools, with no neatly packaged curriculum or

signed-up peer cohort, no way to test one's understanding, no pre-scheduled activity, and so forth (NB: Blackmore's (2010) edited readings remind us how far back everyday, non-digital social learning goes in learning theory, and provide us with foundations for extension into the digital realm).

While OER greatly improves the quality of material available online to learners, the consequence is also that they find themselves adrift in an ocean of information, struggling to solve ill-structured problems, with little clear idea of how to solve them, or how to recognise when they have solved them. Arguably, it is precisely here that social learning infrastructure has a key role to play, helping the learner connect with others who can provide emotional and conceptual support for locating and engaging with resources, just as with our opening tree story. As we highlight in Figure 2, this then forces us to ask whether our educational and training regimes are fit for purpose in equipping our children, students and workforce with the dispositions and skills needed under conditions of growing uncertainty (a challenge explored in detail by many others, e.g. the collection edited by Deakin Crick, 2009).

In the early days of the SocialLearn project, Weller (2008) identified six broad principles of SocialLearn, connecting it with the underpinnings and origins of The Open University (and in part anticipating Hegel, *et al's* priorities): *Openness, Flexibility, Disruptive, Perpetual beta, Democracy* and *Pedagogy*. Following a series of SocialLearn workshops, Conole (2008) proposed some learning principles, contrasting OpenLearn and SocialLearn, and articulating how these could be linked to characteristics of social learning: *thinking & reflection, conversation & interaction, experience & interactivity and evidence & demonstration*:

- Supports a range of pedagogies and styles
- Formalises the informal; informalises the formal
- Is built on relationships between people
- Harnesses the internet
- Aggregates learning events, resources and opportunities
- Provides structures and scaffolds for the learning process
- Uses metaphors and simple approaches to impart pedagogy
- Encourages a range of participation
- Provides evidence via range of informal and formal assessment mechanisms
- Provides lifelong support across different learning goals
- Provides access to expertise
- Supports collaborative elements

- Helps surface incidental learning
- Wraps learning around an individual's interests
- Enables learner control and learner responsibility
- Allows users to build reputation within the system
- Encourages legitimate peripheral participation
- Encourages learning through observation
- Supports different subject areas and styles
- Encourages mentorship

Distilling from this array of perspectives, we have derived a simple working definition focused on three dynamics, which serve to guide us in designing for meaningful interpersonal and conceptual connection:

Online social learning can take place when people are able to:

- *clarify their intention — learning rather than browsing*
- *ground their learning — by defining their question/problem, and experimenting*
- *engage in learning conversations — increasing their understanding*

Tuning social spaces for learning

A significant feature of the Web 2.0 paradigm is the degree of personalisation that end-users now expect. This manifests in the user interface as a means for filtering the complexity of the internet to show just those resources being tracked, but also as the model for engaging with loosely coupled services tuned to one's interests. Figure 4 indicates how this manifests from a learner's perspective. However, a *me-centred universe* has self-evident limitations as a paradigm for holistic development: learning often disorients and reorients one's personal universe. *User-centred* is not the same as *Learner-centred*: *what I want* is not necessarily *what I need*, because my grasp of the material, and of myself as a learner, is incomplete. The centrality of good relationships becomes clear when we remind ourselves that a university's job is to teach people to *think*, and that *deeper learning* requires leaving a place of cognitive and emotional safety where assumptions are merely reinforced (see the extensive research on learning dispositions that characterize this readiness, e.g. Claxton, 1999; Perkins, *et al.* 1993). This implies *challenge* to stretch learners out of their comfort zones,

underlining the importance of affirmation and encouragement that give a learner the security to step out.

What design implications might this have? Certainly, it must be easy to find and interact with people, building a sense of connection that can foster trust and affirmation (an early prototype was not strong enough in this regard, renewing our concern with getting this right!). But what other shifts are needed to go into deeper social learning?

A design space seeks to identify key questions, which reflect criterial dimensions for comparing features of a given class of artifact. Figure 5 sketches some dimensions of a social learning design space, signaling potential directions that a *learning* focus might lead when designing spaces that do not seek to provide *only* a fun place to hang out with friends, important though this is for social learning. A fuller analysis would set out the different options and tradeoffs (e.g. MacLean, *et al.* 1991), with design criteria driven by the extent to which social learning and deeper learning are fostered.

The emerging design concept

A demonstrator website at <http://sociallearn.org> illustrates how we are seeking to translate the above concerns into a design. A “dashboard” provides modular applications known generically as “widgets” (currently we use Google Gadgets in a Shindig container²), which the user can cluster into meaningful, activity-centric sets of tools. Gadgets provide a convenient way to open up functionality to many applications, enable tool embedding in heterogeneous platforms, and place the learner in control of their environment. We are experimenting with making the gadgets portable, that is, ‘carried’ around with the learner in a virtual backpack, which they can access while on any website via a toolbar. Being embeddable gadgets, a partner site can enable its pages to host them (Figure 6).

The gadget dashboard is linked with social networking tools supporting the standard set of social network functions such as user profile creation, personalised views of peer activity, “following”, “friending”, status updates, messaging, media sharing, tagging and group formation. (at the time of writing, not shown on the demonstrator site).

No company or university can provide all the applications that current or future learners may want or need: the point is to harness the design innovation and creativity out there. In addition to the use of gadgets, via its API SocialLearn will be interoperable with social web learning applications, prime candidates being tools to ask and respond to *questions*, weave *learning pathways* through resources, or *annotate* the web with *meaningful concepts and connections* (cf. Cohere, below).

We are experimenting with services that exploit the fact that offering to *coach/mentor* on a given topic is a pedagogically significant act. Detecting debates through agreement and disagreement is another opportunity to scaffold conversation (not the kind of intervention one would expect in a purely leisure social space). We consider below other services that we anticipate in the next generation of social learning environments.

Social learning analytics

Learning analytics is, we believe, one of the core R&D disciplines to underpin the next generation of learning platforms (see the forthcoming *Learning Analytics & Knowledge* conference). We envisage a ‘virtual rack’ of recommendation engines tuned to different patterns of learner activity (Figure 7).

Commerce/Navigation/Social/Reputation

Each of these is fast becoming a ‘commodity’ service in the online social networking, recommender and commerce websites that we use increasingly each day. This is not, of course, to say that these are easy to implement well, and each has active academic and business R&D efforts associated with them. From a distinctively social learning perspective, we might expect to ‘tune’ such engines based on one or more underlying models of what makes for effective social learning, but we do not know of good examples demonstrating exactly what differences that might make to the recommendations offered.

Content recommendation engines

Focusing on the *Content* engine, SocialLearn has active strands exploring the possibilities for more intelligent content recommendations. One strand is investigating the potential of linked data/semantic web research, while another strand focuses on multimedia information retrieval which enables content recommendation based on images and video.³

Connection recommendation engines

The ubiquitous tag clouds generated from folksonomies on social websites provide a useful gestalt view, but pedagogically, they often equate to a learner being aware of a cloud of concepts with no grasp of their “shape or structure”. Buckingham Shum & De Liddo (2010) describe the *Cohere* web application that seeks to scaffold this kind of “knowledge cartography” (Okada, *et al.* 2008). The result is a user-generated web of meaningfully connected annotations which can be visualized, filtered and searched for patterns in ways that are impossible at present (e.g. “*Find me all the websites/articles that disagree with this*”). The ability to make reflective, meaningful connections between ideas moves us beyond tag clouds, providing the material from which knowledge maps can be generated, either from a user’s personal web, or to show a group or the world’s connections. Structured argument mapping and online deliberation tools show, more clearly than a conventional chat, blog or discussion forum, how different positions in a debate relate to each other.⁴

Learning to learn recommendation engines

Many have argued that learning for the 21st Century requires greater attention to learning dispositions and skills that have always been important, but which are now at a premium in a fast-changing world, in which almost all knowledge claims are contestable (Perkins, *et al.* 1993; Deakin Crick, *et al.* 2008). Our interest in such “learning to learn” research is that it provides insights into the processes that strong and weak learners go through, often independent of any particular disciplinary topic of study. In principle, this could enable the formalization of patterns for analytic services capable of tracking a wide range of learning contexts, but this is a nascent field.

Conclusion

Many have argued that social learning is a key part of the tectonic shifts we are seeing in the educational landscape, of which OER is already a key feature. We have outlined the rationale and emerging design concepts behind *SocialLearn*, a prototype social learning space intended to scaffold the formation of social relationships and discourse between learners, without which learning from OER will be far less effective. We have discussed some of the dimensions that we believe characterize the social learning design space. Following a pilot involving >1000 users in Oct. 2009, the next iteration of SocialLearn is currently undergoing internal testing. Future research will report progress on pilot deployments, develop learning analytics, and evaluating the extent to which we manage to support the three core social learning dynamics identified above.

Acknowledgements

SocialLearn is a cross-university project involving too many researchers, developers and strategic planners to mention by name, but we gratefully acknowledge their contributions. While we take responsibility for all ideas and errors in this paper, see references to Gráinne Conole & Martin Weller (OU Institute for Educational Technology). Our thanks also to Hardin Tibbs (Synthesys Consulting) for background research on social values, and Figures 3-4.

Figures



Figure 1 - Four disruptive dimensions of “Open”

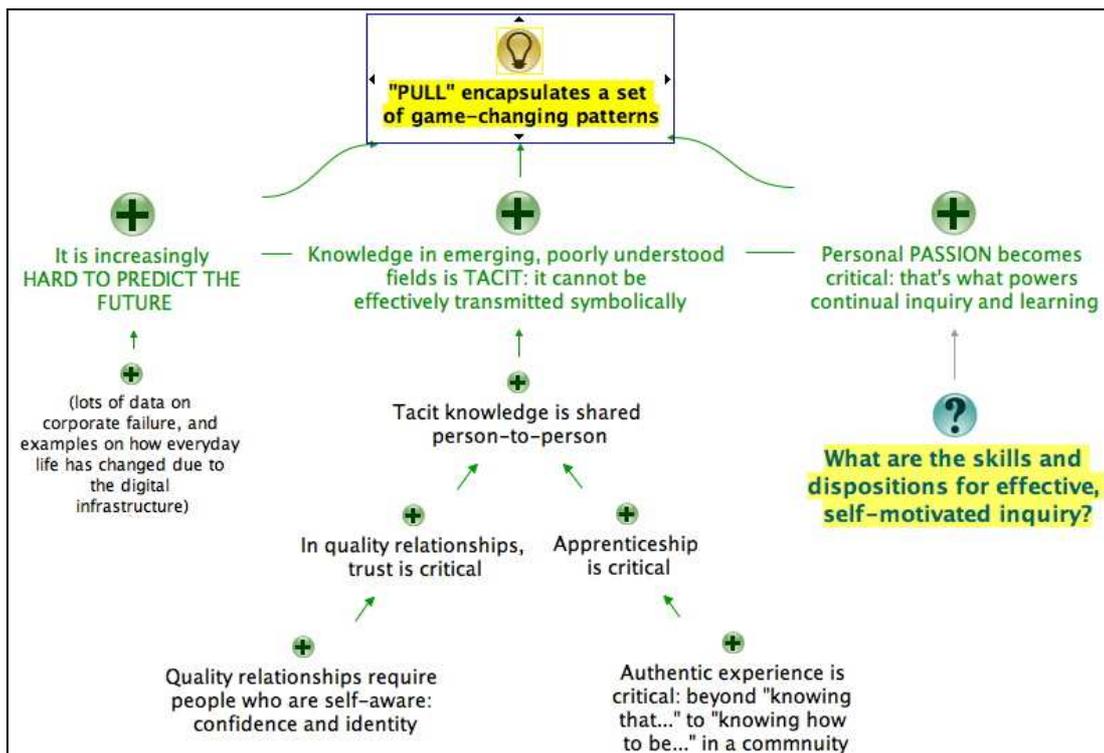


Figure 2 - Argument map summarising some of Hegel, *et al.*'s (2010) “the power of pull”

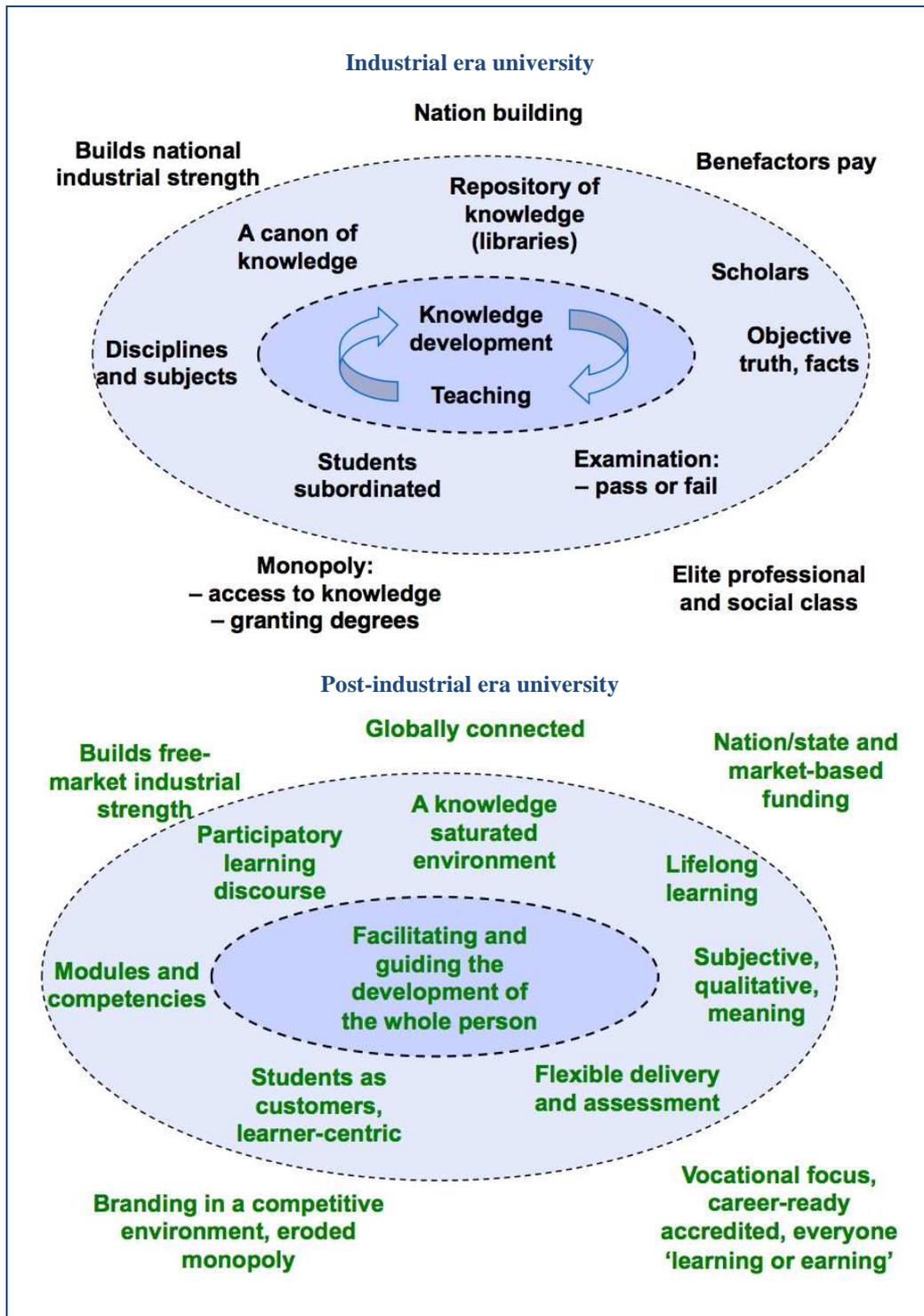


Figure 3 - Characterising industrial and post-industrial era universities

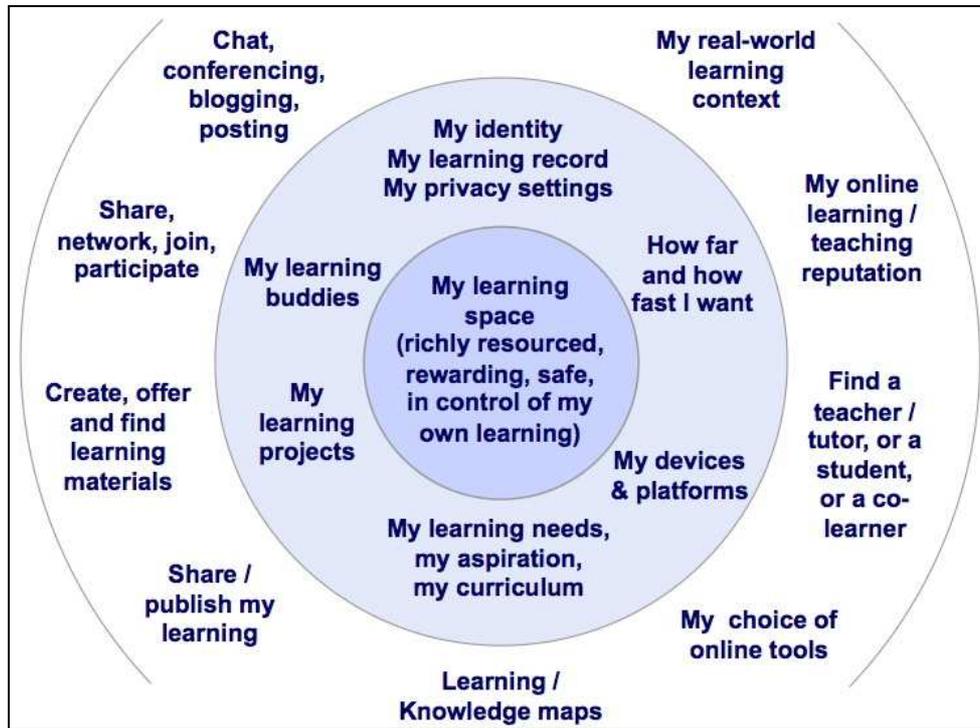


Figure 4 - Personalised learning space onto resources and people

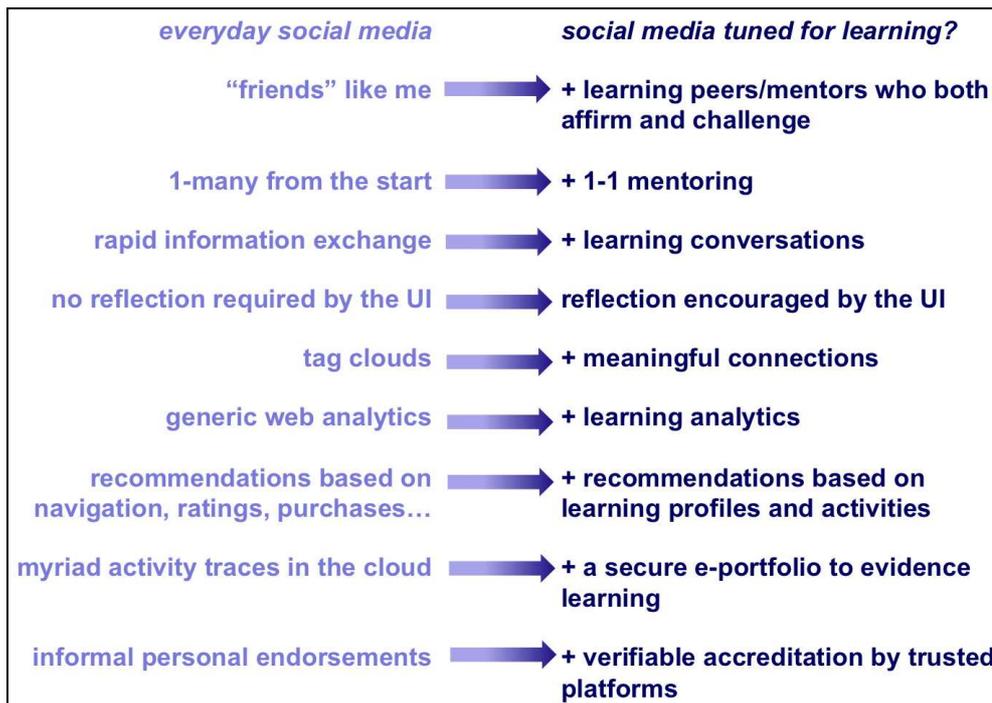


Figure 5 - Some dimensions of a social learning design space

The screenshot displays the Open University's Cloudworks collaboration space. On the left, there is a section titled "Evidence of this skill" with a list of examples and a "Discussion" section. On the right, there are three SocialLearn gadgets: "People Recommender gadget" showing user profiles for R3beccaF and helenrf; "Cloud Recommender gadget" showing a list of cloud pages like "Asking for help" and "Independent working"; and "Cloudstream Recommender gadget" showing a list of cloudstreams with references to academic papers by Potter, S. (2006).

Figure 6: The Open University's *Cloudworks* collaboration space, with embedded SocialLearn gadgets recommending *people*, *clouds* (pages) and *cloudstreams* (web feeds).

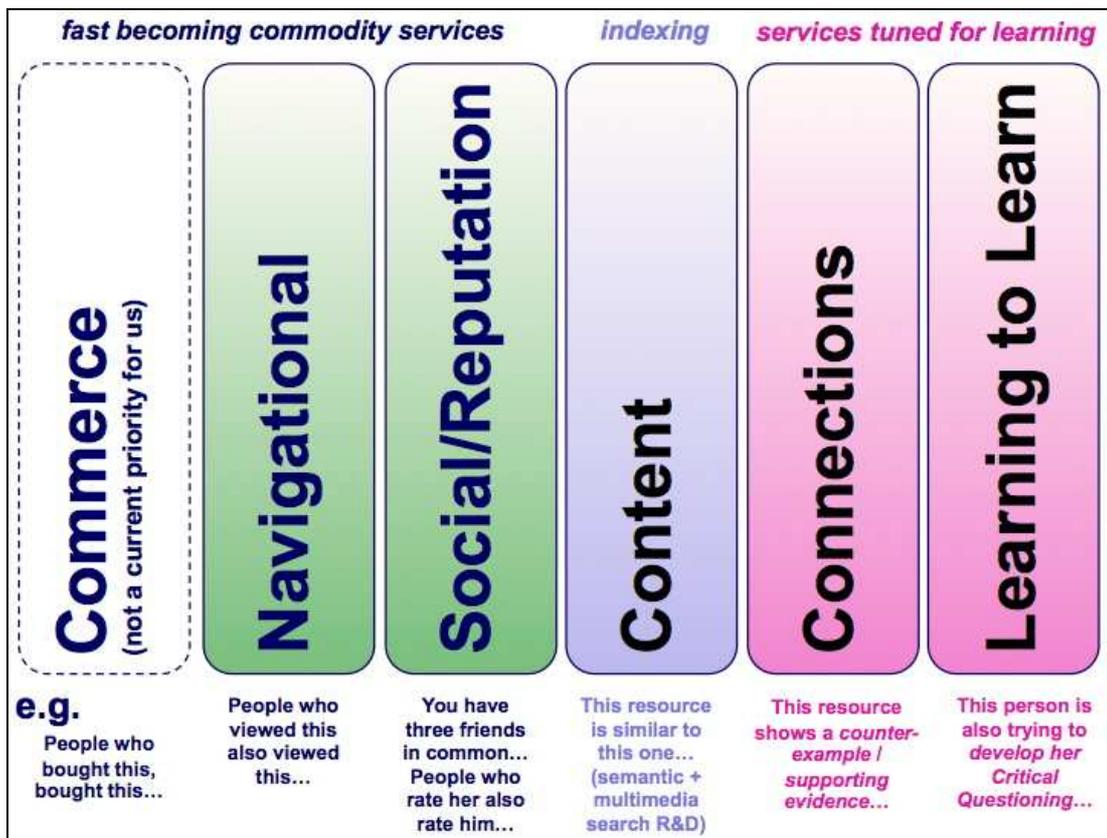


Figure 7 - Envisioning the future of learning analytics and recommendation engines

Notes

1. E.g. <http://podcast.open.ac.uk> and <http://www.youtube.com/user/TheOpenUniversity>.
2. Google Gadgets: <http://www.google.com/webmasters/gadgets>.
Apache Shindig: <http://shindig.apache.org>.
3. LUCERO Project: *Linking University Content for Education and Research Online*, Knowledge Media Institute/Library/Faculty of Arts, Open University, UK: <http://lucero-project.info>.
Semantic Web and Knowledge Services Research, Knowledge Media Institute, Open University, UK: <http://kmi.open.ac.uk/theme/semantic-web-and-knowledge-services>.
Multimedia and Information Systems Research, Knowledge Media Institute, Open University, UK: <http://kmi.open.ac.uk/theme/multimedia-and-information-systems>.
4. For structured argument mapping/deliberation tools see: www.olnet.org/odet2010.

Bibliographic references

- Andersen, C. (2009). *Free: The Future of a Radical Price*. Hyperion.
- Blackmore, C. (2010). (Ed.) *Social Learning Systems and Communities of Practice*. Springer: London.
- Buckingham Shum & De Liddo (2010). Collective Intelligence for OER Sustainability. *OpenEd'10: The Seventh Annual Open Education Conference*, Barcelona, Nov. 2-4, 2010: <http://openedconference.org/2010>.
- Christensen, C.M. (1997). *The innovator's dilemma : when new technologies cause great firms to fail*. Harvard Business Press.
- Claxton, G. (1999). **Wise Up: Learning to Live the Learning Life**. (Bloomsbury 1999, Network Continuum 2000).
- Conole, G. (2008). New Schemas for Mapping Pedagogies and Technologies. *Ariadne*, Issue 56, July 2008. <http://www.ariadne.ac.uk/issue56/conole>.
- Deakin Crick, R. (2009). (Ed.) Pedagogical challenges for personalisation: Integrating the personal with the public through context-driven enquiry. *Curriculum Journal, Special Issue*, 20 (3), pp. 185-306.
- Hagel, J., Seely Brown, J. and Davison, L. (2010). *The Power of Pull*. Basic Books: NY.
- Heppell, S. (2007). *RSA Edward Boyle Memorial Lecture*: www.teachers.tv/videos/4957.
- Inglehart, R. (1997). *Modernization and Postmodernization. Cultural, Economic, and Political Change in 43 Societies*. Princeton University Press: NJ.
- Lane, A. (In Press). How far may open educational resources add flexibility to higher education practices? Lessons from The Open University, In (Eds.) Burge, E., Gibson, C., and Gibson, T., *Open and distance education: can higher education flex that far, and fast?* Athabasca University Press.
- Lane, A. and McAndrew, P. (In Press). Are OER systematic or systemic change agents? *British Journal of Educational Technology*.
- MacLean, A., Young, R., Bellotti, V. & Moran, T. (1991). Questions, Options, and Criteria: Elements of Design Space Analysis. *Human-Computer Interaction*, 6, (3&4). [Special Issue on Design Rationale: John M. Carroll and Thomas P. Moran (Eds.)], pp. 201-250.
- Okada, A., Buckingham Shum, S. and Sherborne, T. (Eds.) (2008). *Knowledge Cartography: Software Tools and Mapping Techniques*. Springer: London.
- Perkins, D. Jay, E. and Tishman, S. (1993). Beyond abilities: a dispositional theory of thinking. *Merrill-Palmer Quarterly*, 39, (1), pp. 1-21.
- Seely Brown, J. and Adler, R.P. (2008). Minds on Fire: Open Education, the Long Tail, and Learning 2.0, *EDUCAUSE Review*, 43, (1), pp. 16-32. <http://bit.ly/Oggee>.
- Weller, M. (2008). *The SocialLearn project*. Blog post: <http://bit.ly/1dVwO6>.

About the authors

Simon Buckingham Shum

Senior Lecturer in Knowledge Media, Knowledge Media Institute, UK Open University.

Simon Buckingham Shum is a Senior Lecturer in Knowledge Media at the UK Open University's Knowledge Media Institute, where he leads the Hypermedia Discourse Group. He brings a human-centered computing perspective to the challenge of building collective intelligence and the sensemaking capacity that 21st-century citizenship requires, from childhood onwards. His research is reflected in the books *Visualizing Argumentation* and *Knowledge Cartography*. <http://people.kmi.open.ac.uk/sbs>.

SocialLearn Project
The Open University
Milton Keynes, MK7 6AA
United Kingdom
S.Buckingham.Shum@open.ac.uk
www.open.ac.uk/sociallearn

Rebecca Ferguson

Research Fellow, Institute of Educational Technology, UK Open University.

Rebecca Ferguson is a Research Fellow, Institute of Educational Technology, studying and developing the use of social learning at the UK Open University. Her overarching research interest is in how people learn together online, making use of different tools and literacies. This has included investigation of learning in online conferences, in virtual worlds, through blogs and through the use of other social media. <http://kmi.open.ac.uk/people/member/rebecca-ferguson>.

SocialLearn Project
The Open University
Milton Keynes, MK7 6AA
United Kingdom
R.M.Ferguson@open.ac.uk
www.open.ac.uk/sociallearn



This proceeding, unless otherwise indicated, is subject to a Creative Commons Attribution-Non commercial-No derivative works 3.0 Spain licence. It may be copied, distributed and broadcast provided that the author, and the institutions that publish it (UOC, OU, BYU) are cited. Commercial use and derivative works are not permitted. The full licence can be consulted on <http://creativecommons.org/licenses/by-nc-nd/3.0/en/deed.en>.