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Towards a social learning space for open educational resources

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Collaborative Learning 2.0:

Open Educational Resources

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Chapter 17

Towards a Social Learning Space for Open Educational Resources

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ABSTRACT

This chapter examines the meaning of "open" in terms of tools, resources, and education, and goes on to explore the association between open approaches to education and the development of online social learning. It considers why this form of learning is emerging so strongly at this point, what its underlying principles are, and how it can be defined. Openness is identified as one of the motivating rationales for a social media space tuned for learning, called SocialLearn, which is currently being trialed at The Open University in the UK. SocialLearn has been designed to support online social learning by helping users to clarify their intention, ground their learning and engage in learning conversations. The emerging design concept and implementation are described here, with a focus on what personalization means in this context, and on how learning analytics could be used to provide different types of recommendation that support learning.

INTRODUCTION

The focus of this chapter is on the development of a social learning space by The Open University (the OU), a UK-based university with a strong emphasis on distance learning. For over 40 years,

The Open University has worked to be 'open as to people, as to places, as to methods and as to ideas'. In practice, this means that more than 1.6 million people worldwide have studied with the university since it opened in 1969, and that the OU is at the forefront of new methods of delivery and new forms of pedagogy (The Open University, 2010). The aims and principles of the open educa-

tional resources (OER) movement therefore align well with the university's mission, and in 2005 it set up OpenLearn, a large-scale experiment in open content that offers free access online to an increasing number of the university's resources.

Good-quality resources are important, but it can be difficult for learners to make use of them effectively. The Internet is awash with information; learners need to locate useful sites quickly and to be able to judge their reliability. Social media offer endless options for personalization, but without challenges learners are likely find it difficult to move out of their comfort zone in order to explore new ideas and material. Synchronous and asynchronous communication are both increasingly easy, but learners need ways of moving from generalized chat to focused learning conversations. It is currently all too easy for learners to become lost in the 'cloud', brushing against each other but never meeting, sharing or locating resources and then losing sight of them forever.

Despite these challenges, online learning around shared resources also offers new opportunities for partners to collaborate by carrying out work together (Dillenbourg, 1999). Collaboration requires more than the effective division of labour that constitutes cooperative work. It involves coordinated activity, a continued attempt to construct and maintain a shared conception of a problem (Lipponen, 2002). In order to work together to solve a problem or perform a task together, participants need to negotiate mutually shared or common knowledge (Littleton & Häkkinen, 1999). Collaboration involves more than being in touch, sharing an online space, or asking the same questions, it is an interaction in which participants are focused on coordinating shared meaning (Crook, 1999). It therefore does not take place automatically within an online space, but needs to be planned for and supported.

Both these challenges and these opportunities suggest that learners need more than access to high-quality resources and a range of communication methods – they need support in order to engage effectively in online social learning.

This chapter therefore addresses four central questions:

- 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.

In order to do this, it first examines some of the different models of openness and how they relate to education, before going on to identify principles of and approaches to online social learning. The chapter ends by describing SocialLearn and how it has been designed to make use of the opportunities and respond to the challenges posed by an open online educational environment.

MODELS OF OPENNESS

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. These changes have the potential to support disruptive innovation within education (Christensen, 1997), introducing new products, tools and services that will prompt many more people to engage as learners. The 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:

- Open Intellectual Property
- Open Economics
- Open Communities and
- Open Data Standards.

Taking these in turn, the OER movement has made significant progress in raising awareness around new kinds of licensing models related to intellectual property (Open IP). In this, it has been aided by developments such as Creative Commons, which is intended to increase creativity, sharing and innovation, while stewarding the legal and technical infrastructure that supports these elements. To the extent that OER is financially free, OER engages with Open Economics, although long-term business models are still evolving. 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 resources and all the university's other free/open media offerings (www.open.ac.uk/openlearn), and the university continues to research and document its impact (Lane & McAndrew, 2010). The OpenLearn programme engages with each of the disruptive dimensions of openness:

- **Open Intellectual Property:** The full text of OpenLearn course units connects strongly with OpenIP by using a Creative Commons BY-NC-SA licence that allows these materials to be shared and remixed for non-commercial purposes, as long as their source is acknowledged and the same creative commons licence is applied when the resulting work is distributed.
- **Open Standards:** OpenLearn materials are published using a wide range of extensible mark-up (XML) formats, which means that they are all machine-readable and can easily be processed by a wide range of programs. These formats include Moodle, a set of open-source community-based tools for learning; the IMS common cartridge content package (IMS-CC+CP) that is widely used to define learning content; and the Sharable Content Object Reference

Model, better known as SCORM, a set of technical standards that govern how online learning content and learning management systems communicate with each other.
- **Open Communities:** OpenLearn welcomes everyone to engage with the site and resources, encouraging engagement worldwide from formal and informal learners of all ages. It also provides tools and spaces for educators and learners to communicate and collaborate, sharing materials and ideas, and working together to create new resources as well as posting in the forums, writing learning journal entries and adding reviews.
- **Open Economics:** is addressed primarily through funding from the university and an initial Hewlett Foundation grant. While iTunesU has proprietary aspects, all media and metadata are co-published in Open Standard formats. Examples of this include http://www.youtube.com/user/TheOpenUniversity and http://podcast.open.ac.uk.

Complementing this institutional, multichannel publishing operation, the SocialLearn project has been investigating the more radical possibilities that Open presents. These possibilities are connected with those opened up by the development of Web 2.0 sites and tools. Web 2.0 has replaced the read-only web with a read-write environment, spanning all connected devices and linking multiple data sources, which can link users in an 'architecture of participation' (O'Reilly, 2007). It therefore offers learners a new set of tools that can stimulate and serve inquiry, conversation and production (Crook, Cummings, et al., 2008). Web 2.0 environments can involve participation, distributed expertise, innovation, creative rule-breaking and the deployment of collective intelligence (Knobel & Lankshear, 2007). They also supply opportunities to learn together in in-

formal online 'affinity spaces' in which learning is proactive but aided (Gee, 2004).

In this chapter we put to one side the intriguing revenue-generation possibilities of Open Economics (see, for example, 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, which includes social networking platforms such as Facebook and LinkedIn, and social media sharing sites such as YouTube, Flickr and Slideshare. The common denominator here is of course the word 'Social' – but the other key word is 'Learn'.

The next section therefore focuses on online social learning, referring readers to commentaries that have been written on 'Learning 2.0' for other perspectives. The section begins by considering why online social learning is important at this point in time, before moving on to look at the implications of online social learning and its characteristic features.

THE SHIFT TOWARDS ONLINE SOCIAL LEARNING

The Internet is full of buzzwords and memes that are briefly popular and then lost to view. Educators are increasingly cynical about technology-driven innovation that is dependent on a craze for the latest development in hardware, software or online activity. If online social learning is genuinely important, we therefore need to understand why has it come to prominence now.

Technology

One part of the answer to this question is clearly related to the technology: only now do we have the right ingredients in our infrastructure to provide almost ubiquitous Internet access in wealthy countries and mobile access in many more. In addition, we now have user interfaces that have evolved through intensive use, digital familiarity from an early age, standards enabling interoperability and commerce across diverse platforms, and scalable computing architectures capable of servicing billions of real-time users, and mining that data.

However, changes in technology do not necessarily imply changes in pedagogy. Those who view education as information transfer will use interactive media for storage, drilling, testing and accessing information; those who seek conceptual change will seek to make use of their interactive qualities (Salomon, 2000). A move towards distributed expertise, collaboration and innovation is not inherent within a technology. So if we do not accept that technology simplistically determines our lives, we need to look elsewhere to understand the move towards online social learning.

Shifts in Social Values

Technology is always appropriated to serve what people believe to be their needs and values. Beyond what we can observe for ourselves informally, there is a significant body of research indicating that the period in which we find ourselves is moving 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) argued that the shift to 'postmaterialism' (a finding from earlier surveys) was confirmed and he offered a new 'postmodernization' framework. He suggested that modernization helped society move from poverty to economic security, and that the success of this move led to a shift in what people want out of life. In postmodernity, as he used the term, people value 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.

Another perspective on the shift in social value is the view that, since 1991, we have lived in the 'knowledge age' – a period in which knowledge, rather than labour, land or capital, has been a key wealth-generating resource (Savage, 1996). This shift has occurred within a period when constant change in society has been the norm, and it is therefore increasingly difficult to tell which specific knowledge and skills will be required in the future (Lyotard, 1979). These changes have prompted an interest in 'knowledge-age skills' that will allow learners to become both confident and competent designers of their own learning goals (Claxton, 2002).

Accounts of knowledge-age skills vary, but they can be broadly categorized as relating to learning, management, people, information, research/enquiry, citizenship, values/attributes and preparation for the world of work (Futurelab, 2007). From one viewpoint they are important because employers are looking for 'problem-solvers, people who take responsibility and make decisions and are flexible, adaptable and willing to learn new skills' (QCA, 2007, p5). More broadly, knowledge-age skills are related not just to an economic imperative but to a desire and a right to know, an extension of educational opportunities, and a 'responsibility to realize a cosmopolitan understanding of universal rights and acting on that understanding to effect a greater sense of community' (Willinsky, 2005, p111). In both cases, there is a perceived need to move away from a curriculum based on a central canon of information, towards learning that develops skills and competencies.

Innovation for Emergent Problems Requires Social Knowledge

The conditions for online social learning are also related to the pressing need for effective innovation strategy. In a succinct synthesis of the literature, Hagel, *et al.* (2010) argued that social learning is the only way in which we can cope in today's fast-changing world. As summarized in our argument map (Figure 1 below), they invoke the concept of 'pull' as an umbrella term to signal some fundamental shifts in the ways in which we catalyse learning and innovation. They highlight quality of interpersonal relationships, tacit knowing, discourse and personal passion as key ingredients. This move away from having information pushed to us during spells of formal education towards a more flexible situation in which we pull resources and information to us as we need them, offers a potential way of addressing 'wicked problems', such as climate change, that cannot be easily defined, require complex judgments, have no given solutions and often have strong moral, political or professional dimensions (Rittel, 1984).

Reframing Educational Institutions

These three shifts – in technology, in social values and in the problems which we collectively confront – motivate a move away from familiar models of education and towards online social learning. This move is apparent at all stages of education, but we focus here on some of the implications for adult learners and, more specifically, for universities. 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. Heppell (2007), amongst many, paints a picture of the future shape of universities. The transition away from the industrial-era university is summarised in Figure 2.

The changes are far-reaching, extending beyond the curriculum to the learners, the educators, the structures and the purpose of university education. The barriers between formal and informal learning, between online and face-to-face learning are being broken down, allowing the development of new models that take into account the range of learners' experience outside formal study, and the affective elements of learning. An example of this

Figure 1. Argument map summarizing some of The Power of Pull (Hagel, et al., 2010)
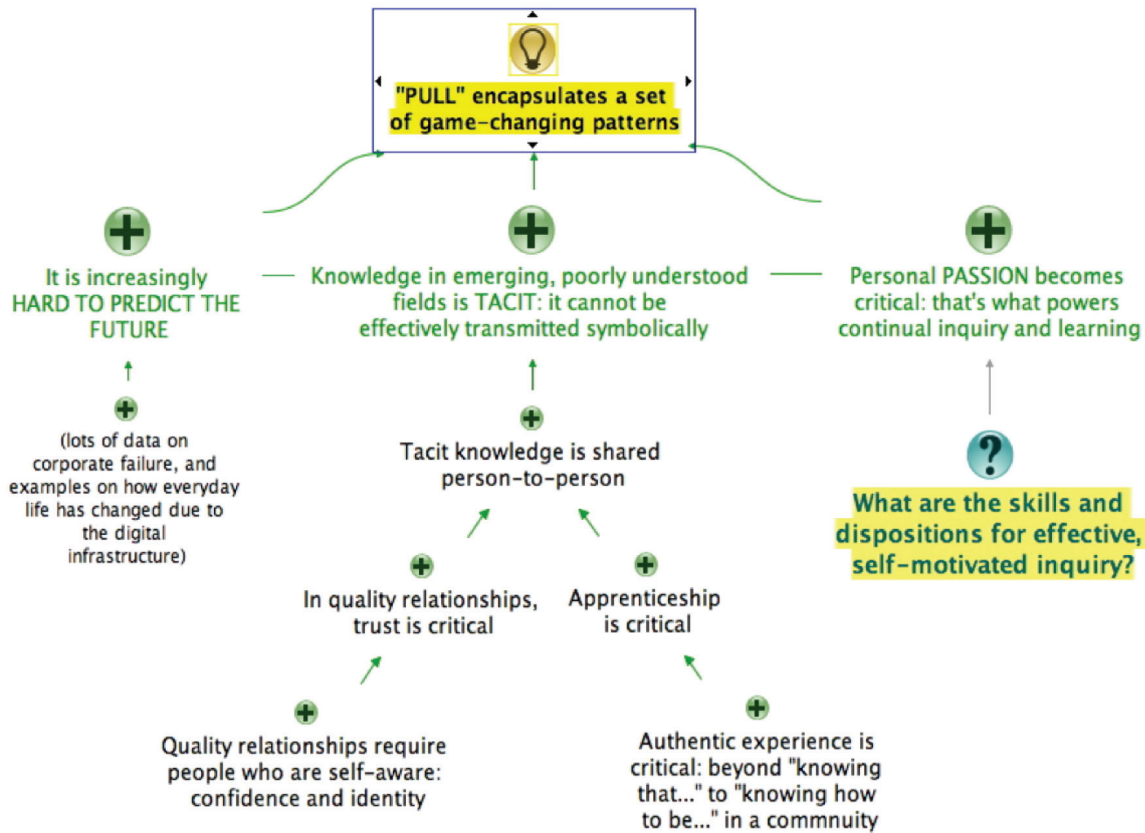
is Gee's 'affinity spaces', which provide a model for online social learning and were first identified in video gaming environments.

Affinity spaces are organized around a passion; within them, knowledge is both distributed and dispersed, they are not age graded and experts work alongside newcomers, learning is proactive but aided as people mentor and are themselves mentored, participants are encouraged to produce as well as to consume, smart tools are available to support learning and everyone, no matter what their level of experience or expertise, remains a learner (Gee, 2004, 2009).

So far, this chapter has examined the radical possibilities of openness in education, showed why there is a move towards online social learning at this time, and pointed to the extent of the shift that could take place within universities as education

becomes more open and more social. The next section goes on to consider what 'online social learning' means, and which principles underpin it.

ONLINE 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.

Figure 2. Characterising industrial- and post-industrial-era universities
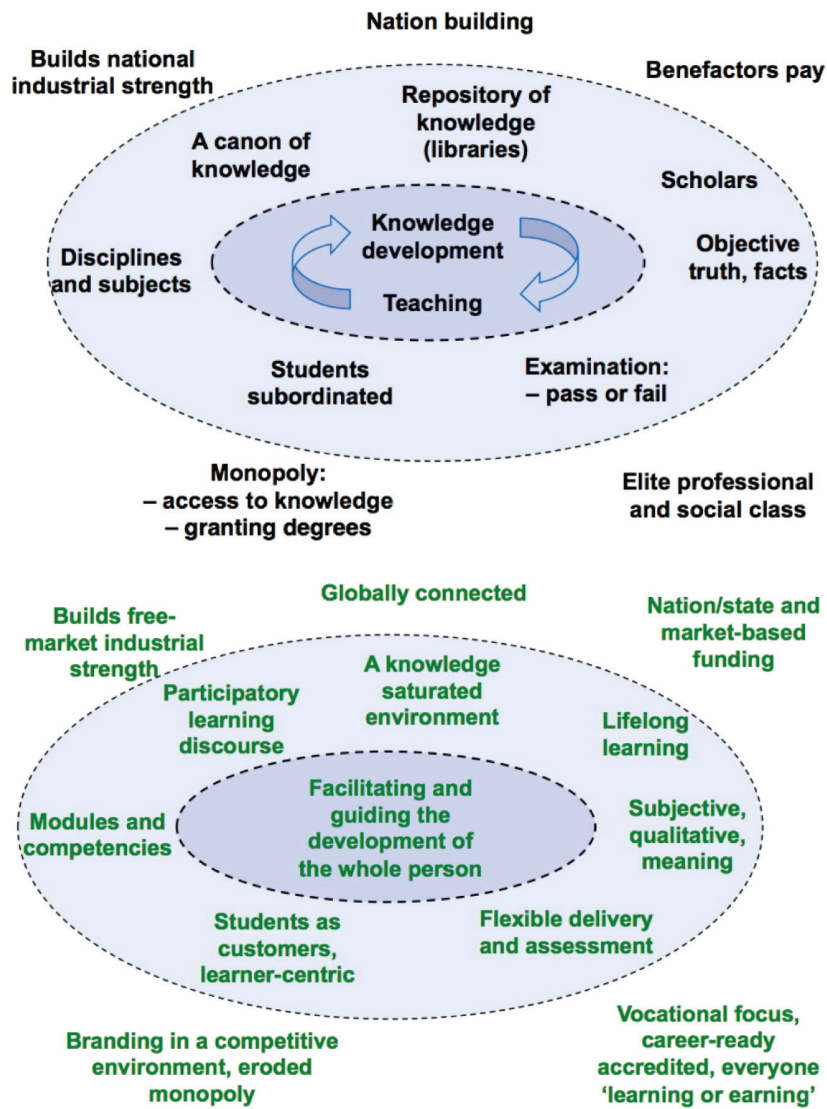
It is not just the social construction of understanding that is important here, since this is a part of most human interactions. My intention to learn is part of what makes this social learning, as are interactions with others. This is not a one-sided engagement with books or online content — it involves 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. (blog post, Ferguson, 2010)

Our conception of learning is succinctly summarized as 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" (Seely Brown & Adler, 2008, p18). Many others have, of course, argued for similar conceptions, unpacking this

broad concept in great detail in the sociocultural and constructivist educational literature, and within computer-supported collaborative learning (CSCL) research.

Online social learning may, however, add important dimensions to CSCL, with its focus on the non-academic contexts in which it takes place (including the home, social network, and workplace), its use of free, ready-to-hand online tools, and the absence of a neatly packaged curriculum, signed-up peer cohort, pre-scheduled activities and agreed ways of testing one's understanding. We note also that Blackmore's (2010) edited readings remind us how far back every day, non-digital social learning goes in learning theory, and provide us with foundations for extension into the digital realm.

While OERs greatly improve the quality of material available online to learners, this wealth of resources can leave learners adrift in an ocean of information, struggling to solve ill-structured problems, with little clear idea of how to approach them, or how to recognise when they have made progress. It is precisely here that social learning infrastructure could have a key role to play, helping learners connect with others who can provide emotional and conceptual support for locating and engaging with resources, just as was the case in the cedar tree story at the start of this section. As we highlighted in Figure 2, this prompts us to ask whether our current educational and training regimes can equip our children, students and workforce with the dispositions and skills needed under conditions of growing uncertainty (a challenge explored in detail by many others, for example the collection edited by Deakin Crick, 2009).

When the OU set up the SocialLearn project, Weller (2008) identified six broad principles of SocialLearn, connecting it with the underpinnings and origins of The Open University. These six principles were:

- Openness
- Flexibility
- Disruptive
- Perpetual Beta
- Democracy and
- Pedagogy.

Following a series of project workshops, which brought together educators from across the UK, Conole (2008) proposed a set of learning principles, contrasted The Open University's OpenLearn and SocialLearn initiatives, and articulated how these principles could be linked to key characteristics of learning: *Thinking & Reflection*, *Conversation & Interaction*, *Experience & Interactivity* and *Evidence & Demonstration*. The learning principles identified by Conole were:

- 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 (Conole, 2008, Table 3)

Distilling this array of perspectives, we have derived a simple working definition focused on three dynamics, which guides 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

SocialLearn's design therefore took into account learners' need to clarify intentions, ground learning and engage in learning conversations. It also considered the extent to which SocialLearn should be tuned to the user. A significant feature of the Web 2.0 paradigm is the degree of personalisation that is both possible and expected. However, a me-centred universe has 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 core task of universities is to teach people to think, and that deeper learning requires leaving a place of cognitive and emotional safety where assumptions are not merely reinforced (see the extensive research on learning dispositions that characterize this readiness, for example, Claxton, 2001; Perkins, Jay, & Tishman, 1993). This implies the need for challenge to stretch learners out of

their comfort zones, underlining the importance of affirmation and encouragement in providing learners with the security to step out.

Figure 3 indicates the different elements of a learning space that can be personalized to suit the user; filtering the complexity of the internet to show just those resources being tracked, and providing opportunities to engage with loosely coupled services tuned to personal interests. The figure shows that these elements can be divided into three categories: a central category that is under the learner's control, a wider category in which the learner feels safe and supported, and an outward-facing category in which the learner may need support to deal with external challenges.

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. But what differences are there between everyday social media sites and a social media site that is tuned to support learning?

A design space seeks to identify key questions, which reflect criterial dimensions for comparing features of a given class of artifact. Figure 4 sketches some dimensions of a social learning design space, signaling how a learning focus might influence the design of spaces that seek to provide more than an enjoyable place to hang out with friends, important though this is for social learning. In each case there is a step change from one design to the other, rather than a radical shift. The space tuned for learning will not appear completely unfamiliar, but will build on and extend familiar aspects of social media, so that tag clouds are developed into meaningful connections and friends become learning peers and mentors.

A fuller analysis would set out the different options and trade-offs (for example, MacLean, Young, Bellotti, & Moran, 1991), with design criteria driven by the extent to which social learning and deeper learning are fostered.

Figure 3. Personalised learning space on to resources and people
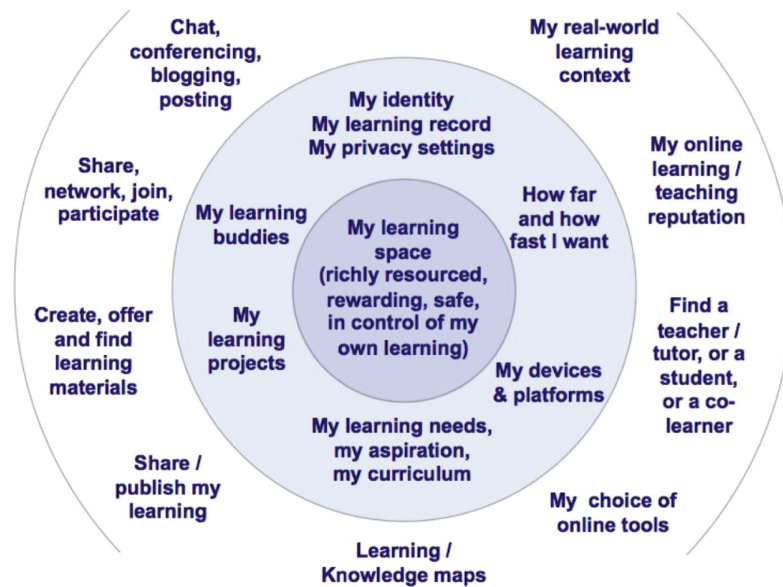
Designs for Online Social Learning

There are many successful OERs and many successful implementations of open learning. Equally, there are many ways in which online social learning can be implemented. Two successful models already in use at The Open University are Cloudworks and iSpot.
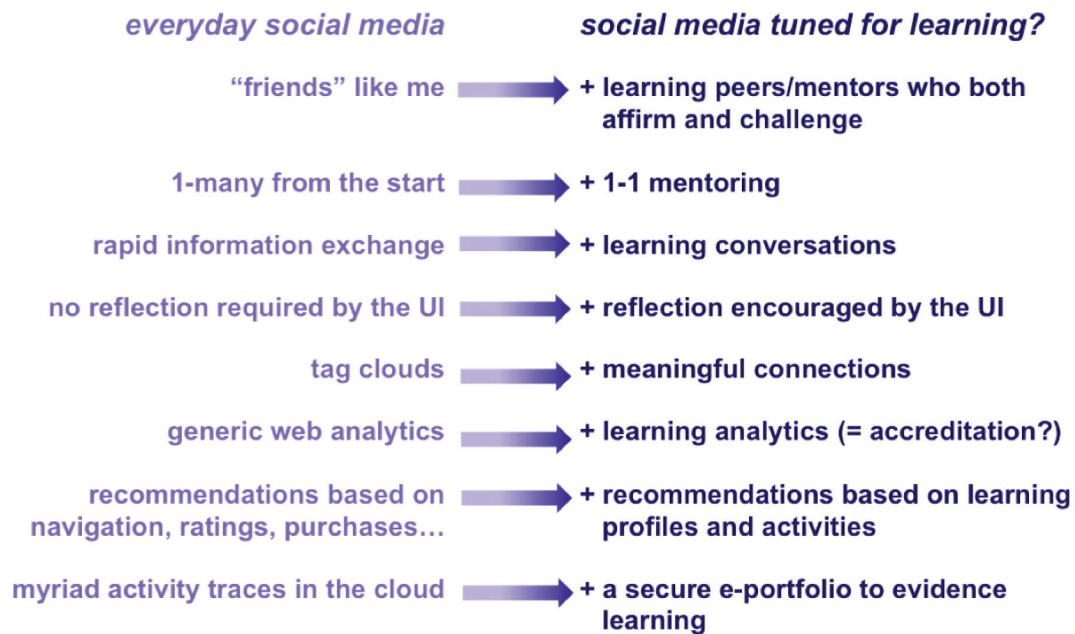
Cloudworks was designed to provide a mechanism for sharing, discussing and finding ideas and designs that relate to learning and teaching (Conole & Culver, 2009). It is therefore subject specific, although the subject is broad, and there is potential for different instantiations of the design to focus on different areas. Cloudworks also maintains the principle of openness throughout – it is open source, and its tools, resources and discussions are open to everyone. Having proven itself as a successful model for open learning, it has since been released open source, making it technically possible to convene private installations.

iSpot is a content-hosting site that is tuned to a subject area. It allows anyone interested in wildlife, whether amateur or expert, to share their observations and to get help with identification (McAndrew, Scanlon, & Clow, 2010). The site motivates and supports learners to engage with a community of like-minded learners. It also allows them to take an active part by uploading their own observations and observing and commenting on the observations of others. The focus is primarily on the content, although there is support for interaction around this. The site is subject-specific but, as with Cloudworks, different builds could focus on different areas.

The design of SocialLearn therefore draws upon the design of pre-existing sites, seeking to complement these and to work with them. We envisage a model of social learning that allows people to make use of a wide range of tools, sites and other resources without being tied to a particular brand or site. The emerging design concept for this model is set out in the next section. Following testing within the OU, SocialLearn is currently moving from the status of internal innovation pilot, to a resource for wider communities to engage in research and development.

Figure 4. Some dimensions of a social learning design space

everyday social media		social media tuned for learning?
"friends" like me	→	+ learning peers/mentors who both affirm and challenge
1-many from the start	→	+ 1-1 mentoring
rapid information exchange	→	+ learning conversations
no reflection required by the UI	→	+ reflection encouraged by the UI
tag clouds	→	+ meaningful connections
generic web analytics	→	+ learning analytics (= accreditation?)
recommendations based on navigation, ratings, purchases…	→	+ recommendations based on learning profiles and activities
myriad activity traces in the cloud	→	+ a secure e-portfolio to evidence learning

The Emerging Design Concept

Key elements in the SocialLearn environment are the *Social Media Space, Learning Paths, Gadget Dashboard* and *Backpack*.

Social Media Space

SocialLearn provides a set of tools that are familiar from other social media platforms and that can be used to support learning conversations and interactions. These support a 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. Groups provide learners with the possibility of moving from an open learning space to a private area where necessary, for example for private mentoring, to carry on a conversation without interruption, or to share resources that are not freely available. The user profile and personal area can be used to supply personalized recommendations, tailored to the user's interests and learning goals.

Learning Paths

Learning Paths can be built quickly and easily, using explanatory text to help link a series of resources that may be distributed across the web together in a series of clearly defined steps. A basic path can be constructed in a couple of minutes, but more complex paths will bring together a range of resources, linking them with carefully thought out text and reflections, associating them with questions, groups or events and tagging them so they can be found easily. Other users can engage with these pathways by joining the discussion associated with each step, suggesting changes, asking for or offering help, adding a rating or review or collaborating in a related group. In addition, they can copy and modify a pre-existing path, link it to others, or associate it with a group. On a more personal level, they can mark and record their

progress through the path and their understanding of the different steps.

Gadget Dashboard

The SocialLearn dashboard provides modular applications known generically as widgets (we are currently using Google Gadgets http://www.google.com/webmasters/gadgets) which the user can use individually or cluster to form meaningful, activity-centric sets. Gadgets provide a convenient way of opening up functionality to many applications, enabling tools to be embedded in heterogeneous platforms, and placing learners in control of their environment.

Backpack

These gadgets and sets of gadgets are portable; they can be carried around with the learner in a virtual Backpack, which they can access while on any website via a pop-up toolbar. This means there is no need to return repeatedly to the SocialLearn website — SocialLearn travels with users to their preferred sites. In addition, these gadgets can be embedded, which means that a partner site can enable its pages to host them (Figure 5).

Some of these gadgets are being developed by the SocialLearn project to support online social learning. The dashboard and Backpack also support pre-existing Google gadgets, and gadgets developed by different projects. For example, the EU ROLE project, based at The Open University offers one gadget that searches OERS, and another which supports audiovisual communication using FlashMeeting. Both these gadgets are already available on the dashboard, and can be opened on any website via the Social-Learn Backpack. Gadgets specifically designed for SocialLearn will provide content recommendations, customized to-do lists related to learning goals, tools to support learning path creation, and a 'flow' gadget to track different learning conversations.

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 application programming interface (API), SocialLearn will be interoperable with social web learning applications. Prime candidates for future gadgets are tools that enable learners to ask and respond to questions, mentor others and be mentored, weave learning pathways through resources, or annotate the web with meaningful concepts and connections.

Use Cases

In order to think through how this will work in practice, SocialLearn has developed a series of use cases related to extended professional development for university staff and students, including librarians, IT advisors, project managers, research students, and lecturers. One example amongst many is Jenny, a fictional example of an early adopter, who would make use of SocialLearn to support her career development. In working through and demo'ing these use cases, we have created real accounts, content and social networks on Twitter, Facebook and other cloud platforms for Jenny, as we seek to understand how SocialLearn might coexist with the many other online presences that future learners will be maintaining.

Jenny

- has worked as a lecturer in the Faculty of Arts for six years
- is a specialist in digital humanities and is therefore likely to be an early adopter
- makes extensive use of the Internet for her teaching and research

Figure 5. The Open University's Cloudworks collaboration space, with embedded SocialLearn gadgets recommending people, clouds (pages) and cloudstreams (web feeds)
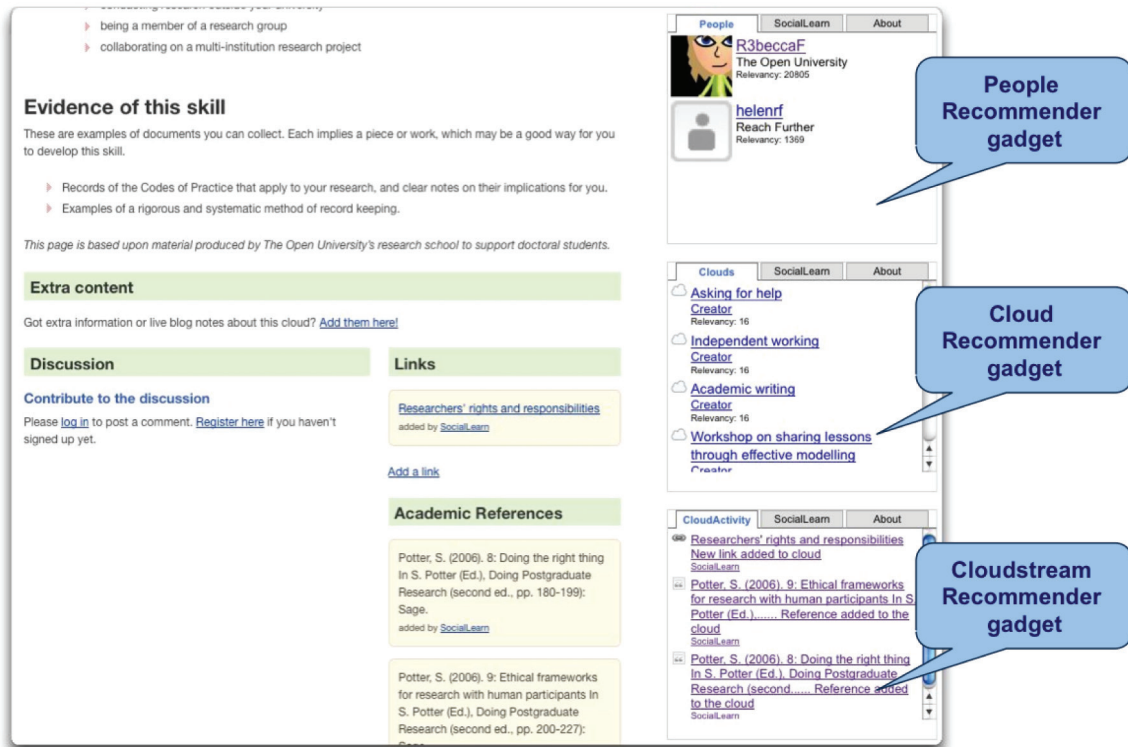
- has limited expertise of aligning course assessment with learning outcomes
- needs to keep up with the latest technologies available for staff and students

Scenario

- Jenny is coming to grips with new administrative responsibilities
- Jenny's line manager prompts her to update her knowledge of assessment
- Jenny's department asks her to train to become their 'Google Apps' champion
- Jenny's Department Head encourages her to try out SocialLearn
- She joins other staff working on assessment and on Google Apps training

Which Elements of SocialLearn Are Immediately Significant for Jenny?

- To-do gadget that prompts her on different stages of training and on her personal learning goals
- Opportunity to chat and discuss resources with people training at the same time
- Informal grouping with others working at the same level
- Extended Professional Development (EPD) recommender gadget for relevant resources
- OER recommender also recommends series of relevant resources
- Gadget set allows her to access her personal workspace from anywhere on the web
- Pathways associated with various skills and issues, including assessment and Google Apps

- SocialLearn gadgets embedded on university's EPD site point her to useful people and resources
- RSS Feed gadget with latest information on training events EPD site
- Able to link resources quickly in order to form a path to which she can return

How Does Jenny Help to Enrich SocialLearn?

- Creates pathways as she explores resources
- Contributes to discussions on Google Apps and on assessment
- Is supported to develop training paths for her faculty
- Works with others to develop and evaluate short paths on different Google Apps
- Creates short paths introducing her subject area

Why Does Jenny Use SocialLearn Rather than Other Sites?

- SocialLearn provides a range of services and does not tie her to one website
- She can use SocialLearn tools and gadgets on her own preferred websites
- SocialLearn is open, but respects her right for privacy
- SocialLearn does not tie her to one subject
- SocialLearn supports her formal and her informal learning
- SocialLearn is focused on understanding.

Each of the many different use cases considers the value of SocialLearn for users, considers why they would take the time to investigate this new set of tools, how it would support their learning needs from the start, and why they would choose to become actively involved.

FUTURE RESEARCH DIRECTIONS

Pilot studies at The Open University are currently in progress, while development of SocialLearn continues. We are currently experimenting with services that exploit the fact that offering to help/coach/mentor on a given topic is a pedagogically significant act. Detecting debates through agreement and disagreement is another opportunity to scaffold conversation, and is not the kind of intervention that would be used in a purely leisure social space (De Liddo, *et al.* 2011). We consider below other services that we anticipate in the next generation of social learning environments.

Social Learning Analytics

Learning analytics will, we believe, be one of the core research and development disciplines to underpin the next generation of learning platforms (cf. the emerging community www.learninga-nalytics.net). We envisage a growing cloud of recommender services tuned to different patterns of learner activity (Figure 6).

Commerce/Navigation/Social/ Reputation

Each of these is fast becoming a commodity service for online social networking, recommender and commerce websites. This is not to say that these are easy to implement well; each has active academic and business research and development efforts associated with them. From a distinctively social learning perspective, such engines might be tuned on the basis of 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.

Figure 6. Envisioning learning analytics and recommender services
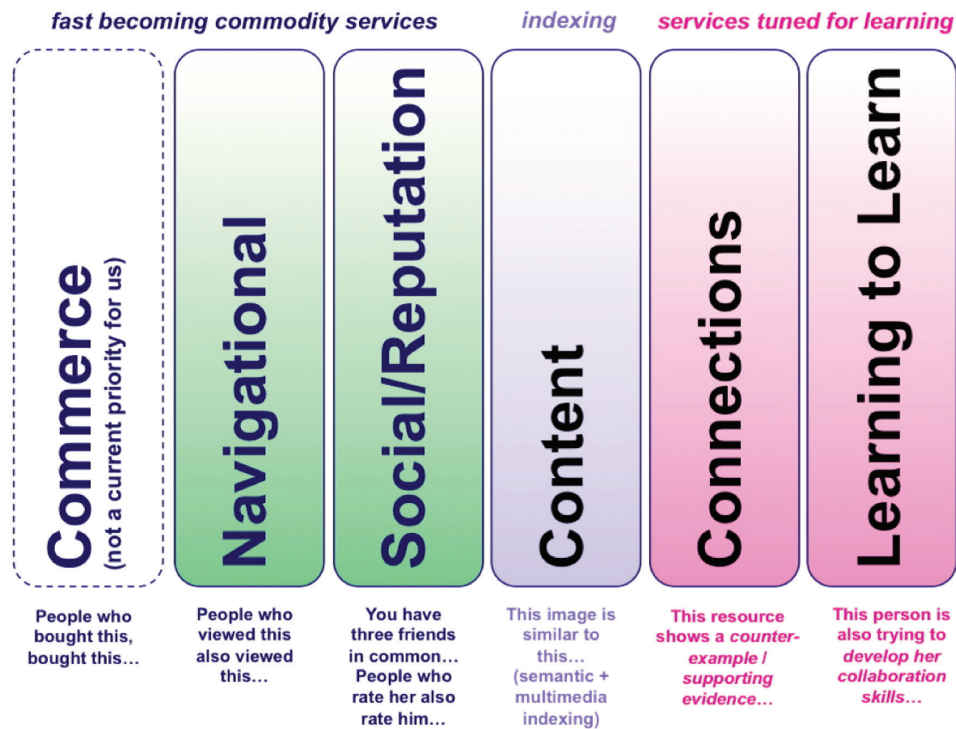
Content Recommendation Engines

SocialLearn has active development strands exploring possibilities for more intelligent content recommendations. One strand is investigating the potential of linked data/semantic web research that could support the development of personalized recommendations for learners (e.g. LUCERO Project, 2010), while another focuses on multimedia information retrieval that enables content recommendation based on images and video (Little, *et al.* 2011).

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, Buckingham Shum, & Sherborne, 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 (for example, 'Find me 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 (see www.olnet.org/odet2010forotherstructuredargumentmapping/deliberation tools).

Learning-to-Learn Recommendation Engines

As discussed above, learning for the 21st century requires paying attention to learning dispositions and skills that have always been important, but which are now at a premium in a fast-changing world with increased levels of uncertainty and diversity of perspective (Deakin Crick, 2009; Perkins, et al., 1993). 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 OERs already form an important feature. We have outlined the rationale and emerging design concepts behind SocialLearn, a prototype social learning space intended to scaffold the formation of social connections between learners, and meaningful conceptual connections between resources and ideas. In the absence of quality interaction around OER, their potential to enrich or even transform learning is greatly diminished. We have also discussed some of the dimensions that we believe characterize the social learning design space. Following a pilot involving over 1000 users in 2009, the current iteration of SocialLearn is undergoing internal testing in three university pilots at the time of writing. Future research will involve developing social learning analytics, and evaluating the extent to which we manage to support the core dynamics of online social learning.

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KEY TERMS AND DEFINITIONS

Collaboration: collaboration involves coordinated activity, a continued attempt to construct and maintain a shared conception of a problem.

Distance Learning: form of education characterised by the near permanent physical separation of teacher and student.

Knowledge Age: period during which knowledge, rather than labour, land or capital, has been a key wealth-generating resource.

Knowledge-Age Skills: skills relating to learning, management, people, information, research/enquiry, citizenship, values/attributes and preparation for the world of work.

Learning Analytics: use of data and models to predict learners' progress and performance, with the aim of using these predictions to influence these positively.

Online Social Learning: learners' understanding of content is socially constructed through conversations and interactions some, or all, of which are

mediated by technology. This can take place when learners are able to clarify their intention, ground their learning and engage in learning conversations.

SCORM: Sharable Content Object Reference Model, a set of technical standards that govern how online learning content and learning management systems communicate with each other.

XML: extensible mark-up (XML) formats are all machine-readable and can easily be processed by a wide range of programs.