Uncovering Hidden Learning
(In Informal Learning within Virtual Social Learning Systems)

Andy Smith
Blackpool & The Fylde College, UK.

Abstract
Despite the pervasive nature of informal learning within formal education, informal learning continues to have the spotlight moved onto it and away from it as its importance is recognised and then forgotten. The literature tends to frame informal learning, formal learning and non-formal learning as discrete activities and such a view fails to take into account the interconnections between them. Web 2.0 virtual social learning systems offer ways in which opportunities for informal learning can occur, often as a means of supporting formal education. With social constructivism being widely accepted as a theory for teaching and learning it is surprising how little is understood about learning in virtual social learning systems.

In this paper four case studies are presented to illuminate the power of virtual social learning environments in supporting informal learning and peer learning and challenges associated with its use in formal education. Although tentative because of the scale of the study, data from this research points to an inverse correlation between the opportunities for face-to-face communication and use of the virtual social environment. Suggestions are then made as to the possible role of a virtual social learning system within formal education.

This project is supported by Blackpool & The Fylde College along with LSIS (Learning Skills Improvement Service) and the IfL (Institute for Learning) and was one of their first Research Development Fellowships.

Introduction
Learning in general and informal learning in particular continues to be the focus of attention in several major educational policy communities;

‘Recognising all forms of learning is therefore a priority of EU action in education and training.’ (European Commission 2008)

‘a new vision for informal adult learning for the 21st century.’ (COI for the DIUS 2008)

Interest in informal learning is of course nothing new. As Coffield (2000) noted, policy makers, researchers and practitioners have a habit of recognising the importance of informal learning and then quickly forgetting about it, failing to recognise it in policy, theory or practice;

‘We must move beyond this periodic genuflection in the direction of informal learning and incorporate it into plans for a learning society.’ (p.2)

Often seen in terms of ‘paradigm wars’, the literature on informal and formal learning literature is characterised by claims of one approach or the other having superiority (Colley et al 2002). Such dichotomous thinking about learning may or may not be part of the human condition but it often results in a failure to see the benefits of a more holistic view;

‘Mankind likes to think in terms of extreme opposites. It is given to formulating its beliefs in terms of Either-Ors, between which it recognizes no intermediate possibilities.’ (Dewey 1939)

Following Dewey, in writing this paper the more I tried to produce a working definition of informal learning, the more I found myself doubting the very notion and utility of definitions, that bring with them arbitrary lines of demarcation and potentially false dichotomies. This doubt is compounded by arguments for further classification breakdown which unproblematically accept the existence of non-formal learning, which Colley has argued is something so ill-defined (Colley et al 2002) that it is better to keep it held within the realm of informal learning.

Examining definitions such as those provided in the report by Trinder (et al. 2008) highlight problems definitions in this area bring with them;
‘Formal learning: Learning provided by an education or training institution, structured (in terms of learning objectives, learning time or learning support), involving the presence of a designated teacher or trainer, and leading to certification or an award of qualification or credit. Formal learning is intentional from the learner’s perspective.

Informal learning: Learning which is not provided by a formal educational or training institution and typically does not lead to certification. Informal learning results from daily, social life activities related to education, work, socialising with others or pursuit of leisure activities and hobbies. Informal learning may be structured or non-structured in terms of learning objectives, learning time or learning support. Informal learning may be intentional or non-intentional (incidental) from the learner’s perspective.’ (p.13)

The idea that informal learning does not lead to certification fails to appreciate the very nature of how people interact within and around formal education. For instance, conversations in the coffee lounge and the peer to peer learning that occurs can be vital to success leading to certification.

Stern and Sommerlad (1999) argued that rather than a definition it may be better to consider a continuum with informal learning as learning that comes closer to the informal end compared to the formal end of the continuum.

‘Characteristics of the informal end of the continuum of formality include implicit, unintended, opportunistic and unstructured learning and the absence of a teacher. In the middle come activities like mentoring, while coaching is rather more formal in most settings ‘ (Eraut 2005).

Eraut also comments on the nature of ‘experience’ (p.4), something Dewey (Kennedy 1959) saw as meaning all of the complex series of transactions which occur between the individual creature and its environment. For Eraut the ‘act of attention’ (p.4) brings experiences into the area of conscious thought, resulting often from the need for the individual to react to changes in the environment. I would however also argue that the thoughtful teacher in formal learning taps into the past experiences of students and helps guide the focus of attention in this way.

The only difference between formal and informal learning through Eraut’s perspective appears to be the agency element. For him informal learning is wholly student-centred and not the often shared agency between teacher and student which would occur in a formal setting. Individuals such as Trinder may argue that the nature of the environment is the factor which differentiates between formal and informal learning, yet it is clear that environment is much more than merely ‘school’ versus ‘not school’ as the people within the settings can become the environment.

As we will discover in the case studies below informal learning activity can be generated by formal learning requirements and formal learning that inspires learners to engage in informal learning. One can even go as far as saying that informal learning is happening all the time within formal learning, after all, is the peer discussion over lunch not informal learning? Is the email discourse not informal learning? Is the hurried conversation before going into class not informal learning? And what of the teacher making eye contact, smiling, giving the pat on the back, is that not an element of informal learning? Could it be argued that it is the social dimensions which influence how learning has become perceived as formal and informal, and that by viewing these dimensions one could break through a possibly false dichotomy. Even in a formal setting a formal discourse can flow into and back out of informal discourse.

The idea that informal and formal learning can interact means that when we view learning as a continuum we can avoid the mistake of assuming the two very different ‘ends’ are incompatible and only vaguely related. In reality the activity of learning dances, sometimes wildly, like electricity sparks across the continuum often arcing back and forth from one end to the other.
Virtual Social Learning Systems
Lucas and Moreira (2009) argue that Web 2.0 technologies have transformed the web into a social platform with a sharing, participating and collaborative focus where users have their ‘say’ as opposed to just being ‘told’. It is ideal for informal learning ‘due to the interaction and connections it enables, the non-linearity it bases on, the multiple paths it affords and the learner empowerment it provides.’ (Lucas & Moreira 2009, p.326)

Some, such as Dede (2008) would even go so far as to say that such technologies represent a seismic shift in epistemology away from the historic views on knowledge, expertise and learning. In the ‘Classical’ view of traditional education, knowledge is viewed as; ‘accurate interrelationships among facts, based on unbiased research that produces compelling evidence about systemic causes’ (Dede 2008, p.80). The content and skills that experts feel every person should know are presented as; ‘factual “truth” compiled in curriculum standards and assessed with high-stakes tests.’ (p.80). This is despite the fact that experts often have yet to fully understand the systemic causes that provide an accurate interpretation of some situations. ‘Epistemologically a single-right-answer is believed to underlie each phenomenon’ (p.80).

It is the views of disciplinary experts’ on what should be learned that hold sway within the classical perspective of traditional education. Unfortunately these views are often characterised by politically motivated inaccuracies (Matusevich 2006), often connected to bias against women (Zittleman & Sadker 2002) and minorities (Moore 2005, Hogben & Waterman 1997), and a lack of acceptance of the contributions made to human learning and culture by other cultures and marginalised and minority groups (Lewis 1999). Such bias occurs by privileging dominant cultures and diminishing or ignoring the perspectives of a dominant sub-culture who seldom manage to make their interpretations heard above others.

Compare this with the Web 2.0 view on knowledge as being something which comes from collective agreement, an agreement that combines ‘facts with other dimensions of human experience, such as opinions, values, and spiritual beliefs’ (p.80).

‘As an illustration, the Wikipedia entry on “social effect of evolutionary theory” wrestles with constructing a point of view that most readers would consider reasonable, accurate, and unbiased without derogating religious precepts some might hold.’ (Dede 2008, p.80)

Validity of knowledge within Web 2.0 environments such as Wikipedia is peer reviewed by those whom the community of contributors view as having an unbiased perspective. Thus; ‘Expertise involves understanding disputes in detail and proposing syntheses that are widely accepted by the community (Dede 2008).

The Web 2.0 world is not without its problems of bias, prejudices and inaccuracies but Wikipedia for instance is far from signalling a Dark Ages reversion in terms of content. It may perhaps be more helpful to explore ways of extending epistemological thinking into the world of Web 2.0.

It is interesting to note that Dewey (1916) sees the development of shared meanings that arise from collective human activity as the source of the mind;

‘What nutrition and reproduction are to physiological life, education is to social life. This education consists primarily in transmission through communication. Communication is a process of sharing experience till it becomes a common possession.’ (p.7)

The various social web tools have been shown to foster and cultivate communities within which learning can happen unexpectedly as a result of the connections and interactions of community members (Gan & Zhu, 2007; Wenger, 2008). It is these surprising opportunities for learning which came into focus for me in the learning discourse that occurred within a forum of which I was a member (Case Study One) and in another forum I created for courses in which I was involved (Case Study Two). These are outlined and analysed below.

Case Study One
The forum in question was a DVD forum based within the United Kingdom with a membership in excess of 66,000. To date over 360,000 threads have been created containing a total of almost six million posts. Whilst DVD related interests was the main focus of the community initially, within the forums several large sub-groups had formed including a Bargains Forum devoted to special offers people had found and a General Forum where a broad range of topics tended to be discussed. It is within the General Forum that the following discourse occurred in May 2007 under the thread heading ‘Impossible uni coursework’. It was started by an individual
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going by the name ‘carrot_girl’ who had joined the forums in 2001 and up to this point had submitted over 4,000 posts.

The entire discourse is 44 postings and over 5,000 words in length beginning with;

‘Have you ever been in the situation where you simply can’t do a piece of coursework? Not because you're lazy or stupid but because you "don't get it" and your tutor tells you that some "get it" and some don't. What did you do to get it done?’

This request for help brings forth replies asking for the problem to be clarified, which it is;

‘I have to create a (faceted) classification scheme for material covering American Political Elections and I just can't do it. I end up just sitting here and crying because it's so frustrating. I know if I fail then there is a reassessment but if it's just the same thing then I'll fail again.’

What then follows is discourse involving 17 individuals which results in elaborations on the problem revealing to some the similarity of the problem to database design (‘I am no techie but this just sounds like standard metadata’) which allows them to re-contextualize the problem.

Re-contextualization occurs twice within the discourse and opens up the problem to allow others to gain understanding and assist the understanding of ‘carrot_girl’. Throughout the discourse are messages of morale boosting and shared experience (‘Try not to focus on how many people failed last year - that won't help’).

Halfway through the discourse carrot_girl shows signs of metacognition. Appearing to have accepted the expertise on offer she agrees to share her work to see ‘what the consensus is’, indicating a possible understanding that the work is now becoming communal.

‘You have a very good point. I think I'm getting lost in the specifics and you've just brought me out of it. I especially like the thought of putting ethics in the first field along with issues (which I already have there). I'll post what I already have to see what the consensus is.’

Seeing the work carrot_girl posts, a poster called Phill gives positive feedback and asks a question to draw out deeper thinking;

‘Carrot_girl,

That's looking pretty good, and quite insightful. I like the way that issue voting goes under behavior. That's really the role it plays in American politics, politicians try to get people to vote based on flashpoint issues which actually occupy very little of the governments actual time.

The only thing that leaps out at me is; where would the effect of religion fit in? under behavior? strategy? issue voting? Evangelicals are practically a political perspective these days.’

As a consensus is formed a poster called DeadYankee appears to be encouraging carrot_girl to think for herself;

‘Oh, ok, you seem much more certain of your task now. Well, if it is that abstract a task then, as Theo says, just do what you want and just make sure you justify your decisions.’

Having started from a state of frustration and despair, Carrot_girl seems now to be fully clear on what she needs to do for her assignment and has now made it her own;

‘aha, now here is where the facets come in. I'll definitely add adoption but if the book to be classified is about gay marriage then I'll just add homosexual from the People in Politics section.

Culture wars and race relations kind of come under the same topic but I need to think of another term to encompass both.’

I feel the case study above reveals the thought, trust, honesty, respect and sheer energy people put into these Web 2.0 enabled discourses.
Case Study Two
Possibly the main inspiration for this informal learning project came from an internet forum which I set up several years ago to compliment several adult courses in multimedia I was teaching at a further education college (assessment was portfolio based). As each of the courses only occurred one evening per week, the forum space was intended as a means by which the tutor could share materials with the students and they in turn could share materials with each other. What quickly became surprising was not only the response to student coursework related problems by their peers but how such help often went beyond the constraints of the course syllabus into richer and often more complex areas. In particular the course did not touch on dynamic web programming yet such was the desire of the students to study this that they set up their own area within the forum which became a hive of sharing found tutorial materials, assisting with programming problems and sharing their stories of programming frustrations.

Unfortunately when I changed places of work I failed to see the value of the site for future research and rather than pay for it to continue I allowed it to be deleted.

Case Study Three
Within virtual social learning spaces created within formal face-to-face learning settings, most informal approaches are of the request for help variety often limited to that which can be answered quickly. For example within a group forum space for ‘assignment’ holding 14 first year students on a Foundation Degree in Project Management we find postings such as the following;

SS ‘I understand the Harvard referencing for book, but I don’t understand it for websites some one help me’

IB ‘Here you go;

Another example concerns a similar issue;

AS ‘what is the thing at the back of your assignment what you put your models/diagrams in can anyone tell me. thanks’

LH ‘It’s appendix’

AD ‘Thanks [LH], was trying to think of that too : )’

When interviewed these particular students reported that they used the virtual social spaces to get quick bits of information off each other as well as providing each other with moral support when working away from college;

‘I only use ELGG [the virtual social learning space] to get an answer in a hurry, like when I need to know what a certain acronym is or if anyone has found a useful diagram.’ (Student A)

‘I have ELGG open when I’m working on my assignments so I can refer back to past stuff from the lessons. When I’m stuck, or bored I’ll check who’s online and use the chat space.’ (Student D)

For more complex issues with regards their work, they preferred to meet face to face, often in the refectory before lessons in the morning or at lunch-time;

‘I don’t really use ELGG that much, just for the odd little bit here and there. I find it much better when we get together in the refectory in the morning and can properly discuss assignments over bacon butties.’ (Student C)

‘There’s so much to talk about like yesterday’s footie or the last Supply Chain lesson that we need to see each other. Like when we had just done about Kaizen in class and saw how the ladies were working behind the lunch counter, we spent ages going over how their processes could have been improved.’ (Student B)

The students appeared to talk more animatedly when referring to meeting face-to-face out of the classroom and it was clear they valued that time.
Case Study Four

Here a space was created entirely with the intention of providing an informal environment for students on the Foundation Degree Games Design & Development, Foundation Degree Interactive Media Development and the Honours Degree Top-Up Interactive Design.

The ELGG environment was set-up 09/11/09 with 48 students (all cohorts for the courses in question) and four tutors as members. Initial discussion groups were implemented by the author to cover five main topic areas for the courses, each containing postings of related web-links to one or more sites holding information within the topic area.

By the end of the first two weeks an additional 11 groups had been created which added to those I had initially created making a total of 16 active groups. There had clearly been an initial flurry of interest which I suspected may have been down to the novelty of the environment for as one student stated when interviewed;

‘When we first got in I was keen to see how people would react to my topics and what people would say but I didn’t get much response so I gave up.’ (Student GD3)

Of the five most popular groups four were related to course topics and one was social in nature. Within the 16 groups, two groups were created by students as closed groups for group work upon a Professional Development Issues module.

Initial analysis of all the postings so far reveals several instances of students presenting informative course related postings of an information sharing variety. For instance;

NO ‘here is a very good site I just came across, has a lot of useful shizz http://www.sloperama.com/advice.html’

RM ‘thanks for that, a lot there I didn’t know’

Another student having heard that others were having problems researching games they did not currently own or did not have the console for, provided a lengthy post introducing others to the ‘Let’s Play’ (LP) sub-culture of gaming. As the poster explained;

‘Let’s Plays or LPs are playthroughs of games recorded in video or in screenshot format with accompanying commentary from a geek-ass dork for your viewing pleasure.’

The poster provided numerous links to various LP archive sites and those for specific games, including several which were connected to coursework. Though no-one posted a response, it became well-known to the lecturers that the games design and development students had found it an invaluable resource by the numerous times students made reference to various LPs in class. Some of the students when interviewed reported it to have been the most useful thing to have come from the virtual environment;

‘I loved the LP area on ELGG as I got to see gameplay from titles I don’t own. It’s the best thing on there.’ (Student GD2)

‘The coolest thing on ELGG was the LP stuff. I’d never seen LPs before so when I now find a good one I email all the other guys to check it out.’ (Student GD1)

After the initial flurry of interest of the first two weeks of the environment it became very quiet and it was through interviews with the students that I was able to consider why that was compared to my previous forum experience.

‘I liked the look of ELGG but I was already doing all my discussing with the others in STEAM.’ (Student GD6)

‘Most of the other guys on the course chat on the STEAM Forum as we’ve got topic areas where we meet.’ (Student GD1)
Further investigation on my part found that when the first cohort for Foundation Degree Games Design & Development started on the course several of them started playing on-line multiplayer games delivered through the STEAM servers (initially created by the games company Valve for their game titles). Connected to this was the virtual STEAM Community Forums which is where they would often meet before beginning a game session. Soon they had begun game design and even assignment related topics in those forums where there would be input from other members of the STEAM Community. By the time the ELGG environment was set up, the first cohort had already been a year and half using the STEAM forums in this way and the second cohort had become involved.

Other comments included;

‘I’m in touch with my mates by email so I don’t need to use ELGG.’ (Student IMD2)

‘ELGG is okay for when I’m not in college but to properly talk about things we see each other most days in college.’ (Student GD5)

‘I see everyone in college so ELGG seems redundant.’ (Student IMD1)

Discussion
It is clear from the Case Studies that opportunities for face to face communication is a large factor in the success of the virtual social learning system in providing informal learning opportunities. The entirely on-line focus of Case Study One, the limited face to face meetings of Case Study Two provides data to support this, contrasted with the more frequent real-life encounters of Case Studies Three and Four.

Additionally it is evident that the time when a virtual social environment is introduced becomes crucial in its acceptance and uptake. I would posit that had the ELGG environment been introduced to the learners of Case Study Four at induction it is more likely to have become embedded as part of their learning lives.

Without the provision of a virtual social environment by the institution, it appears learners do appropriate other technologies for their informal learning needs.

Conclusion
Case Study One is a particularly strong example of informal learning. The processes at work within the discourse are in the form of constant sharing, negotiation, re-contextualisation and readjustments from which knowledge is built. The interactions themselves and relationships appear to be a central instrument for (and feature of) learning and the conditions of informal learning. The amount of thought, care and energy which went into helping the learner highlights the power of community within the learning process.

Case Study Two reveals that even within formal learning, learners can use informal learning opportunities to take control of the learning process. Case Study Three brings to light the value learners place on informal learning communications within the formal learning environment whilst Case Study Four shows learners will appropriate technology for their informal learning needs.

The desire to seek out opportunities for informal learning may suggest that humans are naturally designed, as Dewey (1916) and Vygotsky (1978) posit, to learn as part of a social process and this desire stems from failings within the formal learning environment to engage with learners socially.

If one considers education as the concept of ‘what should be learned and why’ then it is only within informal education that learners truly have the control; they can choose not only the tools they would like to use but also the contents and people they want to interact with. This issue of agency and learner empowerment has arisen with the maturing of Web 2.0 communities and the concept of knowledge as collective agreement.

Whilst this has been a small scale piece of research, it has revealed intertwined relationships between formal and informal learning and suggests that we as educators should seek ways in which to not only accept the importance of informal learning but also to consider ways we can embrace it within our institutions, possibly through suitable technology provision such as a virtual social learning system to engender peer-to-peer communication and community creation. For such technology to be successful I suggest it needs to be
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embedded very early in a course, possibly even before induction, to ensure relationships are made, relationships which form the bedrock of social learning.

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