Learning in Liminality
An exploration

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actions active asynchronous available become boundaries braided bricolage broadcast building camera collaborative comment community concept conferencing connection constraints context contributions conversation create creation describes developed different digital discussion education event experience flashmeeting formal group happens identify important include individual informal interaction knowledge learner learning liminal manager map means mind mindmeister mirandamod mirandanet mmafa mobile needs networking online others participants people person physical possibility practice process professional provide range remote representational room salmon session skills social someone sound space stages stream students support synchronous system teachers technical technologies term together transform tweets twitter used video virtual ways web whatever work world

Background

The term **'unconference'[i]** is a generic term for an informal conference among peer professionals, who come together to set their agenda and determine the format and content of their conference, rather than having to accept the more formal agenda of traditional conference committees and organisers. Participants are seen as equals, regardless of status, culture and nationality. The unconference mode of informal learning has recently been modified by professional educators from MirandaNet[ii] in a version called a MirandaMod[iii]. In these events a wide range of education professionals choose a theme for a face-to-face meeting. Others join in across national boundaries, using a range of such digital communications as video conferencing, microblogging and collaborative concept maps. The technologies used – whether laptops, smartphones, desktop computers or Netbooks – enable people to participate from a range of locations. Some lead participants set the tone in five-minute talks, usually without presentation software, and further contributions can be selected by the chairperson to achieve a balance in participation between teachers, researchers and teacher educators.

 Many of the educators in MirandaNet are interested in exploring the theories and the pedagogies underpinning their teaching practice, which means that those pursuing postgraduate studies find the debate merging with their formal learning. These MirandaMods, therefore, provide an innovative extension to Continuing Professional Development (CPD) where professionals collaborate to manage their own learning agenda. This online and virtual social interaction was first recorded face-to-face in the process of building 'communities of practice' as a means of informal learning (Lave and Wenger, 1991).

Braided Learning theory (Haythornthwaite, 2007; Preston 2008; Preston and Cuthell 2011) tracks the informal dynamic knowledge creation in the collaborative contexts of MirandaNet and MirandaMods, as participants move from textual debate in a conventional mailing list to video conferencing, micro blogging contributions and collaborative concept maps. This collaborative technology creates a liminal space – a term drawn from anthropology that describes a rite of passage, in which a person moves from one state of being to another. In the MirandaMod communities participants are observed to be transformed in this liminal space by acquiring new knowledge, a new status and a new identity in the community. If learning is to be successful, this change is of critical importance. Whilst remote and informal learning is largely is what has been understood about mobile learning, the concept can now be extended to include these informal spaces in which learning takes place – the liminal spaces that those who push the boundaries of digital possibilities now inhabit intellectually (Cuthell, Preston, Kuechel and Cych, 2009).

This paper aims to extend understanding of liminal spaces and their contribution to the Braided Learning process. The processes can be described as a form of Bricolage (Levi Strauss, 1962), in which people build new knowledge from what is at hand.

Mise-en-scène

A MirandaMod. A group of people come together in a room. They are joined by others: not present other than as words writing themselves on a screen; as a low-resolution images and voices echoing across continents; as symbols on a growing map of concepts and ideas. Some will have made their mark earlier, leaving traces from which others will build, After the group has left, gone away from wherever to wherever, the words, images, voices, symbols and ideas will remain, to be re-purposed by the passing strangers who will bind themselves into this community of liminal space, wandering scholars through a virtual digital world.

What is happening? How is it happening? Who is it happening to? To *whom* will it happen? Who – where – are the agents; the actors; the participants? Where are the boundaries? In a state of flux, where can permanence be found? The answer could be everywhere, and nowhere.

There is a physical space, a room to which some are invited and to which some can come. It builds synchronously. People come and people go in real time.

There is a virtual wiki space, in which others can bind themselves to the community and within which they can deposit their messages and artefacts. It builds semi-synchronously – people come and go before, during and after the event.

There is a virtual web space that builds asynchronously.

There is a streamed video link that goes out to others not present and who watch synchronously or asynchronously – during the event, through a sometimes tenuous video stream that battles through the communication fog, or after the event, when broadcast-quality video can be accessed through the web space.

The screens in the room inscribe other messages; other participants.

Web conferencing through FlashMeeting[iv] brings others to the meeting, as both audience and participants, through oral contributions, uploaded presentations, text chat comments or URL web references. All of these are archived and available to all.

A Twitterfall [v] wall collates tweets from across the world that use the hashtag of the meeting and displays them on the screen. Conversations within the room and across the world display and interact with presenters and participants.

On another screen a MindMeister[vi] online collaborative concept map is displayed whilst it is building: those within and without the room add ideas, materials, links, resources and comments. In coming days the map allows for reflective thought. Upon completion it serves as a permanent record of the collaborative knowledge construction of the event.

This paper outlines the concept of liminal space, together with its recent appropriation for education, and describes the ways in which digital communication technologies are deployed to build the spaces and the communities. The learning that these spaces afford, and the ways in which this learning can be evaluated, is examined. The possibility of learning in liminality is re-assessed from the perspective of personal digital devices, new technologies and the affordances they offer for autonomous learning.

Concepts of Liminal Space

Void, without form, without light; inchoate, but aware (however imperfectly) of form and purpose.

The liminal spaces – embedding rites of passage, with people moving from one state of being to another – were three-layered multiverses incorporating a physical space, the virtual space of trance and dream and a visual space of representation: paintings left behind on cave wall; artefacts. Shamans and creatures from Myth entered these spaces, left behind their constraining present and found their identities shifting and changing. They brought back to those unable to cross with them (their communities, cabined, cribbed and confined by spatial temporality) messages to guide them in their daily life. The shamanistic ability to shift time, shift place and shift shape linked the grounded earth world with fluid visions to guide their future.

Van Gennep's concept of Liminality (1909; 1984) identified the in-between-ness of those in a condition of dislocation, where hierarchies are reversed and uncertainty rules. Jung (1978) referred to liminal spaces as boundaries between states of being, where the liminal space offers the possibility of a re-creation of self, where symbolic actions create meaning for the participants. Conflict, chaos, uncertainty and the breakdown of old structures accompany these actions.

So, within these MirandaMods participants are transformed by acquiring new knowledge, a new status and a new identity in the community. Liminality brings with it a sense of power and possibility that is in part a release from prior constraints (temporal; spatial; personal; professional) and in part a reflection of the autonomy engendered by the de-stratification of existing professional power relationships of learning.

The conventional ecosystem of learning is based on the separation of home, the institution (school, college, university), neighbourhood, work: all of these are bound into a system. This system operates the constraints of age, class, money and expectations, all of which act as gatekeepers for the system.

In contrast, the liminal spaces that we inhabit and within which we work are everywhere, and nowhere.

This liminal state is heightened when many of the participants are engaged in the research process, ethnographers exploring the boundaries of what is, and is not, possible in the interrelationship between technology and culture – as complete participant researchers. The more deeply the individual participates in the group and evaluates the actions and values within it then the more deeply they are in the liminal self-reflexive state between participant, researcher, observer and analyst. The range of interests and concerns of all these participant-researchers reduces the possibility of researcher bias when conclusions are drawn.

Meyer and Land (2003; 2005; 2006) appropriate the concept of Liminality to use with the term 'threshold concepts' when students move from one stage of learning to another; Raiker (2011), in the context of undergraduate and postgraduate learning, develops the notion to describe Liminality as the space where mental blocks form.

For our purposes, however, Liminal Space, and its attendant concept of Liminality, can be most tangibly observed in the MirandaMod context and process, where a range of actors come together, accepting the possibly chaotic, fluid instability and uncertainty of creating meaning and new knowledge.

Learning as a transformational process

An integral part of making a range of technologies work together – possibly for the first time – is the acceptance of the fact that conflict, chaos, uncertainty and the breakdown of old structures accompany these actions.

> *Apologies for those in the room. Can't get the twitterfeed for #mmafa working at the moment. Follow on your smart phone instead mattpearson*

> *Finally all the tech is working. Gremlins banished. #mmafa. Even tweets are visible*

> *#mmafa sadly reporting the wifi for streaming gone down : (back shortly we hope)*

Habermas' (1984) comment, that we make meaning through the use of words, the creation and use of artefacts and through actions, should then extend to education. Learning should transform the ways in which we use words, the artefacts that we create, the ways in which we use them and all of our subsequent actions. Education and learning should move beyond simple content acquisition and cognition, through metacognition to epistemic cognition. We should make use of our learning to effect change. But learning is a conditional and contingent process …

Technologies: what works where, and how

Using technologies

The term 'digital technologies' also encompasses the mobile technologies movement that aims to chart the new conceptual space that Pachler et al call the 'Mobile Complex' (Pachler, Bachmair, Cook, 2009).

The theory and practice underlying MirandaMods, described as 'Supercharging Streamed Media' (Cych, 2009) brings MirandaNet's interactive Continuous Professional Development to an international audience.

Supercharging Streamed Media

MirandaMod sessions are filmed for post-production, in order to produce high quality film. The finished film includes people's discussion, embedded presentation slides synchronised with talking heads, and so on, and is then made freely available as an asynchronous web resource. The sessions have two additional video streams: one filmed dynamically, incorporating live streams with both face-to-face and remote discussions and distributed through a channel such as USTREAM [vii]. The MirandaNet team also uses a FlashMeeting [viii] Stream to include all the virtual participants in the discussion for reflective workshop sessions that augment the face-to-face ones.
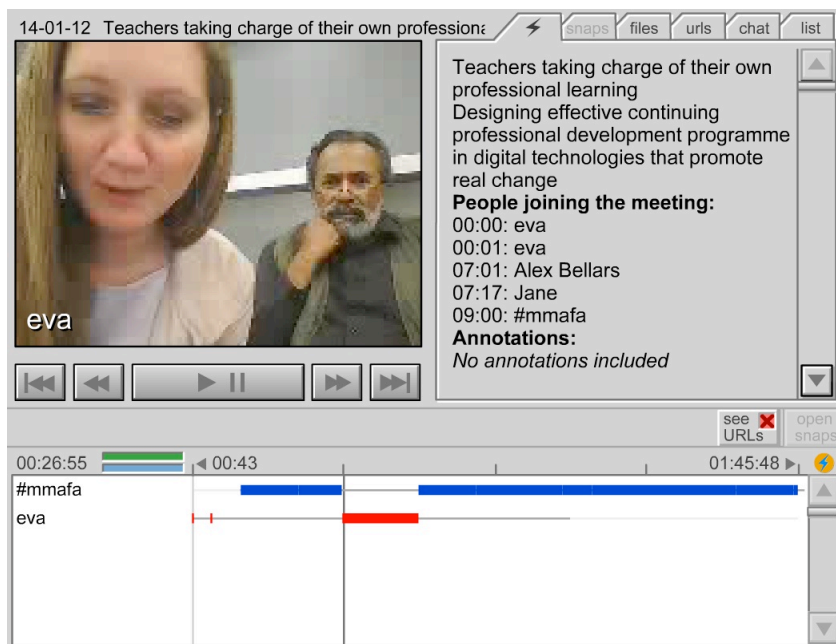
The traditional use of such conferencing tools as FlashMeeting is as a serial video conferencing application operating in virtual space, where everyone's stream is visible in miniature and people take turns to broadcast out. A diagram of its use might look like this:
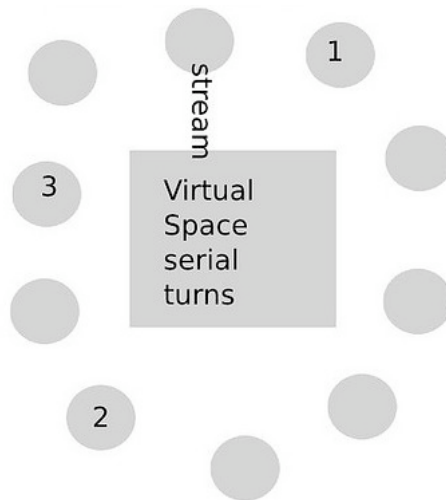

Figure 1: FlashMeeting, a serial video conferencing application

One person talks at a time and is streamed – other remote viewers observe or queue – and one person can mediate.

It has a range of features built in, such as voting and polling, a text chat channel and files and urls can be made available to all of the participants. But that "serial" model of video transmission or streaming can also be wasteful if you wish to amplify live streaming socially. All that is needed – and it is what the author devised for the MirandaMod sessions – is to add a Digital Video camera on a tripod to the computer that is providing the FlashMeeting connection in the MirandaMod and then show the FlashMeeting on a whiteboard in that room as well. The social interactions are then immediately magnified and made highly dynamic.

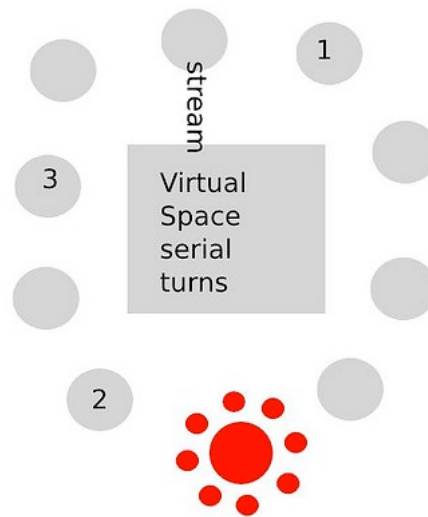One ends up with a modified FlashMeeting not unlike this:

Figure 2: Magnified dynamic social interactions

What was formerly one of the participants is now augmented through the 'many at one' node (because the video is a roving camera, not a static one) and effectively now includes all those in the face-to-face MirandaMod session within the FlashMeeting.

These interactions are further augmented by the use of MindMeister, a collaborative mapping tool being use to create and store knowledge created in real time by an expert group, and who can operate both synchronously and asynchronously wherever they may be in the word, and in whatever time zone.

Twitter is used for participants to comment on the proceedings and interactions within the MirandaMod, and to exchange information. These Tweets are collated through a program called Twitterfall and projected onto a screen (referred to as a Twitterwall) that constantly updates itself, so that participants in the room, and those watching the video as it is streaming, can read – and contribute to – the conversation.

> *Resources are only of any use when they are used - useless when they're in cupboards. #mmafa learners only learn when they're learning.*

> *Linking up and automating data flow and assessment was raised by Chris Yapp at previous mirandamod #mmafa*

#mmafa What assessment is really effective?Is the learner at the heart of the process, or the focus of the process? A subtle difference.

How do these technologies translate into the Liminal Space?

If we use the original analogy of the liminal space as being a three-layered cosmos or universe, it encompasses three 'worlds' – the physical world, the non-physical, or virtual, and the visual, or representational. In MirandaMods these become The Physical Space, The Online Space and The Representational Space, for all which the boundaries remain fluid and blur. Within each of these participants assume different roles and presences, and for many of the participants this is at one and the same time. In other words, within these sessions people assume multiple roles, often in multiple spaces. These technologies – video streaming; FlashMeeting; collaborative online concept mapping; Twitterfall – are supported by a range of devices. These range from smartphones, through tablets and iPhones, to Netbooks, notebooks and laptops, to the interactive whiteboards with integral projectors through which the various streams are displayed. They link the participants both spatially and temporally.
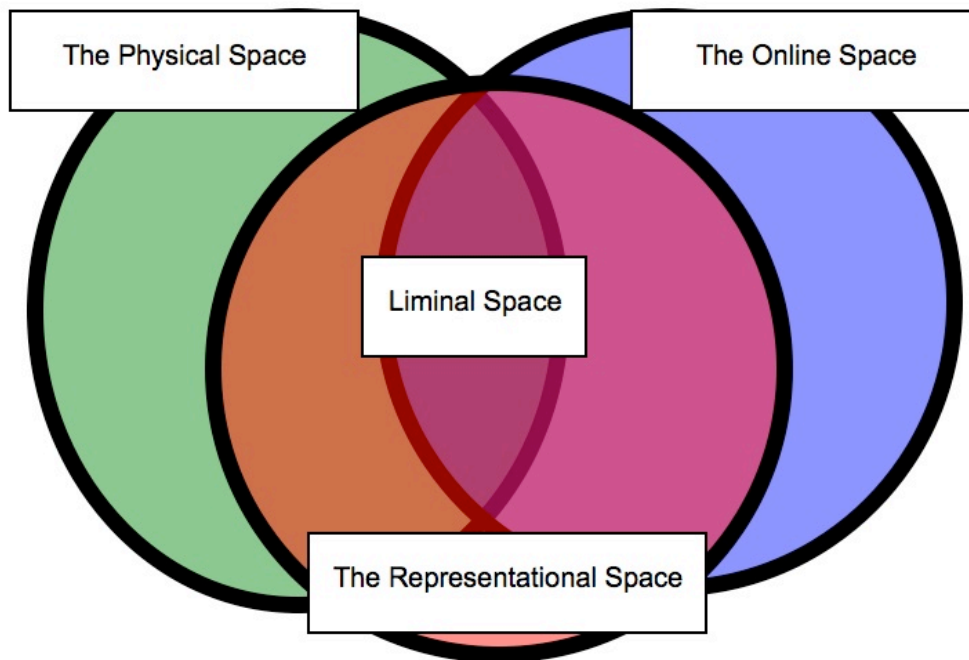
Liminal Spaces of MirandaMods

Figure 3: The Liminal Space

In the Physical Space

There is (usually) a Chairperson, who orchestrates contributions from people in the space, as well as those operating in the Online Space, supported by the FlashMeeting supervisor. The social greeter will have coordinated all those present. The technical crew could consist of the film crew (one camera operator and possibly one sound person); a people director (someone who orchestrates people's movements and utterances and reminds people about the technical kit that is being used); a video and sound mixer; a technician and a remote stream observer providing feedback. These will also be participants in the process. In fact, the majority of participants are involved in the technicalities, as well as contributing and learning.

In the Online Space

Those participants in the online space will include connectivity management: this may fall to one person or, better, be distributed, with Tweets being sent out at appropriate opportunities in the discussion. Another participant will be the MindMeister concept map manager; another may a remote stream observer providing feedback to the technical crew in the physical space, although this feedback is often provided by all of those watching the stream. Then there will be participants in a FlashMeeting (or Elluminate, or whatever other platforms may be used). Many of these participants will also be on Twitter or on other social media. An important aspect of the online space is the provision for asynchronous participants, who can access the website that contains links to the wiki, the video streams, the mind map, the chat documents and the replay and transcript of the FlashMeeting session.

In the Representational Space

This space is inhabited by participants who may be either synchronous (these may also be operating in both the physical and online spaces) or asynchronous participants: the MindMeister map manager, the map makers and a wider audience (again, both synchronous and asynchronous) that can also include people on Twitter and other social media.

#mmafa Concept map being developed - go to MirandaNet site for access. Link: is.gd/fMgprt

Binding all of these spaces together will be a post-production video and web manager – who may be a single, or collaborative, entity. In this way the event, its processes and the learning will exist in yet another temporal and virtual space for asynchronous use.

Summary: Roles and Actions in a Liminal Space

The Liminal Space consists of:		
The Physical Space	**The Online Space**	**The Representational Space**
Chairperson	Connectivity manager (distributed - someone who tweets out at good opportunities in the discussion)	Mind Map Manager
FlashMeeting supervisor	Mind Map Manager	Map makers
Social greeter	A remote stream observer feedback person (remote and on site)	Participants
Film crew (one camera operator - one sound person)	Participants in FlashMeeting, Elluminate or other platforms	People on Twitter
People director (someone who tells people where/where not to stand - what not to say and remind people about the tech)	People on Twitter	People on other social media
Video /sound mixer	People on other social media	Asynchronous participants
Technician	Asynchronous participants	
A remote stream observer feedback person (remote and on site)		
Participants		
A post production video and web manager		

The toolkit

In a perfect world the team producing a MirandaMod would have a complete range of equipment. Our world is less than perfect, and operates with far less than this:

  1 or 2 good digital cameras with proper light and sound plus proper batteries
  A camera to save to SD card
  A sound mixing desk and radio mikes for everyone, plus PA system
  An always-on good broadband connection
  An on-site control booth

The reality is that a MirandaMod often needs to be supported by a range of mobile broadband dongles that provide a level of connectivity when access to the in-house internet connection is less than perfect – or, as often happens, restricted, patchy and fragmented. Indeed, Leon Cych broadcast a discussion group from a treehouse in a London park during a thunderstorm simply using a mobile broadcast dongle. At times, smartphones have also been pressed into service to provide video streaming.

Achievement for all from an iphone - LIVE at bambuser.com/v/2282931 #MMAFA

Finally a stream from an iphone for #mmafa bambuser.com/channel/eyebeams

#mmafa @eyebeams has stripped down his iPhone to hook up the bits and provide streaming from this session. Let creativity thrive.

Video capture can also be augmented by handheld flipcams.

Constraints and conflicts

It can be seen that there are inherent conflicts between the fluid, chaotic and inchoate nature of the Liminal Space of a MirandaMod and the technical demands imposed by the need to high-quality resources that will be uploaded into a virtual web space to be used asynchronously. This is particularly critical when the resources are to be used by other projects. The synchronous is inhibited by the needs of the asynchronous. These constraints need to be recognised by all participants. The MirandaMod process, however, is one that is constantly evolving, both as available technologies change, and as participants become more adept at acting within and across the zones of liminal space.

Learning: how; why; where

To repeat a point made earlier, the conventional ecosystem of learning is based on the separation of home, the institution (school, college, university), neighbourhood, work: all of these are bound into a system. This system operates the constraints of age, class, money and expectations, all of which act as gatekeepers for the system.

In contrast, the liminal spaces that we inhabit and within which we work are everywhere, and nowhere.

Building new knowledge

The knowledge creation process as Bricolage

Participants in the liminal space apply the programs they have to the task in hand, and try to learn the routines as they go along. The use of the tool becomes shaped by the outcome, and the skills develop through use, because the intentional outcome is to develop new knowledge. The practice becomes one of 'do-it-yourself', analogous to one in which items are taken 'off the shelf' and used in whatever way the constructor sees fit.

The French term for this is 'bricolage' – whether for a do-it-yourself store, a builders' merchant or the act of constructing new knowledge and understanding in this way. In 'The Savage Mind' (1962) Levi Strauss used the term 'Bricolage' to describe the way in which the non-literate,

non-technical mind of 'primitive' man responds to the world around him, as someone who works with his hands and uses devious means compared to those of a craftsman and who has nothing else at (his) disposal. Levi Strauss describes the bricoleur as adept at performing a large number of diverse tasks, with the rules of his game, always to make do with 'whatever is at hand'. Whereas an engineer works with concepts, Levi Strauss describes the brocoleur as working with signs, the very concrete objects with which meaning is constructed.

The process involves a 'science of the concrete' which is carefully and precisely ordered, classified and structured by means of its own logic. The structures are 'made up', and are ad-hoc responses to an environment. They establish homologies and analogies between the ordering of nature and that of society, and 'explain' the world and make it able to be lived in. The bricoleur constructs the 'messages' whereby 'nature' and 'culture' are caused to mirror each other. Levi Strauss saw bricolage as a way in which pre-scientific societies construct a belief system which explained their world.

Papert (1980) used the concept of bricolage in relation to the concept of 'chunking' (Miller, 1956), a process in which knowledge is broken into 'mind-size bites', which enables new knowledge and understanding to be constructed from it. His thesis was that the use of previously learned strategies could be used as a tool in concept formation.

Levi Strauss' explanation of bricolage and the bricoleur offers an insight that is, perhaps, applicable to MirandaMod participants.

…a bricoleur is someone who works with his hands and uses devious means compared to those of a craftsman…(he) has nothing else at (his) disposal. … The bricoleur is adept at performing a large number of diverse tasks…the rules of his game are always to make do with 'whatever is at hand'. (p.17)

The process, then, is one of working from the specific (the task that must be completed) to the general (learning from that experience to apply to future experiences). The signs by which they work are those of the Graphical User Interface, with its buttons, toolbars and the ability to undo errors. The 'devious means' which they use utilise a range of mainly open-source software, making do with 'whatever is at hand'. Their work gives an account of their lives in a world where allusion, reference and quotation seem the only possibility.

We have already noticed the connection between…the activities of the…bricoleur and the modus operandi of the jazz musician. …This art, - an art of signifiers, not signifieds, can be said to be truly modern … (Hawkes, 1977 p.121.)

The synthesis must be that learning is seen as experiential, observational and a semiotic experience. The question, however, is whether content is subverted by electronic form.

Concern over the subversion of content by electronic form has been identified as 'data dandyism' (Lovink, 1995). He describes those who are *"… concerned with … the accumulation of as many immaterial ornaments as possible …"* where digital style triumphs over substance. The ornaments are a reflection of both technical skill, in that the 'data dandy' demonstrates superior competence, and technical sophistication, in that the user possesses the latest, most powerful (and most expensive) hardware, software and peripherals. The sub-text is that the user has sufficient time to devote to the acquisition of such skills. This demonstration of social worth through cyber semiotics updates the concept of fashion and conspicuous consumption (Veblen, 1899) and can be seen as particularly apposite in the acquisition and use of the latest mobile digital device.

Learning: Informal or Formal

Cook, Pachler and Bradley (2009) suggest that the key defining aspect of informal learning is one of agency: that is who determines the learning goals. They view informal learning as a natural activity by a self-motivated learner. This could be in a group, without a tutor being aware of such activity; it could be either intentional or tacit learning, in response to some stimulus; it could be what they term 'serendipitous', without the learner necessarily being aware of what is being learnt.

So, who determines the trajectory and outcomes of learning – the institution, or the learner? Should learning only be intentional, or is incidental learning equally valid? Formal learning provides the structure, signposts, and scaffolding for a beginning learner. Informal learning, on the other hand, builds on the foundation of existing knowledge, and a sense of context that provides the framework for understanding.

> *#mmafa "... use translation apps instead of dictionaries - and why not? great ideas from Copland" Language teachers scream NOOOOOOOO*
>
> *improving but as lang learning tool, they're not good as often don't choose words using context and learners become reliant #mmafa*
>
> *I accept your argument, but I was thinking of children who can't speak much English who need to understand in that instant #mmafa*
>
> *that's not as bad. I use to get the gist of letters in Swiss German here! However, I wouldn't use to e.g. write a letter #mmafa*

Some working definitions for formal, informal and non-formal learning have been provided by The European Commission on Education and Training. The question of whether these are seen as a blueprint for further work, or as a way of recognising the needs and progress of the individual,

rather than those of the organisation, is yet to be resolved. What is of further concern is that these definitions (and embedded assumptions) are predicated on both a utilitarian basis (*recognised in the labour market and by society in general*) and are restricted to adults.

"Learning that takes place in formal education and training systems is traditionally the most visible and recognised in the labour market and by society in general. In recent years, however, there has been a growing appreciation of the importance of learning in non-formal and informal settings. New approaches are needed to identify and validate these 'invisible' learning experiences.

However, definitions and understandings of what counts as formal, non-formal and informal learning can vary between countries. At European level, the following definitions are used:

- *Formal learning is typically provided by education or training institutions, with structured learning objectives, learning time and learning support. It is intentional on the part of the learner and leads to certification.*

- *Non-formal learning is not provided by an education or training institution and typically does not lead to certification. However, it is intentional on the part of the learner and has structured objectives, times and support.*

- *Informal learning results from daily activities related to work, family life or leisure. It is not structured and usually does not lead to certification. In most cases, it is unintentional on the part of the learner."*

The meaning-making process of Braided Learning is emerging from the observation of online communication, as communities of professionals mature in digital competence (Haythornthwaite, 2007). These first three stages of Braided Learning were established when the communities being researched were simply using email. The process showing how social interaction can translate into professional action relates to the four socio-cultural communicative strata identified in multimodal theory: discourse, design, production and distribution (Kress and Van Leeuwen, 2001). As the MirandaNet participants have expanded and developed the range of technologies and affordances used in MirandaMods, so the concept of Braided Learning has accommodated these and expanded into the liminal spaces that are no longer constrained by temporal or physical boundaries, and are therefore truly mobile.

This extension of Braided Learning theory builds on evidence that the praxis of those participants in the liminal space of the MirandaMods is one that constructs knowledge: 'the working heuristic of discovery' (Bruner, 1974). They take for granted the constraints and difficulties within which they work. What they produce is a result of their discovery of the ways in which the information given, created and found, with the tools in their hands and the time available – all transmuted into

their knowledge creation. The artefact they create is in the Representational Space, and the manifestation of their conceptual development.

Assessing learning

"As all teachers know, teaching is a complex and often challenging process, because learning is a complex and challenging process. Nor, we wish to say at the outset, would we really wish for it to be otherwise. When knowledge ceases to be troublesome, when students sail through the years of a degree programme without encountering challenge or experiencing conceptual difficulty, then it is likely that something valuable will have been lost. If knowledge is to have a transformative effect it probably should be troublesome, or at least troubling, but that does not mean it should be stressful or should provoke the kinds of anxiety, self-doubt and frustration that can lead students to give up. (Meyer & Land 2006 p.xiv)

In our liminal space, however, there is learning, with whatever teaching takes place mediated informally by peers. Building knowledge, competence and performative skills *can* be challenging and troublesome: not, however, because the actors are students at sea in a degree programme but, rather, that they are navigators charting the unknown. In the process they transform themselves, and are able to effect the transformation in others.

Liminality

The existential reality of learning is very different from the functionalist expectations of learning

YET

So much policy is predicated on limited functionalist outcomes.

In this context, many young people's transformational learning experiences outside school are now significantly different from the traditional routes practiced in school. They build credible identities in social networking sites which are important to them, but their experience in this field rarely takes them into deeper learning stages. Is this perhaps the right time for teachers to consider ways in which the internet can extend their own professional learning – and create good learning habits for students who may wish to take their social networking into a more challenging collaborative learning realm?

one of the students is now watching the #mmafa stream on his smartphone outside the room

> *… without Mirandanet organising the event we would have had nothing to do our tech magic at, so we can only salute a team effort which delivered some impressive outcomes in the face of probably one of the most challenging technical environments we have worked in for a long time ...*

Appendix

Skills needed to run and manage MirandaMods: Leon's 'How To' guide

Operating in a multilayered liminal space requires a complex skill set that changes depending on the participants, the venue, the time available and the equipment.

For Twitter

Fast and efficient skills for Tweeting out. These skills include:

Advance agreement of the hashtag (#) with all the active participants. Identify all of the URLs that will be needed and have them in a separate document on the desktop of the device that will be used for Tweeting before the broadcast.

Listen to the conversation. Tweet a "Hook" – not just: 'Stream from .... at .... at so and so in 10 minutes': this becomes routine and boring and the law of diminishing returns kicks in.

Identify the speakers and their backgrounds. For example, when Chris Yapp was talking during BETT11 MirandaMod it was pointed out that he was one of the people behind *Shift Happens*[ix] – a presentation about how changes in global trade impact on individual careers – and the result was immediate attention and increased engagement from the Twitter community. The conversation on Twitter and in the twitterverse then focuses onto the HashTag, at which point the effect is achieved. That is how it works.

Engage your audience on different channels.

Encourage remote users to respond on Tweets and in the FlashMeeting. The person managing the twitter conversations is talking on two channels to different audiences (those in the MirandaMod community and those in the Twitter community), but is the one constant, and in that way the reach of the event and community can be maximised.

Have a few Twitter templates ready to send out during the broadcast pre-prepared – just cut and paste into Twitter then click 'Send'. The more people who do this, the better chance there is of getting a wider audience.

For FlashMeeting

Always read the FlashMeeting text and talk and respond – the previous strategies hold true in this arena as well as with Twitter. Acknowledging these contributions is important to the face to face participants and those online as it emphasises the global reach of the debate.

NEVER have the videostream and the FlashMeeting up on a desktop at one and the same time. The top window on the browser is active: i.e. one can input data to it. It can also be called the one in focus. There may be a number of windows or tabs open on the browser. One of these will be in focus; the others will not. If someone starts off a FlashMeeting and then minimizes, it or opens another window or tab it will still continue to broadcast sound. So, if the USTREAM video stream is brought up that will initially work well. However, two windows, one visible and one not, are fighting for sound, and are often not in synch. This is why people think the sound is the fault of the transmission. It's not: two windows are open and one is fighting the other to be in focus. The solution is to have only one window with sound and video up.

This disturbance can also happen when other applications clash with either the USTREAM or FlashMeeting – this is particularly the case with Skype, for example.

How things work together (or not)

Never have FlashMeeting and the stream up at one and the same time unless the sound of one or the other is turned down. They also eat bandwidth and the sound and video quality will drop.

People who view the stream remotely have a solipsistic attitude to the data that is coming in and so wrongly perceive a few things.

When MirandaMods are broadcast two laptops are used in the broadcast process.

One is attached to the camera and sends out the videostream. If possible this is hard wired into the best Internet connection available.

The second laptop has a different wireless connection to monitor the sound, on separate headphones from the ones worn for the camera audio input. The operator, therefore, receives two sound sources, one a few seconds later than the other.

The two sound sources provide the evidence of whether the stream is working or not, but input is needed from the online space to indicate how the stream is being received. However, everyone's client (i.e. their own machine) has different specifications. So if one person says that the stream is down it doesn't necessarily mean that it is: it is only when three or four people report this that it can be confirmed.

People in the online space should always re-check their machines and refresh the browser before reporting that the USTREAM is down. Sometimes the picture hangs, and it is necessary to wait 10 seconds or so for the stream to reconnect. If it hasn't reconnected after 30 seconds then it probably is down.

Discourage people in the physical face-to-face space from watching the USTREAM on their laptop. It significantly reduces bandwidth – unless every user has an independent connection (for example, through a dongle) and bandwidth is distributed.

Broadcasting skills

The person who is responsible for broadcasting is combining a number of skills:

Changing sound levels

Filming

Responding to requests

Monitoring sound

Juggling the people

Tweeting

Juggling the sound

Responding to Tweets

Reading the FlashMeeting

Figure 4: Broadcasting skills required for running a MirandaMod

The reality is that this combines the roles of five or six people. In order to maximize the impact of the event, and for it to run smoothly, it's important that everyone involved demonstrates Digital Literacy – all the skills previously outlined. These skills need to be learned – preferably through community mentoring.

Essential tasks for ensuring a smooth MirandaMod

- Someone needs to take ACTIVE ownership of the collaborative online map.
- Someone needs to show it and explain the concept each time during the session. It needs to be modelled, otherwise people struggle to use it effectively. People in the Online or Representational Space need to be shown how they can contribute. This includes checking whether people have a MindMeister account, or whether they are up to their map limit, unless, that is the map has previously been created and saved as a MindMeister wikimap.
- The person or people responsible for the map need to broadcast the map's URL in the hashtag or twitter stream conversation at regular intervals.
- Create and open up a wiki to provide people with as much information as possible.
- People generally have to multi-task smartly, more often and in context.

- At the end of each session copy and paste all the Twitter conversations and save them as a PDF file, so that the data is not lost after a few days. This needs to be done as a housekeeping action immediately after each session.

When sessions are being broadcast:
- don't stand in front of the camera or constantly move around;
- don't make inappropriate comments in front of the camera on the stream;
- try to keep whispered instructions out of camera mike range - they end up on the stream.

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Endnotes

ⁱ An unconference is a participant-driven meeting. The term "unconference" has been applied, or self-applied, to a wide range of gatherings that try to create space for peer-to-peer learning, collaboration and creativity. They can be seen as self- organizing forums for idea sharing, networking, learning, speaking, and presenting.

ⁱⁱ The MirandaNet Fellowship, founded in 1992, is an e-community of practice for international ICT policy makers, teachers, teacher educators, researchers and commercial developers who are passionate about digital technology in teaching and learning and about using technologies to promote cultural understanding and democratic participation. Currently there are around 700 members in about 70 different countries worldwide. The website, online forums, seminars, workshops and projects run by members are funded by international partner companies and government agencies. MirandaNet gratefully acknowledges the support of its company partners. http://www.mirandanet.ac.uk

ⁱⁱⁱ Historically Mod comes from the Gaelic word for a gathering, assembly or parliament. MirandaMod borrows its name from the MirandaNet community and the Gaelic word for a 'gathering or assembly'. MirandaMod acknowledges its indebtedness to other unconferences, especially Teachmeet, under whose banner the original MirandaNet unconference was going to fly. However, organisational considerations mean that MirandaMod has to meet a different set of criteria to Teachmeet. We see MirandaMod as an addition, rather than a competitor, to Teachmeet in the educational unconference world, and it is more than likely that members of the MirandaMod community will be involved with Teachmeet events and vice versa. (http://www.mirandanet.ac.uk/mirandamods/)

^{iv} FlashMeeting is an application based on the Adobe Flash 'plug in' and Flash Media Server. Running in a standard web browser window, it allows a dispersed group of people to meet from anywhere in the world with an internet connection. Typically a meeting is pre-booked by a registered user and a url, containing a unique password for the meeting, is returned by the FlashMeeting server. The 'booker' passes this on to the people they wish to participate, who simply click on the link to enter into the meeting at the arranged time.

During the meeting one person speaks (i.e. broadcasts) at a time. Other people can simultaneously contribute using text chat, the whiteboard, or emoticons etc. while waiting for their turn to speak. This way the meeting is ordered, controlled and easy to follow. A replay of the meeting is instantly available, to those with the 'unique' replay url.

^v Twitterfall is a Twitter client specialising in real-time tweet searches. New tweets fall into the page. Twitterfall has a huge feature list and there are many actions that can't be done on other clients. For popular trends, Twitter is queried from the Twitterfall server, and results are streamed directly to the user. This means that Twitterfall is more user-friendly than other clients. Twitterfall was written by x5315 and Jalada. The name was coined by Chris Northwood. Twitterfall is a collection of Erlang, JQuery, Google Maps and Language APIs, Comet Push Technology and Twitter. http://twitterfall.com/

^{vi} A collaborative web-based tool supporting unlimited simultaneous users. Users can create, edit and share maps on the Web. http://www.mindmeister.com/

^{vii} http://www.ustream.tv/

^{viii} http://FlashMeeting.e2bn.net

ix http://www.youtube.com/watch?v=ljbI-363A2Q