Blending Formal and Informal Learning within an International Learning Network

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ABSTRACT

Recent work on online, formal and informal learning raises important questions. To what extent can online learning communities also be informal learning communities? What 'community building' issues are raised in the context of international learning networks? In the paper we will (i) briefly describe a new case study of a learning network (part of the JISC 'Case Studies in e-Learning Practice' project), (ii) present a framework that builds on the notions of people, policies and purpose but which is supplemented by notions of informal learning, and finding 'common ground', (iii) illustrate the framework using examples from the case study and follow-up research, and (iv) conclude by drawing out key issues raised by our work.

Keywords

Internationalisation; formal, non-formal and informal learning; learning networks; grounding, online communities

INTRODUCTION

In recent years various frameworks have been developed to help us identify what makes for a successful online community. For example, Preece (2000) has proposed that online communities are all about people, policies and purpose. Furthermore, there has been an increase in research examining new contexts for formal, non-formal and informal lifelong learning (e.g. McGivney, 1999; Clarke and Englebright, 2003; Bowskill, 2004; Cook and Smith, 2004). Cook and Smith (2004) identified the goals that motivate learners along a 'Life Cycle' of personal progression and self-directed development. It may be useful to think of formal learning as being something the tutor knows about and informal learning as either being carried out under the radar of a tutor or something carried out individually by a self-motivated learner. Furthermore, 'Learning Networks' (Koper et al., in press) have been proposed as a way to provide Design Models of how we can support seamless, ubiquitous access to learning facilities in a variety of sectors. However, when brought into contrast with the work of Preece and attempts to use learning networks across national boundaries, this recent work on informal learning raises important under explored questions. To what extent can online learning communities also be informal learning communities? What 'community building' issues are raised in the context of international learning networks?

This paper reports on work that investigated the above questions by giving an overview of a study conducted by the authors. Specifically, in the paper we will (i) briefly describe a new case study of a learning network (part of the JISC 'Case Studies in eLearning Practice' project), (ii) present a framework that builds on the above notions of people, policies and purpose but which is supplemented by notions of informal learning, and finding 'common ground' (Baker *et al,* 1999), and (iii) illustrate the framework using examples from the case study and follow up research (the latter being a detailed dialogue analysis of a video transcripts of an online session captured during the initial case study). The paper concludes by drawing out key issues raised by our work.

FRAMEWORK FOR LEARNING NETWORKS

In order to explore the research questions posed above, we have developed a framework for learning networks. The research method for the work described in this paper was initial case study, then follow-up work that explored the framework that was Interpretive (Schutz, 1973; Schwandt, 1994) and Grounded (Strauss and Corbin, 1990). The development of the framework for learning networks thus involved two activities: (1) the first author's attempts to understand members of the initial case study teams' (i.e. co-authors two to five of this paper) definitions and accounts of the situation, (2) the use of various orienting concepts to guide activity 1, which includes the elements of *people*, *policies* and *purpose*, but which is supplemented by notions of *formal*

and *informal learning* and *common ground.* The six concepts in italics in the previous sentence are the key components of our framework. Below we will provide an overview of these orienting concepts.

Preece (2000) has proposed that online communities are all about people, policies and purpose. Typically, a group of people may come together in order to fulfil a particular purpose or to satisfy particular needs. The online groupings of people who manage to build successful communities tend to be guided by formal and, or sometimes informal policies that are defined early on in the evolution of the online community. A member of a community brings with them their own set of characteristics, thus the people dimension can include such things as: gender, expertise, personality, age, culture, motivation, abilities and disabilities. A policy refers to the norms and rules of the community, which include: etiquette, flaming and privacy. The purpose of a community can vary depending on the domain and task involved, but may include: education, information, civic, support, practice, health, problem-solving. Thus in Preece's (2000) framework there are strong elements of individual and collective sociability.

There has been an increase in research examining new contexts for informal, non-formal and life long learning. However, it is important to note that there appears to be great variation in the literature on 'informal' learning regarding definitional and theoretical issues. The context of such learning seems crucial and we would expect to see attributes of informality and formality as present in all learning situations. Specifically, after Colley, Hodkinson, et al., (2003), these attributes of formal and informal learning can typically be described in terms of location/setting, process, purpose and content. It may be useful to think of formal learning as something that is tutor led and accredited, non-formal learning is then something that the tutor knows about (e.g. working in groups) and informal learning can be usefully viewed as either being carried out 'under the radar' of a tutor or as being something carried out individually by a self-motivated learner (Cook and Light, 2006).

Baker et al. (1999) have suggested that collaborative learning tasks involve interaction between multiple participants, who thus need to maintain some degree of mutual understanding. The process by which this is accomplished is termed grounding. The way in which collaboration, grounding and learning take place is largely determined by the task, the situation and the tools available. Grounding is thus the name given to the interactive processes by which common ground or mutual understanding between individuals is constructed and maintained. It is possible that some mutual understanding between individuals will already exist at the start of any interaction. This initial common ground may have, for example, been attained through the integration of the individuals from different backgrounds into a common culture. For Baker et al. (1999) an imprtant process involved in communications revloving around Grounding is that of the appropriation of tools. This is where new information related to different facets of an activity are appropriated:

> "Thus, during the interaction, as a result of grounding, learning may take place, in virtue of appropriation of refined tools. Our challenge is therefore to understand how these processes — grounding and appropriation — operating on quite different timescales, lead to collaborative learning. In order to respond to this challenge we need a deep understanding of the role that tools play in learning within cultures, together with micro-level analyses of how grounding actually takes place in the carrying out of concrete collaborative tasks. A unified perspective on the role of grounding in collaborative learning therefore needs to take into account both the roles of culture and of inter-individual interaction … A *common ground* of mutual understanding, knowledge, beliefs, assumptions, presuppositions, and so on, has been claimed to be necessary for many aspects of communication and collaboration. *Grounding* is the process by which agents augment and maintain such a common ground." (Baker et al., 1999, original italics).

Baker et al. also sugget that although individuals who engage in some interaction may already possess some such common ground, e.g. because of common membership of a particular culture or social group, this common ground will also need to be augmented and maintained during the interaction itself, in order to take into account new aspects of the common situation. Below we now describe the initial case study conducted for JISC.

CASE STUDY OF A LEARNING NETWORK

There were five main parties involved in this project: Islamic University Gaza (IUG, the people with the 'need'); British Council Palestinian Territories (BC, the 'funder'); British Council Distance Learning team; Middlesex University (the 'course deliverers'); London Metropolitan University (who conducted a UK JISC funded case study of the project and led on follow up research). Briefly, the setting was a networked learning one involving Gaza and the UK and was aimed at providing Islamic University Gaza academic staff with continuing and professional development in the area of e-learning. Basiel and Commins were the co-winner of 2004 UK Higher Education Academy's e-Tutor of the Year Award for work revolving around the case study project.

The online workshop series happened over a period of 6 weeks and explored curriculum design and pedagogical models for use within virtual learning environments. The objectives were to develop participants' ability to design and use e-learning content through the virtual learning environment, WebCT. The National Centre for Work Based Learning Partnership at Middlesex University uses a work based learning/learner managed approach to learning was adapted to produce individual learning agreements and student-produced assessment criteria for presentations for peer review. Thus the approach employed in this project was: individual learning agreements, Global Rich Pictures (GRIP, we will describe this in more detail below) mind mapping exercises, online presentations to peers and forum style debriefing.

The course designers took an online activity-based approach to apply Virtual Learning Environment (VLE) models and design issues to the IUG's academic WebCT module sample. Each of the tasks was linked to a core element of the design of a VLE, and included e-content, online communication and support, and an online assessment opportunity. Each topic was addressed over one week and was based around a two-hour video conference session. Feedback was given by email and through WebCT discussion board postings.

As part of the work based learning/learner managed learning approach, learners (practitioners at IUG) directed the tasks, with feedback given by the tutors in the UK. Communication, collaboration and problem-solving activities formed the basis of the pedagogical approach used and as part of this, each individual student established a personal learning agreement. Subsequent students would be supported by a network of local champions in English and ICT and course 'graduates'.

The project made innovative use of Macromedia Breeze, an online multimedia content tool and web-based video conferencing suite. The project successfully delivered an effective programme over six weeks, to multiple stakeholders with diverse cultural, educational and social agendas (total number of learners = 36). Data for the case study was gathered through the use of questionnaire and follow up interview with the Middlesex team. Figure 1 gives an overview of the project set up.
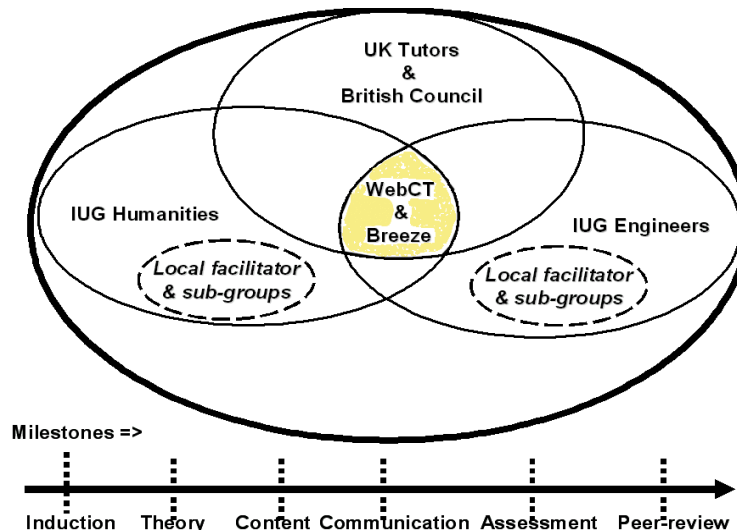

Figure 1: Overview of the project set up

The key points for effective practice drawn out from the case study are given below:

- The strength of the pedagogical design lay in the local facilitator and peer support network that was developed alongside the workshops to provide local champions or facilitators in English and ICT to motivate and steer groups.

- As the participants had a mixed level of ICT and e-learning experience, a work based learning/learner managed learning approach and a set of activities were adopted to allow each individual to progress at his/her own level.

- This approach to learning may initially prove a challenge where participants are used to a traditional transmission, content driven approach. Adapting and applying this framework to an online model demanded some innovative pedagogical design.

- Flexibility was a key component to this online model design. Contingency plans were built into every phase of the learning event.

ACCOUNTS TO ILLUSTRATE THE FRAMEWORK FOR LEARNING NETWORKS

The focus of the rest of this paper is on Interpretive and Grounded work that has attempted to instantiate the framework for learning networks described above. In discussing each concept there is inevitably some overlap with related concepts.

Examples of People concept

The members of the case study team agreed that people come first over the technology. Accounts 1-3 below give a useful account from the different perspective of some of the people involved. Account 1 below, from Dr Hussein, indicates that participants in the 6 week course may have undergone a change in thinking regarding how the way in which technology can be used in learning. This observation also links into the common ground 'appropriation of tools' (a sub-category of the 'common ground') concept described above, in that the new e-learning tools played a transformational role in the new learning culture that emerged; this micro-level analyses may point to how grounding actually took place.

Account 1 – Dr Mohammed Tawfik Hussein (IUG) "… people in this part of the world preferred to learn face to face …we adapted to this new culture of learning, which was an enhancement not only to our technical skills but also to our thinking in terms of e-Learning."

The quote for William Mitchell (Account 2) indicates the desire for the British Council to to "engage people" in new ways. Thus, ICT is seen as an opportunity to engage the different actors in new work flows, and indeed the sub-text appears to be one of appropriating new tools in an attempt to bring about transformation.

Account 2 – William Mitchell (BC): "We briefly explored the option of face-to-face on neutral territory. There were potential problems in IUG staff being allowed to leave Gaza. Another big factor was that BC did want to explore new ways of engaging people. I encouraged Skip quite strongly to think of alternatives to face-to-face."

Account 3 – Anthony 'Skip' Basiel (Middlesex Tutor): "Flexibility was a key component to this online model design. Contingency plans were built into every phase of the learning event."Account 3 indicates that the online tutors found the two-hour video-conferencing sessions to be quite taxing, even with the 10 minute breaks added at the request of the students. The focus and concentration needed to 'orchestrate' the learning event was more than in an equal face-to-face session.

Examples of policy and purpose concepts

Account 4 indicates a view on policy that differs somewhat from Preece's conception. Preece often regards policy at a micro-level, e.g. non-aggressive behaviour in online interactions. Here policy is at a more macro-level, i.e. the policy of the funder (BC).

Account 4 – William Mitchell (BC): "BC objectives were to meet needs of IUG; to develop a "product" that could potentially be used in other countries; to explore new approaches of engaging audiences. A wider objective was to see this as a starting point for working at a national level (as we did subsequently in the policy forum VC)."

Account 5 – William Mitchell (BC): "In addition to education, another **purpose** for BC was about achieving mutual engagement. To take one of the BC's **corporate outcomes**, it was to build *stronger ties between the UK and other countries.* We wanted this to be as 2-way as possible. We wanted to move away from the relationship as presented initially (a party, IUG, with needs) linked to a party that could provide a solution (Middlesex, the training providers). I think Skip and Ralph [would agree if asked] how much more 2-way the relationship turned out to be. This is even reflected now in Dr. Hussein's involvement in the paper" (original bold and italics).Account 5 indicates a wish by the British Council to move towards a state-of-affairs more akin to "mutual engagement". So moving away from service provision and emphasizes dialogue between actors. Hence notion of common ground is important here in the context of policy.

Example of informal learning concept

Although many of the aspect of our framework were well represented in the study, we will now highlight factors that relate to the questions stated above. An illustrative example of the informal learning concept is now given based on 'post-case study' accounts that were gathered from members of the study team. Account 6 illustrates that the IUG participants unilaterally set up their own *study groups* as a form of *informal learning,* which we defined above as learning that was not planned for in the syllabus, under the radar of the tutors. Account 6 can probably be defined as more non-formal learning in the first instance. However, as this initiative was motivated by the learners, and because phone calls and emails that are 'under the radar' of the tutor are being used, this also contains aspects of informal learning. This looks like a community of learners that are oscillating between formal, non-formal and informal learning. It should be noted that the informal groups formed on a Sunday, which in the West is an informal day, but of course a work day in the Arab world. There may be a point to make about why more informal time is after working hours during the week, Fridays/Saturdays were not available Also, it is noteworthy that informal groups formed face-to-face as opposed to on-line.

Account 6 – Dr Mohammed Tawfik

"… this course was a new experience, therefore a lot of the concept which was formally covered online, needs some further explanations, especially to participant who are dealing with this kind of workshop for the first time, not mentioning the new style of e-homework, therefore the Center of e-Learning at IUG met this need by providing a tutorial sessions on Sundays and Tuesdays for two hours during the six week course, and in addition for some other special times for some participants, such as answering questions either by phone, e-mails, or a visit to the center."

Examples of common ground concept

In addition to the incidence of common ground described above, the project made innovative visual representation technique, to find and maintain common ground. This approach was underpinned by the use of Macromedia Breeze, an online multimedia content tool and web-based video conferencing suite; this was used for streaming white board technology in conjunction with Global Rich Picture (GRIP) (Checkland,1999) to construct and maintain common ground between participants from diverse cultural backgrounds. Figure 2 shows how the white board tool that was 'appropriated' in order to stimulate online discourse and promote a shared cultural perspective (we explain this point below).
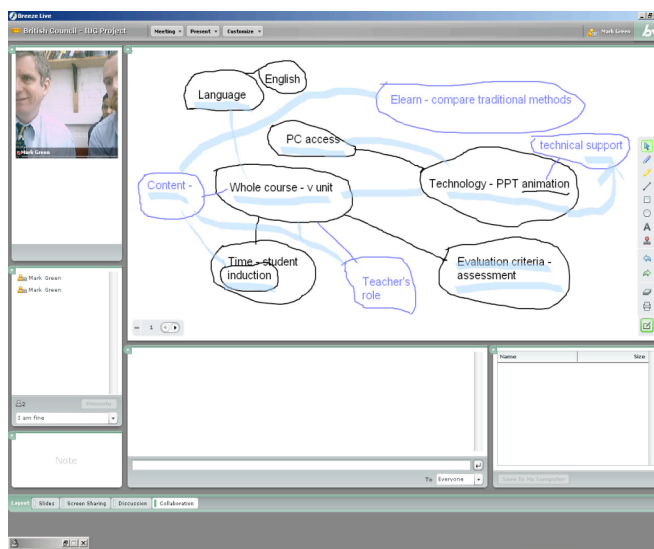

Figure 2: White board tool that was 'appropriated' in order to stimulate online discourse and promote a shared cultural perspective

The GRIP is the adaptation and application of Checkland's (1999) Soft System Methodology (SSM) to a VLE context. A rich picture is a graphical representation of the stakeholders' perceived components of the system and their inter-relationship. A GRIP expands this activity to use online technology such as discussion boards (asynchronously) or white boards (real-time). In the IUG project the participants used the Macromedia Breeze tools to 'brainstorm' key issues of concern during the online induction event. This exercise highlighted the perspectives of the IUG academics that the UK tutors had not anticipated during the curriculum planning. In this

way the workshop leaders were able to adapt the project to better meet the learner's needs. GRIPs may also be used as a means to stimulate online discourse and promote a shared cultural perspective leading to forming a stronger mutual perspective. For detail see: www.elearning.mdx.ac.uk/research/GRIP was used in this case study as a graphical way to illustrate the online learning event and associated concerns from a stakeholder's perspective. Figure 2 shows a screen shot of a GRIP that was developed interactively in one of the sessions using video streaming and white-board technology to facilitate dialogue. This activity brought out unexpected issues such as the language for the WebCT modules (English or Arabic). The Middlesex module team decided it could be either because the IUG modules were not for the UK tutors to solely give expert review, but to be used by the IUG students.

Thus, the streaming white board technology was used in conjunction with GRIP to construct and maintain common ground between participants from diverse cultural backgrounds. Furthermore, we have many examples of a sub-category of the concept 'common ground' which we are calling communications protocol. For example, language like 'physical access' was used as a neutral term to describe incursions and armoured tanks blocking staff access to IUG.

GROUNDED INVESTIGATION

In order to explore the research questions posed above, and in particular to expose the processes involved in grounding, the first author has developed a framework for formal and informal learning networks that extends the work of others (described briefly above). The research method for this follow-up work, to the initial case study and interpretive accounts, was Grounded Theory (Strauss and Corbin, 1990). This phase of the development of the framework thus involved attempts to use the various orienting concepts, described above, to guide a detailed analysis of transcriptions of interaction data from on of the sessions (week 6).

The detailed analysis of the online coursework presentations (which used video conferencing and white board facilities) found that potential cultural misunderstandings were avoided (i.e. common ground was achieved) by various means, e.g. having clear communications protocols. In example 1, we illustrate a pre-arranged policy of the tutors. The news on the day of the exchange shown in example 1 had reported that there had been bombings in Gaza during this time. This made the situation sensitive. Consequently, the tutors had decided in advance that they did not want to bring any 'politics' into the session, so they agreed a policy that they would not mention directly such events and neutral language would instead be used.

Example 1 – Policy (neutral language should be used)

Participant 1 – The situation in Gaza for the past few days has been difficult. We may not have everyone today.

Tutor 1 – We are happy to do any kind of follow-up sessions.

Tutor 2 – We are aware of the situation and are happy to make any extra arrangements to help you as needed.

This policy of using neutral language also helped support community building. Furthermore, common ground was achieved by the cultural sensitivity of communicative style deployed. Example 2 shows that many of the presentations by IUG staff would start with the participant apologising for incomplete work. A typical response was one of humility and understanding from tutors with ameliorating interventions like 'we understand the technical constraints'. This example thus also illustrates cultural sensitivity in terms of grounding.

Example 2 – Grounding (role of culture)

Participant 17 – Here are some other WebCT tools we used. But they are not finished.

Tutor 1 – This is fine. We recognise that there were time constraints in the project workshop. Please be sure to highlight any areas you will develop in the future.

Example 3 illustrates the fact that open-ended questioning was deployed by tutors rather than any confrontational intervention (i.e. turn 2 "Just highlight the design issues."). This technique was used to augment and maintain common ground in terms of inter-individual interaction.

Example 3 – Grounding (open-ended questioning for inter-individual interaction)

Participant 15 – [More discussion about the learning exercises.] Am I clear so far?

Tutor 1 – Yes you are doing quite well. Just highlight the design issues.

Participant 15 – [Discusses the learning material.] I have set it up so that all of the material is not available at once. The material is time released in WebCT so the students can only access it at certain times. The next stage is the assignments. This is usually in the form of an activity they submit by file.

Tutor 1 – Good it sounds like you put a lot of thought into it.

Example 4 – Grounding (humour being used in process of grounding)

Participant 17 – [Passionately] OK, but I have some important things to explain. The communication is next. The chat room is an area the students can have a text chat about a topic. Also for communication I have added a resource from the [URL deleted] site you showed us in the lesson.

Tutor 1 – Nice.

Participant 17 – If you have a look at some of my external resources now you can see the resources the students can use that I have compiled. Can you see them now?

Tutor 1 – Yes, we see them they are looking quite good.

Participant 17 – [In a semi-serious tone.] Actually, I think they are looking quite brilliant! [everyone laughs].

Tutor 1 – OK [laughing].

Participant 17 – [Continues to explain the details of the learning content.] Now I have put in an evaluation form from [URL deleted] so I can get feedback from the students. Can you see that?

Tutor 2 – Yes.

Participant 17 – Are you impressed? [in a light tone – smiling].

Tutor 2 – Yes, I'm very impressed [laughing].

Participant 17 – Are you quite sure?

Tutor 2 – Oh yes. Absolutely [laughing.]

Participant 17 – I have tried to make this site interesting. I want to know if you are impressed because if a student from England says they are impressed it is a little bit different than the way we mean it here.

Tutor 2 – I read the 'Second Coming' [the topic is 20th Century literature] this weekend myself. He is one of my favorite poets.

Participant 17 – It is a complement here because of the different culture. Lets go onto the calendar now as Dr. [name deleted] has done. [Shows the WebCT diary tool, explains its use in detail].

Tutor 1 – I think we are at the 10 minute limit. But it was a fantastic presentation. We look forward to posting our comments on the discussion board for you. Well done

Tutor 2 – Well done [both tutors clapping].

In the extended extract shown in example 4, there are examples in the interaction data of how the Web Video Conference (WVC) media better supported the inter-personal cultural exchanges and the humour that was used as part of a process of grounding. These processed tended to augment and maintain common ground (i.e. mutual understanding). We suggest that this would not have been possible by text-only communication. In fact, some of the comments could have been taken the wrong way if the tutors had not been able to see the speaker's face and hear the humour in his voice. For example, in turn 5 the assertion "Actually, I think they are looking quite brilliant!" would need facial and verbal-sound cues in order to interpret intention. We feel example 4 provides the best example in the project of the added value that real-time interactions, like those provides by the WVC system, can provide.

Overall we conclude this section by noting that there was a surprisingly tight coordination between tutor site and IUG. The evaluation of the presentations was in fact deferred until later and took the form of self evaluation by 'students' accompanied by tutor comments posted on WebCT. There was a surprisingly tight coordination and grounding between course delivery site and IUG as presentations proceeded (even in the face of some sever technical obstacles).

CONCLUSIONS

We conclude the paper by suggesting that the answer to our first research questions is 'yes', online learning communities can also be informal and non-formal learning communities. What is interesting for us is that non-formal and informal learning communities formed spontaneously within the international learning network. We feel the second question has only been partially investigated.

Future work will be in two main areas. First we intend to further 'ground' the concepts that appear to be supported in participant accounts given in this paper by analysing video tapes of final presentations sessions (week 6) in order to develop more detailed 'categories' (these are elaborations of higher-level concepts in Grounded Theory) so that they may in turn be used to developed a more fine grained learning network models.

Second, in future work we will look at what we claim is a real, and as yet unmet, challenge for formal and informal learning networks. In particular, we feel the above findings challenge the preconception that informal learning takes place outside of a formal learning setting, and that this should be catered for when designing for learning networks. What is interesting for us is that non-formal and informal learning communities formed within the student community. Consequently, a second area of future work will look at finding ways to develop models that describes how people perform formal, non-formal and informal learning activities using resources (including materials and services), and how these three things are coordinated into a learning flow. For example, we think we probably saw evidence of a community forming in terms of shifts in roles and relationships with individuals. Future work will therefore focus on developing and implementing models that describe, and tools that support, people as they perform formal, non-formal and informal learning activities using resources.

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