Editorial for the ECEL 2011 Special Issue of EJEL

The Brighton ECEL conference in November 2011 was a vibrant and exciting experience, not least for ourselves as its local organisers, the Business eLearning research group at Brighton Business School. With 200 delegates visiting, three great keynotes and a large range of parallel sessions, not to mention our murder mystery game and conference dinner at the Brighton Corn Exchange, we welcomed the variety and volatility of ideas, applications, pedagogies and technologies on offer.

This special issue of EJEL is an attempt to tell the story of the conference, at the same time offering you, the reader, a taste of that variety of ideas and contexts we experienced there. We had a choice of three major stories at the conference as papers clustered around the themes of eassessment, teaching role change and social and informal learning and its relationship to formal planned learning. We have chosen the last theme for this special issue, as the other two gain much exposure elsewhere. Our chosen papers take you on a journey through transitions to Higher Education (HE), moving on to explore Web 2.0 in HE learning and teaching and specific applications put to the test. The story concludes with papers conceptualising the ethics debates relating to Technology Enhanced Learning and Web 2.0, closing with a paper on dignity in this context.

These papers are mostly case studies of innovation and change but each takes a different perspective of social and informal learning – for academic but also social purposes – for example supporting the social and emotional difficulties of entering HE. Many tools are used in these papers to explore learning and teaching such as Facebook, wiki, blog, lifeworlds, VLEs, e portfolios. There are tiny sample studies and large ones, such as the 600 students in the Bournemouth study. If you read from start to finish, you will also experience a range of qualitative research methods from phenomenography and phenomenology to action research.

Looking at the papers more closely, Knight and Rochon in “Starting online: exploring the use of a social networking site to facilitate transition into Higher Education” offer a case study of Startonline, a social networking environment designed to support students’ transition into HE. This is an urgent focus for Higher Education institutions as they experiment with Facebook and other social media sites to build bridges for students to cross before they turn up to study. This study used Ning as a platform and found strong acceptance from students for social and informational dimensions of the environment, but much less for the academic elements offered. It is easy to suggest from an academic perspective that the latter would have proved more useful to the students in transition, but exciting interest in academic skills among students is an ongoing battle.

Similarly in “Getting the Message: supporting students’ transition from Higher National to degree level study and the role of mobile technologies”, Fotheringham and Alder study student transitions but in this case focus on a later transition from HNC or HND into second or third year university study. This action research study tracked the progress of a project designed to use voices and experience of existing students to reassure new students and staff through timely podcasts, DVD and SMS. This study used mobile technologies whereas in “Fostering a web 2.0 ethos in a traditional e learning environment”, Martin and Noakesoffer a case study of the Web 2.0 learning ethos firmly located within a Learning Management System (LMS). Here the emphasis is not on transition but on “learning by wandering”, which combines both the security and simple navigation afforded by an LMS and multiple options in terms of how the students wish to study and share learning using Web 2.0 tools with the aim to provide transformative e learning. This study offers hope to all teachers who want to leave behind the role of didactic fount of knowledge and move towards the offer of expertise as and when learners seek it. That is not a simple facilitator of learning, but as the paper puts it, a “sage on the side”.

We stay with social media in the next paper, but this time focus on Twitter and its role in HE. “Cognitive communication 2.0 in Higher Education: to tweet or not to tweet?” is offered by Andrade, Castro and Ferreira and evaluates the use of Twitter to drive polling and interaction within a lecture format. The authors discuss this as an impact on cognitive communication. There is much potential impact of social media on learning which affects both learner and teacher behaviour; this is one further example of the
way technology may be used to enhance teaching as well as learning, moving the teacher away from the straitjacket of the large volume passive lecture towards a more meaningful engagement with learners.

Nerantzi then takes us further on the journey of education with a focus on working with multiple institutions in “A case of problem based learning for cross institutional collaboration”. Again we are looking at a move away from standardised passive learning in formal settings to “break out of silos” with open online problem based learning. This phenomenographic study analyses an example of social media used to foster collaborative learning across institutional barriers. The extreme version of such collaborative learning is likely to be a MOOC (massive online open course) which is discussed in Esposito’s paper “Research ethics in emerging forms of online learning: issues arising from a hypothetical study on a MOOC”. In this self styled “hypothetical virtual ethnography study”, the author tests the usual research ethics framework against the emerging context of public open online courses, facing up to questions of informed consent and overt/covert observation in a virtual less controlled environment than traditional research studies.

In the final stages of our educational journey we explore beyond practical content and delivery issues in technology enhanced learning and focus on duty of care for children who learn in a virtual environment, the need for personalised and personal approaches in blended learning and issues of empathy and dignity in virtual worlds. Lorenz, Kikkas and Laanpereoffer “Comparing Children’s E safety Strategies with Guidelines Offered by Adults” which reviews fictional and non fictional stories around e safety and maps behaviour patterns and beliefs about privacy among schoolchildren. The paper raises some considerable concerns about contemporary legislation in this area which merits urgent attention for e learning in schools.

“Mediating Diversity and Affection in Blended Learning: a Story With a Happy Ending” sounds as if it should have come last in this selection but this paper offered by Soeiro, de Figueiredo and Ferreira discusses a different kind of ending, one which builds emotional bridges not between students and teachers but among diverse groups of students. Students with hearing difficulties face more than just the usual culture barriers when attending new courses and this participatory action research project details the affection which can be built online for these students through a blended learning environment supported by Moodle.

Our last paper in this selection, “Empathy and Dignity through technology: using lifeworld led multimedia to enhance learning about the head, heart and hand” by a strong author team from Bournemouth University led by Andy Pulman, explores human dignity in a transprofessional curriculum for health and social work disciplines. This ambitious project not only pulled related disciplines together but aimed to integrate undergraduate teaching with research and exposed students to evidence not just from traditional academic and clinical contexts but also qualitative personal and creative accounts of social and clinical human experience. Again we meet problem based learning, a pedagogy designed to engage learners in real world complexity rather than fragmented academic blocks. Again we meet technology as an enabler of such learning, and again we find students encouraged to share and collaborate in learning.

So to try to summarise this pick of ECEL 201 1’s papers on social and informal learning we can already see our journey’s current destination. Many of these papers discuss case studies of innovation using social media for learning and seek to make connections among learners, between existing and new learners, and between learners and teachers. With social media and Web 2.0 as a whole we are moving towards a new perspective of mainstream education; one which values collaboration and no longer reifies “teaching” but rather prioritises learning; one which uses learning technologies both to create safe spaces and to reach out beyond disciplinary and institutional boundaries. That’s a destination we are keen to reach.

Sue Greener and Asher Rospigliosi
S.L.Greener@brighton.ac.uk
A.Rospigliosi@brighton.ac.uk

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Abstract: It has been widely recognised that transition into higher education (HE) can be challenging for incoming students. Literature identifies three main areas where students may benefit from support: social, practical and academic. This paper discusses a case study that explores the potential of a social networking environment to provide support in these areas during students’ transition into HE.

The Learning Development Unit (LDU) at Bucks New University has previously addressed transitional issues through pre-sessional campus-based programmes. However, to provide opportunities for a wider range of students, the LDU launched Startonline in 2010. This online pre-sessional environment used the social networking platform Ning to provide new students with access to non-subject-specific academic activities (e.g., critical thinking), social networking tools and practical information. As a pilot, the aim was to observe where students focussed their attention and explore the affordances of a social networking environment for facilitating transition.

Startonline ran for the month leading up to the beginning of the academic year, during which time around 300 students signed up and participated. Quantitative analysis of platform user data was conducted and student and staff participants were interviewed, providing useful qualitative data. Findings highlighted that students’ engaged intensely in social and informational aspects of the environment, but remained resolutely uninterested in generic academic activities. There was, however, considerable self-directed interest in finding subject-specific information and learning activities. Direct, personal involvement of subject-teaching staff seemed the determining factor in take up of these aspects.

Social networking platforms are already used by students to maintain social capital and access emotional support from existing social networks when leaving secondary school. This project highlights that, equally, such environments also provide powerful opportunities for students to establish social networks as they transition into higher education. Lessons have also been learned with regard to effective pedagogical strategies for engaging students academically in social networking environments and areas identified for future research.

Keywords: Transition, social networking, social capital, affordances, engagement

1. Introduction

A review of theories related to student retention by Braxton and Hirschy (2005) suggests that while the issue of retention is complex, two models remain important in understanding: Tinto’s (1975, 1993) Academic and social integration and Astin’s (1977, 1985) Theory of Involvement. Both these models suggest that the more engaged a student is with the institution, the higher likelihood of student retention. By focussing on the “known” elements, such as academic, social and practical information, it is possible for universities to contribute actively and positively during the transition phase to facilitate this engagement. This case study considers the use of a social networking site (SNS) to provide support to students in their transition into higher education.

The Learning Development Unit (LDU) at Bucks New University (Bucks) has been addressing transitional issues for a number of years through face-to-face pre-sessional campus-based programmes. These programmes have been highly successful in terms of providing students with opportunities to develop academic skills and engage socially. However, these programmes are necessarily limited in the number of students that can participate. This short paper reviews Startonline, a bespoke SNS based on the Ning platform, launched in 2010 to provide opportunities for a wider range of students. The environment included video, podcasts, discussion forums and web pages, including:

- non-subject-specific academic activities: critical thinking; logical reasoning, writing skills
- social networking tools: profiles, ‘friending’, messaging and chat
- practical information ranging from student services to local entertainment
In total, just over 300 people became members (took the steps of registering to access information on all pages). Of these, 25 were staff. While not all users provided information of their geographic location, 10% of the total self identified as being from outside the United Kingdom.

Quantitative analysis of platform user data was conducted using the site itself and Google Analytics as well as qualitative review of the exchanges. This was complemented with interviews with students as well as one staff member.

2. Emphasising the social in social networking

Establishing friendships and social networks has been described as key to transition (Lowe and Cooke, 2003; Maunder et al., 2010). A study of undergraduate students at Bucks noted that first-year students depend on their network of friends for everything from moral support to more general guidance, concluding that universities should do more to ensure that students have the opportunity to create these networks as soon as they start their studies (Wickens et al., 2006).

SNSs are well-placed to provide students with opportunities for establishing contact with each other; they are well established as part of students’ existing communication systems (Phipps, 2007) and play an acknowledged role in the ways in which they manage and maintain their ‘social capital’ (Ellison et al., 2007). Indeed, it was clear from Startonline activity and from interviewees that students were keen to use the technology to lay the groundwork for future university-based relationships.

I like how it was set up so that students that were just starting could like get to know people that could be on their course or who they might be living with things like that... so that you don’t feel too scared or anything when you come in to the Uni thinking “Oh no I don’t know anyone.” (Excerpt from student interview)

Statistical data demonstrated that the most popular areas were member profiles and discussion forums. Approximately 60% of discussions initiated by students related to finding others who were either studying on the same course or living in or near the same accommodation (see Fig.1, below). This highlights that building social capital was the primary concern of users, and that there was interest in transferring these beyond the Startonline environment.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Threads</th>
<th>Replies</th>
<th>Total (threads and replies)</th>
<th>% of total discussion activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td>37</td>
<td>173</td>
<td>210</td>
<td>63</td>
</tr>
<tr>
<td>Practical</td>
<td>7</td>
<td>24</td>
<td>31</td>
<td>9</td>
</tr>
<tr>
<td>Academic</td>
<td>0</td>
<td>0</td>
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Figure 1: Summary of student discussion forum activity (threads and replies)

Using a bespoke SNS solution rather than building on students existing online profiles (e.g., in Facebook), allowed Startonline to circumvent those privacy issues identified in other studies (Ribchester, 2009; Sturgeon and Walker, 2009) and located control firmly with the students in terms of the extent to which they could choose to make links between their personal online ‘spaces’ and their more public university ‘faces’. Interestingly, there is clear evidence of students establishing initial contact in Startonline and then moving out into the private domain by exchanging profile information and ‘friending’ each other on Facebook. Similarly, there is also evidence of interest and intention of meeting within the physical University environment at an event just prior to induction.

3. Managing practicalities

Managing the practicalities of living away from home in an unfamiliar environment and obtaining information related to the university was another focus for concern. The most popular thread was called “Ask any question”, and enabled students to find out information accordingly. Students were also pro-active in starting their own discussion threads if they needed information. Indeed, almost 20% of all student-initiated threads were requests for information. Equally, students seemed content to answer one another, or direct others to information. In the case where specialised information was needed, the Students Union or appropriate staff member provided information. These interactions highlight that the students were both interested in practical information and pro-active in obtaining it.
I’m disabled. So I was a bit unsure about how I was, you know, how I’d go about finding the Disabled Unit and what I could do, and what sort of help they’d give [...] I did ask a few questions I wasn’t sure about. So, I asked those myself. (Excerpt from student interview)

4. Learning
Student problems during first year are often related to a lack of study skills (Winterson and Russ, 2008; Cook and Leckey, 1999). However, none of the three learning generic activities were engaged with by students. Reasons for students’ lack of engagement in this area remain unclear, but a possible cause is suggested in the way that SNSs can be said to afford interaction and provide opportunities for learning. Where the technology was used in a way that ‘played to its strengths’ (i.e., to connect with others and convey information) learning opportunities seemed to occur spontaneously. Where subject-related teaching staff members were available (and seen to be available), students self-directedly sought information and engaged with materials in a way that could be usefully built on within the physical teaching environment. Students also showed interest in finding subject-specific information and learning activities.

It is telling that this learning-related activity took place solely via direct messages to staff profiles, rather than in the public discussion forum, perhaps reflecting Greenhow’s (2009) assessment of the usefulness of SNSs to afford useful academic behaviour. Direct, personal involvement of subject-teaching staff seemed the determining factor in encouraging this. Staff who engaged with students directly, providing subject-related content, found the experience rewarding and were able to draw on shared Startonline experiences during initial face-to-face contact:

...[it] was very useful in terms of that engagement: breaking it down rather than being just a cold lecture [...] it became something that was a little bit more vibrant, really. (Excerpt from staff interview)

5. Lessons learned
One of the main points of learning relates to the appropriateness of the participants’ engagement with this type of environment in relation to their role as learners. ‘Learning to learn’ is fundamental to students’ transition to HE; a key element is fostering the students’ understanding of their own role within the experience (Wingate, 2007). However, in most cases, the first contact with the new environment that students experience is an instructor-led setting where they passively receive information. The provision of resources that students can access, manipulate, control and question is a positive model for their introduction to HE. Results suggest that this is the case: many students modified their profiles, while others started discussion threads or answered questions for one another. Notably, almost 80% discussions in the discussion forum were started by students. The use of an SNS allows them, in many cases, to use tools that they are already confident and competent in using in these interactions.

Staff, however, proved less comfortable with or attuned to the affordances of the SNS environment. While some expressed excitement at the opportunity to develop their own presence and resources within Startonline, and some evidentially did so, many did not participate, or participated only partially, registering but failing properly to engage with the SNS ‘spirit’, including no personal photograph, giving no indication of subject expertise and teaching interests and making little effort to attempt to connect with their future students. Based on this experience, it is suggested that a university-wide strategy and set of explicit guidelines on how staff might best engage with SNSs are needed in order to promote an equal opportunity for all students to engage with their tutors and to provide tutors with the benefits of engaging with their students prior to arrival.

One section of staff that provided essential support to the environment was administrative personnel. The “Ask any question” thread that proved so popular with students was initially maintained by academic staff responsible for the project. However, it was quickly apparent that the most effective host for this area would be an administrative assistant. The active involvement of administrative staff
provided necessary practical information, and in doing so contributed to the success of one of the most popular areas of the site.

6. Ways forward
Following initial success with Startonline in 2010, a further iteration of the environment was made available in 2011 and another planned for 2012. While it is beyond the scope of this brief paper to discuss in detail the results of Startonline 2011, two aspects of the experience were notable and cast an interesting light upon this discussion. First, the adoption of SNS-appropriate approaches to using the environment by staff was clearly seen to be instrumental in creating opportunities for student engagement. In particular, personal and personable approaches accompanied by staff photographs were seen to be effective in creating space for staff-student interaction. Second, and to our surprise, student numbers and the amount of social interaction in the SNS were much reduced in comparison to 2010. This may have been due in part to changes in which the university marketed its pre-sessional activities in 2011, but it may also result from students finding or creating opportunities for social interaction elsewhere via existing tools such as Facebook. This would cast an interesting light on those concerns relating to students’ management of their personal and public identities in SNS (Ribchester, 2009; Sturgeon and Walker, 2009) and how we might usefully provide opportunities for such interactions in the future. Clearly, further research into student use of SNS and other tools in self-directedly and proactively attending to their transitional needs will be required in order better to identify appropriate strategies for supporting them in the future.

At the same time, however, it would be a mistake to assume that all new students conform entirely to Prensky’s stereotype of the ‘digital native’ (Prensky, 2001) with their innate understanding of the affordances of the online environment and its tools and willingness to engage with them. Transition is an area of challenge, too, for mature students, indeed, in many ways, it is an issue of even greater importance for them than it is for those students fresh from the pre-university educational system (McGivney, 1996; Reay et al, 2002). The same also applies for the increasing numbers of international students entering the UK university system, for whom environments such as Startonline represent a useful opportunity to begin the process of engaging with a new educational culture, establishing networks of future friends and finding useful information about their soon-to-be new homes before they leave their existing ones. Further research is required into the uses such ‘non-traditional’ students make of SNS and related tools and how best these learners may also be supported in their transitional journeys.

7. Conclusion
Using SNSs has the potential to widen access to useful pre-entry information and allow students to engage easily and at a distance with other students and members of staff. Issues of privacy do not preclude the use of this type of environment, as these may be avoided by adopting a bespoke solution, allowing students to manage the degree of overlap between academic and private social networks.

It is apparent that the usefulness of the SNS is at its most beneficial when it is employed for its intended purpose. Using SNSs empowers students to engage in the useful activity of developing friendships, something that they are demonstrably interested in doing. Attempting to manipulate the affordances of the platform to provide generic pre-entry learning activities was not successful. However, the social engagement of staff members encouraged engagement with subject specific resources. Moreover, the development of students as self directed learners, who take responsibility for their own engagement, is a key benefit of using SNSs that could be effectively exploited. Future research into students’ use of the full range of SNS possibilities available to them and ways of supporting non-traditional students in their use of such tools will be useful in developing the range of resources available to new students in their transition into higher education.

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Cognitive communication 2.0 in Higher Education: to tweet or not to tweet?

António Andrade¹, Cornélia Castro² and Sérgio André Ferreira²
¹School of Economics and Management, Portuguese Catholic University, Porto, Portugal
²School of Education and Psychology, Portuguese Catholic University, Porto, Portugal

aandrade@porto.ucp.pt
corneliacastro@gmail.com
sergioandreferreira@gmail.com

Abstract: Research has been fertile in producing studies on pedagogical change and innovation through technology in Higher Education Institutions, namely the integration of the social media in pedagogical practice. However, there is a lack of studies on the integration of the social media in the particular field of lectures. In this context, commonly practiced, the teacher faces a wide audience and feels the need to activate mechanisms of direct instruction, for reasons of economy of time and because it is the most dominant pedagogical model. As a result there is a communication paradigm 1.0 (one-way communication, one-to-many, low or non-existent interaction). In this study, exploratory and quantitative in nature, an approach to the thematic of the exploration of the social media in order to upgrade the cognitive communication from 1.0 to 2.0 (many-to-many, interaction between all the participants) in lectures was made. On the approach to the problem, we explored a PowerPoint presentation with the integration of the micro blogging tool Twitter, as a basis for addressing the characteristics of cognitive communication 2.0. For data collection a questionnaire was designed, based on literature, and intended to evaluate several dimensions of the resource used, namely: i) pedagogical issues, ii) technological aspects, iii) cognitive learning; iv) interactions in the classroom; v) positive behavior in the classroom and vi) negative behaviour in the classroom. The results indicate that students recognize the potential of this tool in the dimensions assessed. Twitter integration in PowerPoint allowed the teacher and the students to read each other's views and each had the opportunity to contribute to the debate. It also allowed the release of multiple choice questions to the audience, with answers via Twitter and projection of results via PowerPoint. This way, a true cognitive communication 2.0 took place.

Keywords: classroom; cognitive communication; learning; micro blogging; Twitter; web 2.0

1. Introduction

The new forms of communication are inextricably linked to the imposition of new forms of teaching and learning, which have resulted in the redefinition of political and pedagogical models. In this context of profound social changes imposed by the increasingly presence and transformative nature of technology, the Higher Education Institutions (HEIs) are confronted with new challenges which require their reorganization so that they can respond effectively.

Information Technologies (IT), specially the “web phenomena”, have contributed to changing the way people work together, share resources, co-produce, co-act and get involved in activities that benefit all (Fuchs et al., 2010). Nowadays, expressions such as “collaborative learning”, “learning communities”, “media in education”, “social media” and other similar ones, are essential in educational investigation. However, research on these topics focuses on online environments or face-to-face groups of limited size. Studies in which these principles are applied to a classroom with dozens of students are rare.

In fact, research shows that the classroom has been losing its historic centrality in favour of new agglutinating poles such as the Personal Learning Environment (PLE) and the Social Learning Network (SLN), usually associated with spaces outside the classroom – Cloud Learning Environment. However, despite the development of on-line learning systems and b-learning, classroom learning is still largely dominant, and the organization of activities continues to have the classroom learning as

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the nucleus. Hence the importance of designing activities and creating resources that, in conjunction with this new paradigm, promote the exploration of the potential of the new ways of learning that dominate the Cloud Learning Environment.

This paper aims to contribute to the study of the issues related with the cognitive communication morphology in classroom lectures, in Higher Education, where often the communication is done from one-to-many. This study takes an exploratory nature, since the bibliographic review has revealed a lack of studies about the exploitation of the social media, as a means of enhancing cognitive communication 2.0 in the specific context of lectures to large groups. So, taking an approach to this issue and helping to open a new field of study are also the goals of this study. To do so we started with a PowerPoint presentation with the integration of micro blogging tool Twitter, as a basis for addressing the characteristics of communication 2.0 in classroom in lectures of a more expository nature.

The methodology of data collection used was a questionnaire built based on literature review, with which we intended to assess various dimensions of the resource used in classroom lectures and to verify if the integration of Twitter in the presentation contributes to the upgrading of a cognitive communication 1.0 (one-way communication, one-to-many, low or non-existent interaction) to cognitive communication 2.0 (many-to-many, interaction between all the participants). This study has a quantitative approach, since the data of the questionnaire was processed using the basic procedures of descriptive statistics. The results of this study are preliminary and intended to serve as an exploratory approach to the subject.

2. Related work: change challenges and pedagogical innovation in institutions of higher education through technology

Throughout this study, we employ the expressions “cognitive communication 1.0 and 2.0” as an analogy to the rupture in the paradigm of web 1.0 to 2.0, proposed by O’Reilly (2005). In web 1.0, users are limited to passive viewing of content others have created. In contrast, web 2.0 is a space for interaction, dialogue and collaboration, where users assume the role of not only consumers but also producers (prosumers) of content.

Figures 1-3 represent lectures at universities at three times in history: in Figure 1 a picture of the 13th century is reproduced, which shows Henry of Germany delivering a lecture to university students in Bologna (Voltolina, 1233); figure 2 depicts the influential British scientist Michael Faraday in the nineteenth century, delivering a Christmas lecture at the Royal Institution (Blaikley, ca1856); figure 3 (uninnbruck, 2008) depicts a lecture today. What emerges from the analysis of the images is the immutability of the communication process in lectures: a masterful communication, in which the teacher exposes the contents to a wide audience of students. In fact, communication 1.0 in lectures has perpetuated throughout time. The communication upgrade from 1.0 to 2.0 is something that has not yet been materialized.
based on four functions: i) transmission of content provided by lectures, often masterful, ii) application of concepts, iii) group work and iv) evaluation. These functions are shown in table 1.

**Table 1: Pedagogical face-to-face dominant model in the HEIs (Figueiredo, 2009)**

<table>
<thead>
<tr>
<th>Pedagogical face-to-face model</th>
<th>Lectures</th>
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<tbody>
<tr>
<td>Transmission of content</td>
<td>Lectures</td>
</tr>
<tr>
<td>Application of concepts</td>
<td>Lectures and practical lessons</td>
</tr>
<tr>
<td>Group work</td>
<td>Laboratories</td>
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<td></td>
<td>Projects</td>
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<td>Evaluation</td>
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<td>Projects</td>
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<td>Essays and Presentations</td>
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This way, it can be proven that the lectures are a central aspect in the way the teaching activity is organized in HEIs. 1.0 communication of lectures collides with the new ways of communicating and interacting in a society immersed in technology that is intrinsically linked to the imposition of new ways of teaching and learning, which results in the redefinition of political and pedagogical models. Social and economic factors call for the use of technology as pedagogical support. Mark Prensky (2001) was the first to use the term "digital natives", which is associated with expressions such as "residents", "Generation Y" or "Net Generation". These students grow up in environments immersed in technology and have different preferences and skills in key areas related to education, particularly in making use of the immense potential of web 2.0 (Castañeda & Soto, 2010; Kennedy et al., 2009), especially social software tools (blogs, micro blogs, sites of video sharing, social media, wikis or podcasts), which facilitate not only the emergence of communities of users, but also the involvement in social media.

The "Horizon Report: 2012 Edition Higher Education" (Johnson, Adams, & Cummins, 2012) makes a prospective analysis of the integration of technologies in HEIs, highlighting the need for fundamental change in fields such as: i) the architecture of training models: "Education paradigms are shifting to include online learning, hybrid learning and collaborative models. Budget cuts have forced Institutions to re-evaluate their education strategies" (p. 4-5), ii) the educators’ role: "The abundance of resources and relationships made easily accessible via the Internet is increasingly challenging us to revisit our roles as educators" (p. 4) or iii) Adequacy of pedagogical activity in the HEIs to how people communicate, learn and work in modern societies; "The world of work is increasingly collaborative, driving changes in the way student projects are structured. Because employers value collaboration as a critical skill, silos both in the workplace and at school, are being abandoned in favour of collective intelligence" (p. 4).

In the current scenario, it matters that HEIs reconcile their conception of the educational process with new ways of learning and student expectations. The HEIs should not overlook the fact that IT offers the students the opportunity to control and manage their own learning beyond the institutional vision. The globalization of the sources of knowledge, that brings the world to the school and the growing importance of social media and collaborative work of smart mobs (Tapscott & Williams, 2008) emphasize the value of the Social Learning Network (SLN), which creates the need for the HEIs to evolve to a Hybrid Institutional Personal Learning Environment (HIPE) architecture, as a bridge between the vision of the institution and the Personal Learning Environment (PLE) of the student. In Figure 4 a possible architecture for the integration of IT in cognitive communication is shown, in which there is a link between the student’s PLE and the institutional vision, hence the resulting HIPE. The Personal Learning Environment (PLE) of the student consists of the exploration of a multiplicity of skills available in the Cloud Learning Environment, which may go beyond the institutional vision. In fact, learning takes place increasingly through the social media, communities, institutions, exploring web tools, libraries of digital resources, repositories of Learning Objects, among other environments, tools and resources, which together result in the construction of the student’s PLE outside the HEIs.
Despite the characteristics of this new generation of students, we cannot assume that all who reach higher education already possess the necessary skills to use web 2.0 technologies such as learning tools (Castañeda & Soto, 2010). On the other hand, it is also observed that the HEIs are still inadequately prepared to work with students who have completely different technical skills and learning preferences (Bennett, Maton, & Kevin, 2008).

To address this complex situation, the HEIs must create programmes and define methodologies that enhance the use of the enormous educational potential of web 2.0. Thus, it is expected that students will develop learning skills in this context and increase their motivation and, as a result, will increase the chances of achieving good academic results.

The introduction of technology in the facilitation of cognitive function in education means a challenge for applied research with very complex and slow progress. Among the changes that have been introduced in training models under e-learning, b-learning and face-to-face, it is in the latter where the pace of change is slower. Therefore, the classroom continues to be a place of excellence in the communication of knowledge. In this context, highly practiced, it is pertinent to introduce mechanisms of interaction mediated by technology, since research shows a significant correlation between the use of technology and time spent with social media and students engagement (Chen P., 2010; Junco, Heiberger, & Loken, 2010). In this line, the Horizon Report: 2012 Edition Higher Education, states that: “There is a new emphasis in the classroom on more challenge-based and active learning (…) The active learning approaches are decidedly more student-centered, allowing them to take control of how they engage with the subject and to brainstorm and implement solutions” (Johnson et al., 2012, p. 5).

In this study we focus on the institutional context, particularly in the lectures, where teachers are faced with numerous students and have the need to activate mechanisms of direct instruction, either to save time, or because this is the teaching model that they are comfortable with. Electronic presentations as a way to transmit knowledge are a means commonly used in these classes (James, Burke, & Hutchins, 2006). This is a reusable resource, a facilitator of discourse organization and an integrator of multiple media which can serve different learning styles, as well as becoming a stepping stone of motivation and it is also conducive to note taking by students.

These presentations are massively materialized on technologies such as PowerPoint and Prezi which have mechanisms to support text, video, image, flash animation and sound, but they also have the ability to interact with the so-called web 2.0 systems, such as the micro blogs. A PowerPoint or a Prezi presentation can therefore be linked with the micro blogging application Twitter, allowing the teacher the opportunity to speak to his students.
Recent research about the use of Twitter in academic work shows that although 85% of undergraduates have a Facebook account, teachers prefer to integrate Twitter into the process of teaching and learning (Junco et al., 2010). In the category of micro blogs, Twitter, designed in 2006 by Jack Dorsey, allows users to share messages up to 140 characters. This system also allows sending messages to a direct channel specifically created to exchange information (# hashtags) and the vote for alternative options which are placed under review (by vote tweet @ x key_word).

Individual or business initiatives (Elliot, 2011) have developed ADD-INS for Prezi and PowerPoint, allowing the following dynamics for those who have a Twitter account (teachers and students):

- Creation of a channel (not compulsory) for comments on the presentation that is being made;
- Students can comment directly on Twitter what they see and listen in the classroom as well as what they read from sharing with peers (virtual classroom);
- The teacher may have prepared additional comments for each slide, that hidden in "notes", can be sent to Twitter whenever it is projected;
- The teacher can capture and project in all, or in some of the screens, what is being shared on Twitter;
- The teacher can ask multiple-choice questions that are answered on Twitter, and the percentages of the responses for each option can be projected in a slide.

This model of communication in the classroom will increase the level of participation by: i) providing voice and turn to all the students, ii) facilitating and asking for the participation of more reserved students in oral participation iii) engaging the learning community in discussions about the theme and iv) exploring the acuity of young people to use IT.

3. Evaluation methodology

In the previous chapter some studies on the use of the social media for pedagogical purposes in various social contexts of the educational process, apart from lectures, were reported. However, as already mentioned, the literature reveals a lack of studies on the theme of exploitation of the social media to foster cognitive communication 2.0 in the context of lectures to large groups in higher education. Thus, this study assumes the characteristics of an exploratory study.

Considering, therefore, the nature of the study we did not seek to establish correlations between variables, but only to identify trends. It is expected that the results obtained will contribute to the articulation of web 2.0 tools with traditional cognitive communication in the classroom, in such a manner that positive impacts will result in pedagogical and technological effectiveness and thus in students learning achievements.
The way the operationalization of the resource was made is represented, in schematic form, in Figure 7: the integration of Twitter in PowerPoint, with reference to a hashtag #, through which students could ask and answer questions, vote on matters presented and answer multiple choice questions. Thus, the electronic presentation, not only had the traditional function of transmitting information from one to many, but it was also intended to foster interaction content-students, teacher-students and students-students. The integration of Twitter in an electronic presentation, enables, potentially, a paradigm shift in teaching: to the one-way communication teacher-class is added the value of the interaction teacher-student-content. The feedback given by students is an important item because it allows the teacher to suit his speech to the class and answer students’ questions and comments that appear in real-time presentation.

Figure 7: Integrating cognitive technologies in communication

At the end of the sessions, the participants were asked to fill a questionnaire to evaluate the resource. The convenience sampling technique was our choice. Although not representative of the population, this sampling technique had the advantage of being a fast and simple one and, therefore, suitable for preliminary studies, as in this case.

The questionnaire was made based on literature review (Hu, 2011; James et al., 2006; Kurilovas, 2007; Nesbit, 2007; Nokelainen, 2006) and consisted of 41 items spread across six dimensions: i) pedagogical aspects, ii) technological aspects, iii) cognitive learning, iv) interactions in the classroom, v) positive behaviour in the classroom and vi) negative behaviour in the classroom. The six evaluated dimensions include: issues that students identify as central in the quality of digital learning resources associated to more direct teaching and the perceived effects by students in the field of learning, behaviour and attitudes. A Likert scale of five points was used.

4. Presentation of results

The overall results of the questionnaire indicate that the respondents recognize the pedagogical and technological potential of the resource in the six assessed dimensions, as well as its positive effects on the quality of learning and type of interaction. In Figure 8 the assessment on pedagogical aspects is presented. In the seven analyzed items, the large majority of respondents evaluated the pedagogical aspects of the course with level four, "agree" and level 5 "strongly agree." The global average of the seven items corresponds to 55% of responses at level 4 and 22% at level 5, and the importance of level 1 and 2 is negligible (0% and 4%, respectively).

Figure 8: Pedagogical aspects

As far as the "technological aspects" is concerned (Figure 9), the respondents commented on the appropriateness of the use of technology, design, usability, interface, added value compared to printed material, the potential of technology in facilitating learning, building concepts and skills
development. The average of the eight items of this dimension indicates that 52% of students "agree" and 32% "strongly agree" that the technology used was appropriate and that potentiated learning. Like in the previous dimension, the number of respondents that gave unfavourable levels of answers (levels 1 and 2) is negligible.

**Figure 9:** Technological aspects

Regarding "cognitive learning" (Figure 10), if one considers the average of the 11 items on this dimension: 82% of the respondents said that they "agree" (47%) or "strongly agree" (35%) that the resource has positive effects. In the average of the 11 items, the value of the terms "strongly disagree" and disagree" is located at 2%. However, 7% of the respondents "disagree" and 1% "strongly disagree" that the resource facilitates taking notes (item 3).

**Figure 10:** Cognitive learning

**Figure 11:** Interaction in the classroom
The potential of the evaluated resource in the "interactions in the classroom" are also recognized by the students. The average of the five presented items in Figure 11 indicates that 70 % of respondents "agree" (40 %) or "strongly agree" (30 %) with the positive effects of the resource on this dimension. The item 1 is the one that meets the highest percentage of negative and neutral answers: 2 % "strongly disagree" 11 % "disagree" and 35 % "do not agree nor disagree" that the resource leads to a better knowledge of the classmates in the classroom.

The results in the dimension "positive behaviour in the classroom" (Figure 12) are in agreement with those of the other dimensions. Considering the average of the 7 items, 75 % of respondents "agree" (49 %) or "strongly agree" (26 %) that the resource has positive effects on behaviour in the classroom. The item 1, which states that the resource helps taking better notes in class, holds the highest number of negative evaluations (1 % "disagree" and 15 % "strongly disagree"). This result is aligned with item 7 "it stimulates coming to class to take notes (15 % of respondents answered "disagree") as well as with item 3 in Figure 10.

Figure 12: Positive behaviour in the classroom

In the dimension "negative behaviours in the classroom", the scale should be read in reverse: the more favourable views about the resource are located on level 1 and the less favourable in level 5. Looking at Figure 13 we can conclude that: i) 36 % "agree" and 19 % "strongly agree" that the resource increases the possibility of keeping side conversations while the teacher presents the subject, ii) 8 % "agree" and 8 % "strongly agree" that the resource reduces the motivation to be present in class. This figure (16 %), although low in percentage terms, assumes an important meaning and is not aligned with the very positive evaluation made to other dimensions and iii) 24 % "agree" and 7 % "strongly agree" that they are more likely to skip school if they know that the resource will be available on the web.

Figure 13: Negative behaviour in the classroom

Table 2 shows the average of responses in each dimension for each course attended. Only courses with 10 or more students were taken into consideration as it was assumed that courses with fewer students didn’t have any statistical significance. However, it is important to state that the same class
could integrate students from various courses, which increases the dimension of students in each session. What was meant by this analysis was to identify possible differences in opinions according to the type of training. The students from School Management and Organization and Childhood Education and Special Education courses are the ones that, overall, make a more positive assessment of the resource used. On the same scale of 1 to 5, the average score for items 1 to 5 (item 6 was not considered in this average as it presents a reverse scale) was 4.3. The less favourable reviews were noted in the course Pedagogical Supervision, with an average of 3.7. Although the type and size of the sample do not make it possible to establish correlations between variables, the results of this preliminary study indicate that there is material for further analysis in this field.

Table 2: Average of results in each dimension per course

<table>
<thead>
<tr>
<th>Training Undergone</th>
<th>Pedagogy</th>
<th>Technology</th>
<th>Cognitive Learning</th>
<th>Interaction in class</th>
<th>Positive behaviour in class</th>
<th>Negative behaviour in class</th>
<th>Average items 1 to 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education and Music</td>
<td>3.8</td>
<td>4.1</td>
<td>3.9</td>
<td>3.8</td>
<td>3.8</td>
<td>3.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Pedagogical Supervision</td>
<td>3.8</td>
<td>3.9</td>
<td>3.9</td>
<td>3.4</td>
<td>3.6</td>
<td>2.8</td>
<td>3.7</td>
</tr>
<tr>
<td>Infection and Health Care</td>
<td>4.1</td>
<td>4.0</td>
<td>4.4</td>
<td>4.2</td>
<td>4.0</td>
<td>2.1</td>
<td>4.1</td>
</tr>
<tr>
<td>School Management and Organization</td>
<td>4.0</td>
<td>4.4</td>
<td>4.5</td>
<td>4.3</td>
<td>4.3</td>
<td>2.5</td>
<td>4.3</td>
</tr>
<tr>
<td>Childhood Education and Special Education</td>
<td>4.2</td>
<td>4.4</td>
<td>4.3</td>
<td>4.0</td>
<td>4.2</td>
<td>2.4</td>
<td>4.3</td>
</tr>
</tbody>
</table>

An analysis of differences in various dimensions, by gender, was made in this study. In dimensions 1 to 5 no significant differences are visible. Gender disparities are only visible in dimension 6, which refers to negative behaviour in the classroom (Table 3). As shown in the three items considered, male respondents considered that the resource has more negative effects.

Table 3: Significant differences per gender

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It increases the probability to keep side conversations while the teacher presents the subject</td>
<td>3.7</td>
<td>3.2</td>
</tr>
<tr>
<td>2. It reduces motivation to be present in class</td>
<td>2.7</td>
<td>2.2</td>
</tr>
<tr>
<td>3. The probability to miss classes is higher if it is known that the resource will be available on the web</td>
<td>3.1</td>
<td>2.5</td>
</tr>
</tbody>
</table>

5. Results discussion

5.1. Implications

Constructivism as a philosophy and pedagogy is now widely accepted and is close to most contemporary theories of teaching and learning: "constructivism", "situated learning", "social cognition", "activity theory", "distributed cognition", "ecological psychology", and "case-based reasoning" (Jonassen, Howland, Moore, & Marra, 2003). Education policies, including the Bologna process, give expression to these pedagogical models of constructivist nature. In line with this perspective is the way new generations of students learn: in a more flexible way, not just playing the role of passive consumers of information, but as active builders in their learning process. The social media provided by web 2.0 support this new philosophy of learning based on community building, participation and sharing.

In fact, it has been observed that the social media – a collection of Internet web sites, services and practices that support collaboration, community building, participation and sharing – has attracted the interest of academics more likely to use technology in education and who seek new ways to motivate their students to a more active way of learning (Junco et al., 2010). In this exploratory study, promising indicators that suggest that web 2.0 tools can be integrated efficiently in the cognitive communication process of lectures emerged, with positive impacts in terms of teaching and
technology effectiveness, the encouragement of learning, the fostering of interaction and positive behaviors in the classroom.

There are several studies about the use of the web 2.0 tools potential as an approach to more constructivist philosophies. However, few are the studies focused on classroom lectures, where the teacher faces a class-group, consisting of several dozen of students with the need for direct instruction, to be able to present a large volume of information in the minimum time. In this context, which occurs often in higher education, dialogue and interaction are limited.

Figure 14 depicts the morphology of the communication process in a lecture to large groups, in which the electronic presentation only allows one-way communication, the interaction is not favored and the student is sent to a more passive role.

Figure 14: Cognitive communication morphology 1.0 in the context of a lecture

Mayer (Pennsylvania State University, 2010) admits the possibility of using resources more associated with direct instruction to achieve more constructivist approaches. In this study we sought to determine whether the integration of the web 2.0 tool Twitter micro blogging in a PowerPoint presentation contributed to the upgrade of a cognitive communication 1.0 to a cognitive communication 2.0 in the context of a lecture (Hu, 2011). The applied questionnaire allowed to assess various dimensions of the resource used in the classroom and to verify the changes in the morphology of cognitive communication. The results indicate that students recognize the potential of the resource used in the dynamics and dimensions of a cognitive communication situation 2.0, in particular with regard to: i) pedagogical aspects, ii) technological aspects, iii) cognitive learning; iv) interactions in the classroom and v) positive behaviour in the classroom.

In Figure 15 the results of the resource at interaction level and the direct effects on the student’s activity are summarized. Twitter integration favours a multidirectional communication and an increase of the interaction between teacher-student, student-student and student-content.

This leads to an upgrade of the level of cognitive communication from version 1.0 to 2.0. The findings corroborate the results obtained when applying this questionnaire to a smaller sample (Ferreira, Castro, & Andrade, 2011) and are aligned with other studies, namely: i) the positive effects on learning (Balanskat, Blamire, & Kefala, 2006; James et al., 2006; Junco et al., 2010) and ii) the relation between the use of technology and the student involvement in school activities (Balanskat et al., 2006; Chen P., 2010; Junco et al., 2010).

There are still significant sectors of conservatism and resistance to change in HEIs through technology: “Institutional barriers present formidable challenges to moving forward in a constructive way with emerging technologies. Too often it is education’s own processes and practices that limit broader uptake of new technologies. Much resistance to change is simply comfort with the status quo” (Johnson et al., 2012, p. 6). Only with more research can the potential of technology be demonstrated, namely in the exploration of the social media and in the upgrade of the cognitive
process of communication from version 1.0 to 2.0, in order to align it with the way the Net Generation thinks and learns.

![Diagram of Cognitive Communication 2.0](image)

**Figure 15:** Morphology of cognitive communication 2.0 in the context of a lecture

### 5.2. Limitations

The main limitation of this study relates to the fact that it was done with a specific sample, consisting of a small number of masters students at Catholic – Porto, which is not necessarily representative of all HEIs. In addition, only master's students belong to the sample, which requires some conservativism in the transposition of the reading of the results for other levels of education, particularly for undergraduate students. Aspects such as maturity and experience of students in the use of the social media were not manipulated and can be crucial in explaining the results.

### 6. Conclusions

The pedagogical change and innovation in higher education through technology, namely through the exploration of social media in teaching activities, is a hot topic in research. However, the literature reveals lack of studies on this subject in the context of lectures. Despite the loss of centrality of lectures on research, they remain a fundamental element in the organization of teaching activity.

Mandatory time-saving and teaching organization lead teachers to rely upon mechanisms of direct instruction in lectures, which contributes to the immutability and conservativism in cognitive communication. As a result we have a model of communication 1.0, where the communication is predominantly from one-to-many, in which the student plays a passive role in receiving the information. This communication model is opposed to the communication model 2.0, closer to the constructivist philosophy, which reflects the way students learn in the Information Society, where they assume an active role, interactive and collaborative in the construction of their knowledge.

As an approach to the theme of cognitive communication 2.0 in the context of lectures, with the integration of social media, we have developed an exploratory study, which consisted of the use of a PowerPoint presentation with the integration of the micro blogging tool Twitter. This feature allowed students to comment, question and debate the subject in real time. The comments, visible in PowerPoint, allowed the teacher to re-orientate his speech, without interrupting it, and enabled the students to read their peers’ views and to contribute with their own perspective to the debate. It also allowed the release of multiple choice questions to the audience, with answers via Twitter and the projection of results via PowerPoint. This way, a true cognitive communication 2.0 took place.

The results obtained through a questionnaire distributed at the end of the session, indicate that students recognize the potential of this tool in the dimensions evaluated: i) pedagogical aspects, ii) technological aspects; iii) cognitive learning, iv) interactions in the classroom and v) positive
behaviours in the classroom. The conclusions reached are in line with the results of the literature on the integration of social media, in other contexts of training activity:

- The digital resources have positive effects on learning (Balanskat et al., 2006; James et al., 2006; Junco et al., 2010)
- The use of educational technology and student involvement are related (Balanskat et al., 2006; Chen P., 2010; Junco et al., 2010)
- The digital resources, which integrate communication tools, increase student participation in the activities. The use of Twitter helps remove psychological barriers, increasing the participation of more introverted students (Junco et al., 2010; Kruger, Epley, Parker, Ng, & W., 2005; OECD, 2007).

7. Future work

For future work, it is suggested i) to extend the sample in order to validate the questionnaire and to allow the study of correlations between variables and ii) to repeat this study with students from other academic levels and doctoral degrees and from other institutions.

The polling systems are systems of “voting” which allow to for the creation of interactions on multiple platforms: between smartphones, via sms, e-mail or web pages. This potential to probe the audience can help to gauge the effectiveness of communication and students’ involvement. It is, therefore, considered a fertile field for future investigations.

References


A Case of Problem Based Learning for Cross-Institutional Collaboration

Chrissi Nerantzi,
University of Salford, UK

c.nerantzi@salford.ac.uk

Abstract: The idea of moving away from battery-type Academic Development Activities and silo modules and programmes towards open cross-institutional approaches in line with OEP are explored within this paper based on a recent small-scale, fully-online study. This brought together academics and other professionals who support learning, from different disciplines and professional areas who are studying towards a Postgraduate Certificate (PgCert) in Teaching and Learning in HE/Academic Practice during a facilitated open Problem-Based Learning (PBL) task around assessment and feedback using freely available social media. The study aimed to explore if and how online PBL can be used within PgCert provisions to provide opportunities to connect, communicate and collaborate in a community of practice beyond institutional walls. The phenomenographic methodology underpinned this research. Participants’ experiences in this open Academic Development activity were captured through individual remote interviews, a series of questionnaires and reflective accounts.

Findings indicate that open online PBL has the potential to enable learners and educators to break out of academic and virtual silos. It also widens collaborative learning within Academic Development in multi-disciplinary and multi-institutional groups. Recommendations are made to Academic Developers and other tutors on how to bring learners from different programmes, institutions and countries together online using social media to create the conditions and the environment for a meaningful, rich and fruitful exchange and enable collaborative formal and informal learning.

Keywords: Open Educational Practice, Academic Development, social media, Problem-based learning, Phenomenography

1. Introduction

This paper explores if, and how, freely available Web2.0 technologies can be used effectively within Academic Development provision and other professional areas and Disciplines to create an open networked learning environment. This type of environment can enable learning beyond the institution, in the spirit of open education, bridging formal and informal learning. It also provides enhanced and extended opportunities for connectedness and peer learning.

A small-scale, fully online PBL trial with PgCert participants from seven Higher Education Institutions around the UK has been carried out to test this hypothesis. The trial was conducted over a period of 3 months. Ten individuals participated in total working in two groups of five including the facilitators. This paper describes this trial. Findings are shared and recommendations are made for other practitioners on how open online Academic Development activities could be used. Accredited undergraduate and postgraduate provision is considered, linking institutions, to create and maintain more open learning communities to share expertise, resources and most importantly bringing together learners and tutors from around the world.

The background, research methods used, results and findings of this study are discussed and recommendations are made for future implementations within and beyond Academic Development activities.

2. Background

Problem Based Learning (PBL) is an active, collaborative student-centred teaching and learning approach (Savin-Baden 2003; Hmelo-Silver et al. 2009). Boud (1985, 13) stated that “the principle idea behind problem-based learning is that the starting point for learning should be a problem, a query or a puzzle that the learner wishes to solve”. Real-life open-ended scenarios, triggers or problems are used to engage small groups of students in meaning-making (Torp and Sage 2002) and the co-construction of knowledge using a PBL model. Beyond subject-specific knowledge creation and construction, PBL also enables the development of more generic and transferable skills and
Introduces students to research. PBL is also seen as a self-directed learning approach. A tutor facilitates and assists learners in becoming more autonomous and discovering new thinking and knowledge through collaborative and networked learning.

PBL was introduced in the 1960s in Medical Education (Barrows & Tamblyn 1980) and has spread since then to a large number of different disciplines and institutions. Today it is used within undergraduate and postgraduate provision around the world.

Web2.0 technologies and pedagogies such as networked learning (Jones & Steeples 2002) and connectivism (Siemens 2004) are re-shaping the way educators learn, deliver and support learning (Kear 2011). Today, a variety of technologies are used in face-to-face, blended and online provisions with differing numbers of learners. These enable a more participatory and rich way to connect, interact, learn and co-create with others when and how it suits them best. Increasingly we see learners choosing digital tools and platforms, as well as digital devices for their formal and informal learning needs.

While learning online is flexible, it can also be extremely challenging. Network-directed learning (Siemens 2011) plays an increasingly important role and acts as an enabler of social learning. Social media are frequently used to connect learners outside formal learning situations, and networks of different kinds are used by learners to engage in a variety of collaborative learning activities and connect with peers and experts around the globe. Could this open networked-collaborative learning model also be useful for formal programmes to enrich the experience? Would PBL be an effective vehicle to implement such online collaborative and networked learning activities (as stated by Donnelly 2009) due to its structure and process?

The spirit of openness and sharing knowledge came to life with the Open Educational Movement. OpenCourseWare (OCW), Open Educational Resources (OER) and courses on a wide range of scales are offered already. Wiley (2006) states that “a shift towards ‘openness’ in academic practice is not only a positive trend, but a necessary one in order to ensure transparency, collaboration and continued innovation.” (online). Ten years have passed since MIT made their first OCW available and other institutions have followed. Many have joined the OCW Consortium. The interest in OER has since grown and there are now a number of OER repositories available to educators and learners worldwide, as well as opportunities to engage in open access courses of small, large and extra large scale.

Currently there is limited evidence of OEP within Academic Development and if it happens it is based on the learners intrinsic motivation and not linked to a specific programme of studies. However, a series of OER projects for Academic Practice have been funded and produced by various HE institutions which also include complete modules such as the Teaching inclusively created by the University of Wolverhampton and made available to the wider community and the one currently under development by the University of Lincoln. Both have the potential to be used as open access modules within PgCert provisions enabling the development of formal and informal cross-institutional learning within specific programmes. Academic Development units play a vital role in modelling innovative practice and enable academics and other professionals who support learning to immerse into new ways of teaching, learning and thinking aiming to transform their practice and triggering a shift in their beliefs (Mezirow 1997).

Engaging in the design and delivery of open access cross-institutional courses is something that is under-represented at the moment in an Academic Development context. PBL is also not widely used in this context (Barrett 2010). There is even less evidence of blended and fully online PBL in the same area (Donnelly 2005) and no evidence has been found of a more global, open and online or blended collaborative cross-institutional PBL application within Academic Development or elsewhere while Open Educational Resources (OER) including a small number of open modules for Academic Development have been released more recently and other ones are currently under development.

This research was carried out to explore the potential of open access cross-institutional collaboration within accredited PgCert provision in an Academic Development context and identify whether Web2.0 technologies could be used effectively for online PBL to provide an open-access, collaborative and cross-institutional learning experience that bring diverse learners together and act as a motivator for
learning. A small-scale UK trial was carried out with colleagues from the UK which is described in detail in the following section.

3. Research Settings

The current research project was carried out within the Academic Development Unit and is linked to the Postgraduate Certificate in Academic Practice and other similar accredited provision provided across the UK. Such programmes are usually developed and delivered by the Higher Education Institutions and are open to new and experienced academics and other professionals who support learning within HE and successful completion lead to a teaching qualification in HE.

The aim of this research was to explore if PBL successes in other identified subjects could be replicated within Academic Development but this time fully online, and specifically within the Postgraduate Certificate (PgCert) in Academic Practice or similar programmes. The author acted as the trial organiser but did not participate in the trial which was set up as a naturalistic study.

In the spirit of networked learning, an online PBL trial with participants from England and Scotland was conducted from September to November 2010. It was based on the model of Computer-mediated collaborative problem-based learning (CMCPBL) (Savin-Baden 2003) itself based on CSILE (Scardamalia and Bereiter 1994) in which small groups worked together, synchronously and asynchronously, to co-construct new knowledge through the application of online PBL.

Eight new academics and two academic developers participated. Two multi-disciplinary, multi-institutional groups were formed each with four participants and one academic developer assigned to each group to act as the PBL facilitator. The total number of participants is in line with Cousin’s (2009) recommendation of ten as an optimum number of participants in phenomenographic studies. Virzi (1992) also explored usability problems in application development and recommends that issues can be identified by groups of four to five individuals.

Freely available Web2.0 technologies, such as a Wordpress group blog, Pbworks collaborative wikis and the Skype web-based conference tool were utilised during the trial. The trial included an initial stage to enable all participants to familiarise themselves with the technologies used and learning online. A socialisation stage with tutors and peers followed. During this participants had also the opportunity to explore the basic concepts around PBL and engage in a conversation about these. The main PBL task followed which stretched over 5 weeks and was conducted in two groups. Both groups were given the same scenario. This included issues around assessment and feedback. At the end each group shared their findings with the other group and received feedback from peers and their tutor.

Media-rich self-study materials were made available throughout the trial to help participants understand the technology used and the concepts of PBL. Participants were also given access to resources specifically linked to the PBL task to enable them to focus on the collaborative activity.

In order to study the variations of lived experiences, the research methodology was based on phenomenography (Marton, 1994). This enables one to “describe qualitative varieties in people’s experience of phenomena” (Dortins, 2002, p. 207), and “focuses on student perspectives” (Boustedt, 2008, p. 28). Phenomenography was also used as the main data collection and analysis method. Patterns that emerge through the limited variations of experiences are captured in categories of descriptions. Within this paper the category of description linked to ‘Online cross-institutional collaborative learning’ is presented. Individual remote and in-depth interviews were conducted using the web-conferencing tools Elluminate and Skype. Reflections on the experience of participants in the trial were externalised through a series of open-ended questions. The interviews were recorded using Elluminate and MP3 Skype Recorder, transcribed manually and collated into a Microsoft Excel spreadsheet where data were filtered and analysed based on common themes that came up during the interviews. Through this process the categories of descriptions emerged. Additional data were collected through reflective accounts and initial and final surveys.

This was a small-scale study. All participants were volunteers, and busy professionals with limited time available. None of the participants had experienced learning and/or teaching online before and
only a small number were familiar with PBL. There were issues with the technologies used due to participants’ unfamiliarity. These were the main limitations of this study.

4. Results

Despite challenges and difficulties, the two PBL groups worked collaboratively and successfully completed the set task. Peer-to-peer and tutor feedback was provided at the end of the trial.

Below are presented the results linked to ‘Online cross-institutional collaborative learning’. These highlight how participants experienced online PBL in collaboration with colleagues from other institutions.

4.1 Online cross-institutional collaborative learning

4.1.1 Multi-institutional collaboration

Participants and facilitators found working with colleagues from other institutions both a novelty and beneficial. Many cited it as the main reason they had decided to participate in this trial. One participant for example confirmed that

"Communicating with people from other institutions was one of the best aspects of the trial, it was good to exchange ideas with people from other institutions [...] it was novel and exciting – this aspect kept me going on the trial really!"

The above illustrates that individuals value opportunities to connect and learn with colleagues from different institutions. In recent years, MOOCs have become popular; attracting thousands of participants through providing individuals from across the globe and enable people to connect and form learning networks (Downes, 2010) beyond institutional boundaries or identities.

4.1.1 Multi-disciplinary groups

Overall, participants were welcomed working in online multi-disciplinary groups.

"It was very positive. Especially because we all came from different backgrounds. Enriching my experience a lot."

It is most likely that working with individuals from different disciplines enabled learners to open their mind about teaching and learning practices in their own area and gain an insight into colleagues thinking and practices. However, there is an ongoing debate around multi- and mono-disciplinary academic development, McLean (2009) highlights the importance of multidisciplinary conversations; they have the potential to enrich the exchange of ideas and co-construction of knowledge. Conversely, Healey and Jenkins (2003) favour a discipline-focused academic development approach which might explain the difficulties and the frustrations expressed by one participant.

4.1.2 Community

In the words of one participant’s blog entry, participants missed the “real human contact–eye-to-eye, smile, feeling the other’s real presence”. There was “the sense of writing into a black hole”, and indicate that participants missed the feeling of being part of a community. This was upheld by another participant, who noted that “I would have liked to come away feeling it was more of a community being created”.

Socialisation activities were available at the start of the trial, to enable participants and facilitators to get to know each other, but these were not fully explored.

Donnelly (2010) notes that online interaction appears more successful when there is an interpersonal and social dimension which can lead to enhanced participation, motivation and learning in an online environment. This is in line with the findings of this trial and with Wenger et al. (2011, 10) who recognise that “The formation of a community creates a social space in which participants can discover and further a learning partnership related to a common domain.”
4.1.3 Group size

On the matter of group size, one participant mentioned:

“Actually we lost one person and that might have been a blessing actually. Just in terms 3 people are easier to organise than 4.”

This observation indicates that participants felt more productive when working in an even smaller team and this agrees with Novak (1989) and Donnelly (2009) who note that smaller groups make online communication and collaboration more effective and active.

4.1.4 Rules

Participants felt that the lack of ground rules around working practices meant uncertainly and indecision for group members at times caused delays.

One participant, for example, stated

“The basic manners and etiquette must be clearly communicated at the beginning; For instance at the beginning I was apologising to cut other's writing, but I later found out that it was taken for granted. I wished that we had a discussion on those very basic ethics and manners working online within our team.”

The above confirms that participants were reluctant to proceed and make decisions because working practices within the group had not been defined from the outset with other group members. Shea (1994) highlighted the importance of establishing ground rules when working with others online.

4.1.5 Facilitation

This was the theme on which participants commented most extensively. In the anonymous final survey, one participant stated that

“The chief thing that the trial highlighted for me was the importance of the facilitator to the success of the project. It is a lot more work doing things this way, and the facilitator needs to be pretty “hands on” in the absence of face-to-face meetings between group members.”

The above observation is echoed in a number of responses from participants who also felt disorientated and unsure, and were seeking informed support in what they were supposed to be doing. The hands-off approach adopted by the new PBL facilitators in this trial is in line with Savin-Baden’s (2003, 50) observations that “facilitators new to problem-based learning often feel that it is better to say less – or even nothing – so that the students feel that they are taking the lead in the learning.”.

However, reflecting on their roles and performance, both facilitators agreed an imperative need to improve facilitation; to offer the support and guidance required to participants during online PBL activities with the intent of enhancing engagement and learning. They recognised the importance of facilitation in online settings, the power it has to overcome barrier and motivate learners. Both also agreed that they learned a lot and now have a better understanding of what does and does not work in online collaborative PBL.

4.1.6 Technologies

Some participants, it was noted, felt confused, frustrated and irritated –being unsure how, and on what criteria, the collaborative tools had been chosen and how they would be used. This frustration of online participants towards technology is echoed by Hara & Kling (1999).

One participant commented

I was curious about the choice of tools. Were they what facilitators felt comfortable with? I am happy online. I forget how daunting people find the technology. […] Oh!, it is really complicated. [...].
The use of two different platforms, “rather than having an integrated environment” (participant) for the trial, added to the confusion. This is highlighted by the participant who noted that “navigating through the blog, using the wiki as well, it became more frustrating as it progressed”. This is affirmed by another participant, who decries “the irritating platforms I found the set-up very cumbersome”, and by facilitators’ comments.

Leinonen et al (2009) documented similar experiences, finding it a challenge to deliver an open course at the University of Art and Design Helsinki. They maintained that “The communication tools used in the course — blogs and wiki — were found by most participants rather confusing and sometime frustrating” (online). The complexity added to learning through the use of multiple tools and environments used for online courses is also noted by Levy (2011).

5. Discussion

The findings of this trial strongly support the notion that participants enrolled on institutional PgCert value the opportunity to work with colleagues from other institutions. Many of them participated in the trial for this reason, and found that this more open approach enabled them to make new connections. Wenger et al. (2011) discuss the value of learning in social networks and communities of practice and, both during and after the trial, participants recognised the value and potential of online collaborative learning in this open and networked format. Many current PgCert programmes already enable individuals from different disciplines in the same institutions to come together, creating wider communication, collaboration, multidisciplinary learning and knowledge co-construction beyond academic and discipline-specific silos.

The opportunity, and perhaps the need, now exists to broaden this scope, and create more open online collaborative learning opportunities for PgCert participants beyond institutional boundaries. This trial has provided evidence that these can encourage a culture of openness, sharing and exchange and be beneficial for the institutions as well as those individuals involved. Widely and freely available social media can be used to enable and facilitate a more open educational offering within accredited and non-accredited Academic Development provision. This model can provide the space to be more explorative, creative and outwards facing. It can help develop enhanced networking, team and collaboration skills. It also immerses staff involved in teaching or supporting learning in HE into alternative more open and fruitful delivery approaches which have the potential to be transformative for their own practice and provide food for thought about potential learning partnerships.

Põldoja (2010, 2) highlights that “learning is a social process and open content is not the only way to change the educational system towards openness. In addition to open content we need open learning environments and teaching practices”. In the last few years such environments and courses have been created (Põldoja 2010) as well as Massive Open Online Courses (MOOCs) a name given by the participants of the Connectivism and Connective Knowledge Course 2008 (Siemens 2008) who were around 2,200 (Downes 2010).

Responses by facilitators also indicated clearly that a multi-institutional approach is welcome and that there is a place for PBL within PgCerts to facilitate such open activities, especially if linked to assessment. Assessment should enable participants to build new knowledge and develop their contextualised problem analysis and problem solving skills through collaborative learning (Birenbaum and Dochy, 1996). Using PBL for delivery and assessment constructively aligned with the intended learning outcomes (Biggs 1999) has the potential to make PBL more effective because students “will learn what they think they will be assessed on” (Biggs, 2004, 3).

To make online PBL more effective in the context of open and collaborative education, it will be important to design and plan such activities thoroughly before implementation. Participants should be able to personalise the technologies they are using, and be provided with a collaborative platform and framework which is well supported and facilitated, has a clear focus and in which activities are scaffold (Juwah 2002) and enable peer support and learning. These activities should enable familiarisation with the technology and PBL, and lay the foundations for learning partnerships, as well as a learning community in which collaboration and learning can take place and strengthen self-directed and network-directed learning. Facilitation plays a vital part in enabling this as findings of this pilot have shown.
Therefore facilitators it is advisable that potential facilitators engage in staff development in preparation for this role to gain a better understanding of the role and its complexities in online PBL and enable them to develop appropriate and effective support strategies that maximise engagement, collaboration and lead progressively to learner autonomy.

6. Conclusions

This paper contributes new evidence to the benefits cross-institutional and open learning have for academic developers and institutions more generally. The paper is especially of value for academic developers involved in the design of staff development provision but also for those working with colleagues in the disciplines.

The overall aim of this research project was to introduce and evaluate an online PBL approach within Academic Development that would connect participants from different institutions. A small-scale PBL trial was conducted using social media.

Findings linked to the category ‘Online cross-institutional collaborative learning’ show that there is the need to open our programmes and create opportunities for collaboration beyond module, programme silos and institutions. Participants in this study valued the opportunity to connect and learn with colleagues from other institutions and felt that this was an enriching learning experience despite the difficulties they were confronted with a finding which is in line with Wenger et al. (2011, 12) who note that “being more interconnected often increases the sense of community, and a desire to learn about a shared concern often motivates people to seek connections.”

Open learning is currently still uncommon within Academic Development. It is recommended that module and programme teams explore options for freeing their programmes of studies and working together with other institutions to promote a more open educational model based on network-directed learning using social media and enable learners to choose the digital tools they would like to use. Such a cross-institutional design and delivery model would also be beneficial for other professional areas and disciplines.

Overall, there are many benefits from such initiatives for learners, educators and institutions beyond the positive effect it has on learning and engagement such as

- Using existing resources and expertise more effectively through sharing and exchange with other institutions.
- Utilising freely available social media tools and technologies, accessible to or owned by learners, enabling enhanced connectivity, thereby increasing buy-in.
- Adapting and creating resources collaboratively, preferable as OER and sharing with other learning communities.
- Developing and delivering sessions, modules and programmes in collaboration and partnership, thus enriching institutional offers.
- Providing learners the opportunity to connect with other learners beyond module and programme level and become active members of more open learning communities.
- Using opportunities for collaboration and shared pedagogical and subject-specific research and scholarly activities to raise standards of teaching and create good relationships among institutions, transforming competitiveness into cooperation – aiming for a common good.

Open cross-institutional learning makes learners feel in charge and responsible for their learning. It has been observed that learners become in such situations more explorative and their appetite for learning increases. At the heart of cross-institutional open learning is the opportunity to connect with others and build bridges and networks for collaborative learning and knowledge co-construction. Such initiatives or open learning events have short-and long-term benefits and the authors invites others to explore some of the possibilities.

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Research ethics in emerging forms of online learning: issues arising from a hypothetical study on a MOOC

Antonella Esposito
PhD candidate, Universitat Oberta de Catalunya
aesposito47@gmail.com

Abstract: This paper is concerned with how research ethics is evolving along with emerging online research methods and settings. In particular, it focuses on ethics issues implied in a hypothetical virtual ethnography study aiming to gain insights on participants’ experience in an emergent context of networked learning, namely a MOOC – Massive Online Open Course. A MOOC is a popular type of online open course, that provides free content and expertise to anyone in the world who wishes to enroll. The purposes of this article are to briefly outline recent debates on online research ethics approaches and then to explore competing views on ethical decision-making when researching in a globalized, online and open learning setting. Considering the challenges of this new e-learning inquiry context, issues as the underlying research ethics models, the roles of researcher and participants and the integrity of the research process are discussed in their interplay with the evolving ethos of the ethnographical methodology being adopted to investigate participants’ views. Elements drawn from a hypothetical design of a qualitative study are here utilized to identify an empirical instance that shapes and is being shaped by research ethics decisions. The study aims to answer the following question: what are the affordances (opportunities and challenges) of online open courses as they emerge from the participants’ perspectives? This paper considers the potential operationalization of the above research question and discusses both theoretical and methodological issues arising from applying research ethics to this specific case of Internet inquiry. In this sense, ethical approaches in online research contexts as well as main ethical decisions are discussed and justified, envisioning a submission to an institutional ethics review board before undertaking the ethnographical study. Topics such as privacy concerns in a public online setting, choice between overt and covert research, researcher as observer or participant, narrow or loosely defined application of the informed consent and anonymity are outlined, presenting a range of different options. This article intends to show that ethical decisions are an iterative procedure and an integral part of the research design process. Moreover, it endorses the opportunity to produce localized and contextualized ethical decision-making. To this end, it takes into account the guidance available (research ethics literature; narratives of ethics procedures applied to empirical cases); the ethics debates within the ethnographical tradition and the nature of the setting being researched (the specific format of the networked learning instance being examined). The discussion here proposed orientates ethical decision-making towards an overt and participant research approach, an informed consent intended as a ‘public notice’ and a consideration of participants both as authors in the online setting and as human subjects embedding unexpected privacy sensitiveness. However, such decisions are considered as many starting points to build a research ethics protocol intended to a degree as a work in progress, in a problem-solving approach guided by the practical wisdom of participants emerging over time.

Keywords: internet research ethics, massive online open courses, virtual ethnography, situated ethics

1. Introduction

Research ethics can be intended as a type of applied ethics – between morality and legality - that both strives to provide guidance and support to researchers in their work and constitutes a distinct inquiry field, with its own empirical instances. For two decades the availability of Internet research settings has produced an “ethical destabilization” of researchers’ and research participants’ expectations (Whiteman 2012) and has often questioned the role and competence of the local ethics institutional review boards in providing effective guidelines to investigators (Buchanan, 2011). In the last years, emerging social networking technologies – being used both as empirical research settings and tools for data gathering and dissemination of findings - have revamped foundational debates of the constitutive principles of research ethics. This is also apparent in controversial ethical decision-making related to e-learning research (Anderson and Kanuka, 2007; Kanuka and Anderson, 2009) that, as a branch of educational inquiry, has intimate ties with ethics.

Evolving forms of e-learning – such as mobile learning and open networked learning – have been enabled by an ecology of Web 2.0 tools that develops along with their users and related societal contexts (Brown and Adler 2008) and provide individuals with new opportunities of self-directing (Kop 2011) and emergent learning (Williams et al. 2011). Such new configurations of technology-mediated learning blur boundaries between formal and informal settings, tend to disrupt traditional ethos, conventions and ethics issues of institution-bounded online learning contexts (Toprak 2010; Demiray and Sharma 2010) and increasingly align ethical dilemmas of e-learning research with those of
This changing digital landscape therefore adds unexpected ethical challenges both to teaching and research activities (Burge 2007), prompts the exploration of a new vocabulary of online research ethics (Beaulieu and Estalella 2009), and demands a greater effort for “unravelling the intricate tapestry of ethics and method in research design and process” (Markham 2007: 3). It also seems to suggest an ethics decision-making approach that strives to combine general rules of the codes of conduct provided by the institutional review boards – in an increasingly bureaucratised institutional climate (Whiteman, 2012) - with a continuing effort to gain phronesis or ‘practical wisdom’, “which demands understanding of specific situations and reference to prior experience” (Tracy and Carmichael 2010).

This paper firstly proposes a brief review of changing online research ethics approaches and then focuses on in-depth discussing an hypothetical ethical decision-making case applied to a networked learning instance.

2. The changing status of research ethics

Definition and application of ethical issues to specific research contexts has never been straightforward – both in offline and online contexts - because they are made by a complex blend of social norms, values and legal issues, are dependent on national and local traditions, and refer to different ethics philosophical frameworks. Ess (2004) notices that in the EU deontological frameworks are usually applied, while in the US utilitarian approaches are more common, and elsewhere virtue-laden perspectives are considered. Research involving humans has in the Nuremberg Code – shared at the end of the Second World War - its ethics primer, as regards to inescapable principles in protecting individual research participants from any direct or indirect harm that a research intervention might cause. Since then, other factors have affected the evolving status of research ethics over time and have shown how ethical dilemmas are nested in inquiries that at first sight do not involve human beings. Demiray and Sharma (2010) highlight some developments and practices that have strongly increased the importance of ethics in social research, such as the growing role of societal contexts in research evaluation and (mentioning Punch 1998) the transition from naming humans involved in research as ‘participants’ or ‘respondents’ rather than ‘subjects’; moreover, the practice of signing an agreement on ethical standards between researchers and public funding bodies. In the last decades, digital technologies have enabled data-driven kinds of inquiry and have fostered an increasing convergence of methods and infrastructures between hard sciences and soft sciences (Borgman 2007): this has also contributed to re-shape disciplinary differences related to ethical issues. In fact, at a policy level, the growing complexity and sharing of the digital infrastructures being utilized across disciplines and the emerging roles of different stakeholders suggest the need to think of research ethics as a transdisciplinary domain (Adamick, 2010), engaging scholars in responsible conduct research's practices across scientific fields. However, a distinction is made between ‘e-research’ and ‘Internet research’ in social inquiry (Carusi 2008), whereas the former use digital technologies to collect, archive data on subjects investigated offline, and the latter study online subjects in order to understand their behaviours. Moreover, a view of ‘data as representation’ (ib.) - that is a focus on how subjects are represented in data - opens up new ethical implications of data related to human subjects, beyond traditional issues of anonymity, confidentiality and privacy. Likewise, recent discussions focusing on 'Big Data' (Boyd and Crawford 2011) - a data ecosystem peculiarly networked and embedding relationality to other data (e.g. data drawn from social networking sites) – pose key questions on what in this light counts as research and caution against an exacerbated risk of using data for research purposes just because they are available. This phenomenon has its own side in education, in the emerging discipline of ‘learning analytics’, in which similar ethical questions arise (Duval 2012).

Others stress the importance of the current increasing role of institutional constraints - from the spread of the institutional review boards in the 1970s - in approaching research ethics and underline the new responsibilities both to investigators and learners:

“Researchers and students need to be able to demonstrate and assert that what they are doing/have done is legitimate and increasingly have to be able to justify their ethical decision-making to a broader, more public audience than they would in the past” (Whiteman 2012: 6).

This kind of responsibility is also reinforced by the contemporary ethos of science as open science (Nielsen, 2011), that underlies a more extended culture of sharing of inquiry methods, process and...
results (see also Kraker et al 2011 about openness in e-learning research). However, sharing data poses unexpected ethical dilemmas in sensitive research domains (Langat et al. 2011) as well as archiving qualitative data raises ethical questions to social scientists, that have to face constrasting positions among funding and academic institutions and law regulations (Carusi and Jirotka, 2009). Under this respect, in e-learning research Anderson and Kanuka (2009) recall the difficulties of utilizing ‘secondary data’ in online learning forums. Furthermore, current pressures on academia from funding bodies towards a timely disclosure of research settings and findings, may put researchers in danger of not respecting the value of informants' anonymity as so far it has been conceived (Tilley & Woodthorpe 2011).

3. Evolving approaches to Internet research ethics

Ethical issues in e-learning research can be located in the wider domain of Internet-based research, in which ethics mainly refer to a human subject research model, and focuses – as well as in offline contexts - on issues such as public versus private ownership, informed consent, anonymity and confidentiality (Eysenbach and Till 2001; Mann and Stewart 2000).

At the beginning of the new millennium some scholars questioned the exclusive adoption of human subject model for research in computer-mediated communication settings (Bassett & O’Riordan, 2002; Walther, 2002; Buchanan, 2004) and valued a model of Internet research that intends “Internet as production of cultural texts” and online subjects as authors (Basset and O’Riordan 2002). In this view it is envisioned an ethics approach which considers issues such as “appropriation, reproduction and removal of Internet texts from their original context” (ib.). Indeed, the definition of ‘online subject’ constitutes the core ethical challenge of online research:

“Some of the ethical difficulties in Internet research arise from not being clear about whether people in the on-line world are the subjects of research, as in, for example, medical research in the off-line world, or authors of works (e-mails, Web sites, etc.) which they have knowingly put into the public domain for information and comment” (Oates 2006: 65).

More recently, a particular “attention to mediation, to the relations between technologies, spaces, texts and people” (O’Riordan, 2010) has developed, in order to gain insights on emerging intricacies advanced by new digitally-mediated research settings. For instance, at least in the developed world, an additional concern is to be considered, since “the concepts of ‘being online’ and ‘being offline’ are anachronistic, as we embrace the ultraconnectivity of our present technological existences, and thus blur research boundaries and binaries” (Buchanan, 2011: 89). Such intricacies cannot be merely solved with a neat choice between human subject model, drawing from medical and social science tradition, or textual model, drawing from literary, historical or new media studies.

In fact, the current call for a rethinking of research ethics (Bakardjeva 2008; Kanuka and Anderson 2009; Beaulieu and Estalella 2009; Whiteman 2012) underlies the statement that “a continuum of online research is emerging”, whereas on one extreme the inquiry is not human subject based at all and on the other extreme there is a peculiar sensitiveness towards risks and benefits that can affect individual identities of research participants (Buchanan, 2011: 92). For instance, the increasing availability of ‘found’ Internet data allows for the uptake of unobtrusive methods by social researchers (Hine, 2011) and the exploration of unknown territories of social life, through new quantitative and qualitative approaches. This notwithstanding cautionary notes referring to access inequality, participation biases, technical constraints in data searching as well as “lack of information about the consumption of online interactions” (Hine, 2011: 3), that urge researchers of using such obtrusive methods only as part of a more general ethical decision-making strategy.

Considering how to come to terms with ever changing ethical dilemmas arising from Internet research, Anderson and Kanuka (2009) focus on two main competing philosophical views that so far have underlied research ethics: a deontological or rule-based view, that works well in fairly stable research settings and a teleo-logical or consequentialist view, that just looks both at the immediate and long-term consequences of researchers’ actions on research participants’ lives. They argue that
the rapid evolution of settings and practices enabled by technological advancement "suggests the need for teleo-logical modification to deontological, rule-based ethical guidelines established for non-networked research" (2009: 120). This position resonates with the distinction between law and sociological approach to research ethics (Bakardjieva, Feenberg and Goldie 2004) whereas the sociological one refers to a dialogical and iterative approach to raise emergent ethical issues and negotiate solutions. This perspective on the one hand seems to fit the dynamic nature of new forms of technology-mediated learning, such as in mobile learning research (Lally et al., 2010), on the other hand it embeds a participatory approach that has to be inflected according to the methodology being applied and the specific situation and participants being researched.

Finally, referring to ethical debates within the ethnographical tradition, Beaulieu and Estalella (2009) have recently led attention to consider contiguity of online settings, in which blurring distinctions emerge between research fieldwork, the place where analysis is being carried out and where findings are disseminated and published, and traceability of data, that is "the property of inscriptions to be located through search engines and other mechanisms" (ib.). These inherent features are intended as many typical tensions and features of the technology-mediated ethnography settings, that urge a rethinking of the same principles of research ethics, such as anonymization, exposure, authorship and ownership.

4. Approaching ethical implications of an online setting

The second part of this article deals with ethics issues implied in a hypothetical virtual ethnography study, aiming to gain insights on participants’ experience in an emergent context of online open education, namely a Massive Online Open Course (MOOC). The general goal is to discuss the main issues to be included in an ethical review to be submitted to an institutional ethics review board, before undertaking a study on this topic. However, in the current evolving landscape of technology-mediated ethnography (Markham 2003; Beaulieu and Estalella 2009; Estalella 2007), there is an increasing awareness that the mandatory rules imposed by the institutional review boards are necessary but not sufficient conditions to illuminate hidden aspects and suggest practical solutions to researchers in online inquiry settings. So, issues such as different approaches to ethical issues in an online research context, privacy concerns in a public online setting, the choice between overt and covert research, the application of the informed consent and issues of anonymity are outlined as many springboards to build a ‘doable’ research ethics protocol. In this perspective, decision-making on ethical issues is intended here to be a continuing reflexive interrogation of one’s method of inquiry to reveal “hidden ethical practices from inside” (Markham 2007: 3). This engagement in the interrogation of one’s method is complemented by a recursive work aiming to a “production of localized, contextualized ethical decision-making” (Whiteman 2009: 65), that needs to be adapted over time. In fact, in this hypothetical work constructs of research ethics in online settings are considered as the individual researchers’ endeavours to balance discrepancy between ‘control’ (design of a research ethics plan) and ‘contingency’ (local and unpredictable ethical issues to be faced) (Whiteman, 2010). Such efforts are considered as aiming to preserve research integrity while taking into account and to a degree challenge well-established rules by institutional ethics review boards, methodological good practices for research validity, features of technology-mediated learning contexts, expectations from the community of stakeholders and changing roles of researcher and research participants. This view is also grounded in a constructivist approach in which a consistent effort is made to identify stakeholders and iteratively solicit their “claims, concerns, and issues” (Guba and Lincoln 1989: 42), aiming to negotiate consensus on the issues about which there is disagreement.

Given that, the initial elaboration of the research ethics strategy takes into account the guidance available (research ethics literature; narratives of ethics procedures applied to empirical cases); the ethics debates grounded in the ethnographical tradition and the nature of the setting being researched (the specific format of networked learning instance being examined).

5. Research ethics in MOOC research: a hypothetical case

I assume as the specific setting of the hypothetical study a MOOC's edition (Cormier and Siemens 2010), carried out in the area of educational technology and addressing lifelong learners all over the world. This kind of informal learning experience is enabled by a network-based pedagogy and enacted in a public, distributed technology-mediated learning environment (e.g. Moodle forums and any social media). Usually a few hundreds of individuals play a role as active learners, against
thousands of ‘lurkers’ or non active participants. Moreover, a very small number of learners generally choose to pay a fee to gain credits by individually submitting assignments and experimental forms of peer assessment. However, distinctions are not rigid and diverse roles are equally legitimated: some ‘lurkers’ might be active participants for a while and there is no recognizable status difference between for-credit and non-credit learners.

A body of knowledge has started to be constructed around the projects of MOOCs (Kop 2010; Kop and Fournier 2011; Kop et al. 2011; McAuley et al. 2011; Mak et al. 2011) and highlights a thriving core community of researchers, professionals and mere participants that shape the form of a MOOC while they experience it, adding insights to what is perceived as a collective networked learning experiment. Nonetheless, issues concerning the model of contributing learner and the appropriate kinds of support keep on being discussed.

For the purpose of this article, the general research question I would like to focus on is the following one: what are the affordances (opportunities and challenges) of online open courses as they emerge from the participants' perspectives?

The goals of the proposed study entail: 1) to understand participants’ experience in an emergent context of online education; 2) to draw recommendations for future course design of online open courses.

The hypothetical study embeds a qualitative approach and a virtual ethnography perspective is being applied as methodology: observations of communication occurring in forums and social media among active participants and an online, open-ended and anonymous questionnaire are considered as main data gathering methods. A constructivist grounded theory method (Charmaz 2006) is intended to be utilized as data analysis procedure, whereas participants will be involved in checking themes and categories arising from an early systematic examination of data.

The ethical approach being adopted takes into account the ethical stances of virtual ethnography (Markham 1998, 2003; Hine 2000), which relies on human subject research model, but also explores new kinds of text-based settings, such as a MOOC mostly is. So, to a degree this ethical approach also values participants as authors; and above all considers ethical expectations by participants in the specific instance being investigated (Eysenbach and Till 2001; Ess and AoIR 2002), as drawn by previous editions of these pilot courses (i.e. PLENK 2010; Siemens 2010; Cormier and Siemens 2010).

The aims relate to balance the need of preserving research integrity with the provision of advantages to participants and the effort to minimize related dangers, and to inflect the ethical decision making along with the exploration of ethnographical approach and the empirical setting being investigated.

6. Public versus private ownership

The public nature of the open learning environment established in a MOOC (Fini 2009; Mak et al. 2010) seems to facilitate the collection of large amounts of observational data, with minor privacy concerns by researchers. Indeed, unlike formal e-learning environments, a MOOC is likely to be assimilated to an open web space, since it takes place in multiple, non reserved areas (for instance, in PLENK 2010 also Moodle forums had full visibility to non-enrolled readers) and it provides loosely defined constraints of ‘enrollment’ and ‘attendance’. In fact, learners can withdraw at any time and participate at whatever level of engagement, and they can mark their own online presence and interact with their facilitators and peers using their preferred social media, while undertaking ordinary social/academic/professional activities. Given that, drawing from recent social research studies with popular technologies, it is worth taking into account that behaviours linked to voluntary choice and use of social media “suggest a mindful aspiration for publicity” (Vieweg 2010) by participants. Thus boundaries between public and private ownership tend to blur in the open learning environment being considered. It is worth recalling that online communication has been defined as neither private or public, but as both and can be inflected as “privately-public, publicly-private or semi-private” (Anderson and Kanuka 2009: 119). Indeed, the problem of ownership of messages' transcripts in Net-based spaces is still controversial (Kanuka and Anderson 2007), especially if access is restricted to enrolled students: my general view follows Mann and Stewart's position that when one posts a message "there is an implied license to read, or even archive, the information it contains" (2000: 46). Moreover, drawing from a recent MOOC (PLENK 2010), the informed consent adopted there declared
a default research use of all posted messages across social media, whether tagged with the course's title: otherwise, authorization was asked. In addition, focusing on other kinds of contribution by learners, any acknowledgement of authorship of more complex artefacts being produced during a MOOC can be hardly framed within IPR issues. In fact, the setting of such online open courses is grounded in a culture of sharing that is at the heart of the knowledge production model suggested by these experimental learning projects. This cultural mood is fed with forms of acknowledgement of the individual original production – such as the mutual acknowledgement among participants - that are different from the mere protection of copyright and have more to do with the construction of one's own digital identity.

Nonetheless, it is also considered that enrolled learners in a MOOC are potentially all over the world and therefore they are likely to have different cultural and personal sensitiveness about privacy issues (Vieweg 2010). Indeed, analysis of some specific threads of discussion (e.g. self-evaluation, learner experiences, etc) might reveal for instance feelings of discomfort by some learners – often accredited professionals - in a complex networked environment such as a MOOC: these learners might feel violated if they saw their posts de-contextualized and highlighted in a publication. In this case the researcher might be at danger to enter learners' private sphere: to mitigate any distress the researcher should contact authors' posts to let them the possibility to choose to be anonymized or credited.

However, it was also noticed that the researcher might occasionally decide to shift from the observation method to interview technique, whereas individual participants were more available to directly express their opinions to researchers rather than accepting that their own written words was analyzed out of the context (Bakardjieva and Feenberg 2001). Furthermore, the sense of ownership of the produced content might vary at individual level, even if sensitive content is not implied: this suggests to researcher a diversified approach in ways to cite posts, when reporting findings (Bakardjieva 2008).

Given that, as a general recommendation a debriefing opportunity – usually planned in the final phase of the study – could be provided as a continuing dialogue between researcher and informants to be carried out in a devoted forum, in order to monitor if any harm is being perceived and to provide timely solutions.

Here also issues related to researcher’s sense of ownership and authorship should be considered, recalling the notion of contiguity of settings discussed by Beaulieu and Estalella: “While fieldwork is never easy, we felt at time exposed, surveilled and even, on occasions, that actors in the field or colleagues from ‘home’ were foreclosing on our research” (2009: 8). This challenging perspective questions traditional conventions to manage distinctions between the role as a fieldworker and that as an academic, between participants’ and researcher’s voice.

7. Overt vs covert research approach

The ethical attitude of an overt research approach is being endorsed to preserve individual informants, seen as ‘participants’, and social ecology of the community (Cohen et al. 2007: 156-175). The negotiation of access to the fieldwork, an “acclimatization process” (Chen et al. 2004: 172), the long permanence in the field, the acquisition of competence of informants and debriefing procedures are being used as many cautions to mitigate the disrupting character of the researcher’s intervention. The disclosure of the researcher’s presence is considered among the benchmarks of effective ethnographies (Splinder and Splinder 1992: 65) and has methodological and ethical relevance in virtual ethnography, as a by-product of a negotiation of access and self-presence (Hine 2008: 264). However, others hold that a researcher’s behaviour as a “lurker” is acceptable (Paccagnella 1997; Beaulieu 2004:146), just because online ethnographical observation can be considered as less intrusive than in offline contexts.

On the one hand some official guidelines addressing Internet researchers (Ess and AoIR 2002) seem to authorize a covert role by researchers, whether participants have chosen to post publicly. On the other hand, Bakardjieva and Feenberg (2001) warn researchers with respect to ‘technically’ public research settings and refer to a “non alienation principle”, whereby everyone is welcome to join and use online communities but not to ‘harvest' or sell information therein.
That said, I think that a covert approach could be even counter-productive for data collection in the setting being researched, in which participants are encouraged to share critical and creative contributions within the community. Moreover, adopting an overt approach can ease the accomplishment of “descriptive ethics” (Bakardjieva 2008), by enabling researcher to become well acquainted with the researched setting, that in this case additionally presents the uncharted characteristics of an emergent phenomenon. Furthermore, the same disclosure of researcher’s work might constitute a meta-reflection in its own right, useful both to community of learners to critically reflect on the collective knowledge building effort and to course authors to enhance understanding of learners’ perceptions of the networked learning experience. In this line, running a blog as a research journal could help to prove “that the researcher is real to the digital space and not just a visitor with no knowledge” (Mortensen and Walzer 2002: 251). Such a practice is aligned with the phenomena being researched and “both helps these ethnographers create the object, and make visible the subjectivity of the researcher” (Beaulieu 2004:151). So, the blogging activity appears to fit both methodological and ethical aims, by enacting reflexivity and facilitating the maintenance of trust and rapport between researcher and informants.

Therefore, the adoption by the researcher of a role as ‘observer as participant’ (Cohen et al. 2003:179) is likely to be tolerated by the community of learners and thus appears to be more functional to the need to gain insights on challenges and opportunities of an online open course. Finally, such a choice seems to be inescapable in the endorsed virtual ethnography perspective:

“lurking online to collect data without participating in culture may not just be less desirable, but perhaps not possibile if the goal is to explore sense making practices” (Markham 2003:5).

8. Informed consent

Informed consent is generally acknowledged as the key issue to be addressed when building an ethical framework (Christians 2000; Mann and Stewart 2000). The choice of an overt and active approach makes the informed consent an instrument for researcher to demonstrate credibility and accountability. However, there are contrasting views about its mandatory character and its operationalization.

In my view, the informed consent to be submitted to MOOC’s participants of the proposed study could assume the form of a mere ‘public notice’ (Ess and AoIR, 2002: 7), before the observational data collection starts. Therefore, a ‘reverse technique’ is being proposed, whereby participants must inform the researcher if they don’t wish to be investigated as posts’ authors.

Indeed, some scholars (Bakardjieva and Feenberg 2001; Bruckman 2002a) state that obtaining consent (through signed form) from each participant is mandatory, even if it is logistically difficult or potentially disruptive of the online environment. On the other hand, Fahy and Spencer (2004: 33-34) maintain that an ethics institutional board can waive informed consent where minimal risks in research are present, if subjects can be provided with additional information after participation, or there are serious hurdles in getting it. Indeed, to obtain consent through a signed form from individual participants can be fairly easy in a voluntary online questionnaire survey, for instance by including a ‘check box’ in the online form. However, this might be problematic for observations, given the ‘rhizomatic’ environment of a MOOC, as characterized by high numbers of enrolled people, discontinuity in learners’ participation and uncertainty to retrieve reliable contact information in participants’ profiles. Given that, some hold that in a public arena to ask individual participants for signing and sending back a form seems to be inefficient and time consuming, whilst posting a general message to inform the community appears to be intrusive (Eysenbach and Till 2001). Following Moreno et al. (2008), I set out firstly to obtain permission by the course’s coordinators, who can act as many gatekeepers to the research setting, and secondly to widely inform the community of learners as a whole about the study’s details. Furthermore, participants would be involved in an iterative debriefing process (occurring in the same forum area), would be allowed to withdraw consent at any time in questionnaires (through a devoted ‘exit’ button) and would be able to communicate to researcher if they have any objections to be directly quoted in research accounts or if they prefer to withdraw.

In fact, given the non sensitive nature of the topic and the peculiar research-focused attitude of the setting, I think that to set up an informative web space within the course’s forum area could be an
acceptable solution for course participants to become aware of research aim and design, gathering and data protection methods, types of dissemination outputs and planned levels of commitment. In this line, Fahy and Spencer maintain that, under conditions given above, the “rights of the majority to participate in research are protected over the objections of those who may not wish to do so” (2004:33). Nonetheless, I realize that issues related to informed consent are likely to be a controversial object of negotiation with the local institutional review board that the researcher has to refer to: in fact a perceived loose respect of the standardized guidelines might even cause to the researcher the impossibility of using a set of data, with evident, frustrating consequences for research integrity (Boyd 2007).

On the other hand, beyond the formal fulfilments, a further step could be considered, reflecting on the participatory nature of the learning community being investigated and on the varied cultural and professional backgrounds of research participants. The same informed consent could be developed to a degree as a work in progress, in a problem-solving approach guided by the practical wisdom of participants emerging over time: “the different disciplinary perspectives and varied experience represented offer not only creative solutions to dilemmas but are also a source of critique of the ethical framework itself, that continues to evolve as a result” (Tracy and Carmichael 2010: 254). This perspective is also consistent with the constructivist epistemological approach I endorse, that leads to interpret the informed consent as a situated, dialogic agreement that develops over time between researcher and participants (Allen 1996).

9. Anonymity

One of the risks of naturalistic research is the over-exposure of individuals and groups, which can be just avoided preserving their anonymity or at least, as I set out to do, allowing informants to choose anonymity or disclosure of their personal data.

As regards to observation, taking cue from the adoption of a ‘public notice’ to inform research participants, I opt for a ‘no disguise’ approach (Bruckman 2002b), that is a use of pseudonyms or real names of the posts’ authors. In fact, I consider the low level of risk of the research to be undertaken but also that “Anonymity may not always be preferred as default, especially in a participatory culture, where people want to be attributed to the stories they publicly share” (Liu 2010: 2). Indeed, participants in a MOOC are invited to comment each other and disseminate blog entries and to experience a role as producers of “remixed” content and various digital artefacts. So, to a degree, anonymizing material such as videos, diagrams or blog posts could be even perceived as a harm by active participants in such a context. This is also in line with the idea of the Internet users as “amateur artists” (Bruckman 2002b) to whom it seems appropriate to give credit for their work if they desire it. So, if on the one hand disclosure of participants as authors can appear as a concession (justified by the setting’s features) to an Internet research model focusing on textuality, on the other hand the use of an anonymous online questionnaire can help to give voice to the numerous lurkers – who otherwise would be unreachable and unheeded - without disrupting their privacy and anonymity.

Moreover, once again taking cue from debates on technology-mediated ethnography, a further issue is considered, that sheds a new light on the traditional concept of anonymity as a ‘protection’ bulwark of subjects: “Being traceable could actually mean greater, and more diverse accountability” (Beaulieu and Estalella 2009). Just because the traces of researcher’s activities can be found online and are potentially disclosed to all research participants and stakeholders, a “more subtle and modulated approach to human subject protection” can be envisioned as an object for new discussions and formulation of future solutions.

10. Conclusions

The article intended to lead attention to the evolving tenets of online research ethics, within which it is worth locating an ethical decision making process focusing on emerging forms of e-learning: the complex and dynamic nature of such instances in fact suggest a renewed endeavour to iteratively generate ethics questions and to share tentative solutions with the researched individuals and the research community. In order to explore what this perspective implies, this paper stated and justified main ethical decisions to be undertaken in a hypothetical virtual ethnography study on a networked learning instance. It was used as a basis for the exploration the potential operationalization of a research question focusing on opportunities and challenges of a MOOC. The discussion here
proposed orientates the ethical decision-making towards an overt and participant research approach, an informed consent intended as a ‘public notice’ and a consideration of participants both as authors in the online setting and as human subjects embedding unexpected privacy sensitiveness. Such choices are highlighted as many issues to be submitted to an institutional ethics review board for further negotiation and approval. However, following Markham’s (2007) recommendations for a ‘reflexive ethics’ that recursively intertwines ethical and methodological decisions, such decisions are intended as many starting points to build a research ethics protocol intended as a work in progress. In fact, an open networked learning environment encourages a participatory research approach and therefore fosters creative suggestions and shared solutions from participants, in an evolving landscape of ethical opportunities and challenges. This entails for the researcher to devise and assume new kinds of responsibility and accountability, to research participants and to the same role as a researcher.

References


Comparing Children’s E-safety Strategies with Guidelines Offered by Adults

Birgy Lorenz¹, Kaido Kikkas¹,² and Mart Laanpere¹
¹ - Institute of Informatics, Tallinn University, Estonia
² – Estonian Information Technology College, Estonia

birgy.lorenz@gmail.com
kaido.kikkas@tlu.ee
mart.laanpere@tlu.ee

Abstract: The ways our children are using Internet have changed significantly within the last five years: the Web experience is more personalised, social, open, self-regulated and oriented towards ripping, remixing, sharing, following, reflecting. As a result, also e-learning has recently become more social and open, involving the use of personal learning environments or social networks. We believe that the schools are not ready for this yet, as strategies and regulations supporting open learning are not up to date. It may seem easier to restrict the use of e.g. Twitter or Facebook rather than integrate them into the learning process.

In 2011, we carried out the qualitative analysis of 201 e-safety related short stories presented by students (aged 12 to 16), parents, teachers, school IT managers and police officials, collected through the Safer Internet in Estonia EE SIC campaign. 2/3 of the stories are fictional – they may be based on urban legends which however appear to refer to real stories. 1/3 of the stories reflect real incidents. We mapped typical behaviour patterns and beliefs regarding privacy as well as the regulations and limitations concerning the use of social networks at schools.

Our study shows that typical safety incidents are not solved adequately when existing regulations are used by the schools. We found that most of the solutions used by schools to ensure e-safety are either technical or purely regulation-based, only some schools appeared to have studied or elaborated on pedagogical or behavioural aspects. Problems are defied by limitations and regulations, while actual safety incidents (whether in- or outside school) remain largely unsolved (or even undetected). Thus there is an urgent need for information and working guidance mechanisms for managers, teachers, parents and students. These matters must be solved before schools reach the critical mass in using e-learning, social networks and modern gadgetry as parts of curriculum.

Keywords: online safety, schools, policy, new technologies, social media

1. Introduction

Massive internet repositories and on-line tools have given schools and homes the opportunity to educate children in new ways – we can use digital images, animations, videos, direct messaging, social networking, smartphones etc. Studying the PISA 2009 ICT skills analysis in Estonia, the students' time spent on the Net at home is usually dedicated to chat and leisure rather than education, while at school their use of computers is more or less limited compared to a number of other countries (Lorenz, 2011). Also the EU Kids Online II survey states that the most common risk for students is communicating with strangers online or seeing something that they should not see. The main problem is that most adults are still living in ignorance about what is actually going on in their children’s online life – something that kids nowadays call “the real life” (EU Kids online II, 2009). So it raises several issues between adults and teenagers, regarding the concepts of privacy, copyright and identity.

ICT is an important cross-curricular theme in the new national curriculum in Estonia, thus teachers are supposed to favour students' use of technology, not restrict it. But when asked about solutions to the problems, most adults still liked the idea of restricting the network/computer use or introducing a lot of rules (so detailed that nobody would actually be able to comply). Students were more appreciative of cooperation and mutual assistance in case of a safety incident – instead of just dealing out sanctions. Quite often, the internet safety issues in the context of e-learning are addressed in a simplified, black-and-white manner, using rare cases of criminal privacy violation to scare teachers and parents. We believe that fear is not the best teacher in this domain.

Our goal was to:

- evaluate what kind of e-safety stories are told by students and experts (teachers, it-managers, and police), and how they are related;
- find typical e-safety stories to promote development of regulations in these areas;
analyse the e-safety stories to find out where do students turn for help and what makes them react in case of an incident;

determine typical solutions used by children and find out how they differ from the 'mainstream' advice offered by adults, media, awareness trainers etc.

The previous studies in this matter can be divided into 6 bigger groups: cyber bullying (Berson 2002); moral issues – pedophilia, inappropriate content, behavioural errors (Akdeniz 1997; Carr 2004; Mitchell 2004; Peters 2009); programs and materials for schools (Wishart 2004); threat analysis for e-learning (Alwy 2010); normal teenage internet usage (Bullen 2000; Enochsson 2005; Dworschak 2010); Internet usage analysis (Livigstone, 2011; Safer internet for children qualitative study in 29 European countries 2007; Towards a safer use of the Internet for children in the EU – a parents’ perspective 2008). While according to the EUKids Online II survey (Livingstone 2010), Estonian students are among the top users of Internet and have had substantial exposure to online security risks, there has been next to no attempt of national-level regulation in this field.

The solutions usually prescribed in this area are mostly technical or are as simple as: “stop-block-tell”. Blocking is likely not the solution for the students, even if our currently typical awareness training is centred on that. Also, questions rose about understanding the problem and one's responsibility to react. The lack of knowledge about technical solutions seems to be widespread in that area – even things like simple reporting or blocking unwanted picture/video in Facebook/YouTube are often unknown to neither children nor adults.

We analysed the typology and sources of safety incidents, the real solutions offered, the students' thoughts and feelings stemming from the situation, the solutions suggested by students and whether these typical solutions actually apply in real-life situations. The practical experience of students, teachers, IT managers and police indicates a gap between the measures used in education and real life.

2. Background

The EU Kids Online II states that Estonian children are among the top five when it comes to using Internet and online communication, but on the downside they also experience more cyber threats - sexual imagery, bullying, sending/receiving sexual messages, meeting strangers online, data misuse etc (EU Kids online II, 2009).

In comparison, for the e-learning community the online threats are mostly about keeping up the servers, data misuse/theft and sensitive data (Alwi, 2010). The question of privacy has emerged as well (Becta, 2008).

A typical Estonian home offers good opportunities to use technical gadgets and Internet, but at schools, ICT-related activities are not widely used in the classroom yet. The PISA 2009 segments Estonia to the same group with Portugal and Israel, instead of putting us together with our geographical and cultural neighbours - Finland, Sweden, Norway and Denmark (PISA, 2009).

Legally, the regulations and policies at Estonian schools rely on the Penal Code and generic school regulations that differ from school to school. When we studied the development of new regulations focusing on e-safety, we found that Estonian school leaders were not ready to adopt new rules, but they were open to suggestions (especially concerning the problems which were understood to be serious, e.g. cyber bullying, illegal picture/video taking or slandering). Still the problem with detecting e-safety incidents remains – one of the prime reasons being that teachers and students don’t discuss the events and many incidents are kept secret (Lorenz et al, 2011).

The awareness training in the e-safety area has become very popular around the world in recent years (a good example is the Insafe campaign), but for Estonia, 2010 was the first year when systematic awareness training was undertaken for parents, teachers and students and related international networks like InHope, Hotline, Helpline were consulted for help (Hallimäe, 2010).

The area of e-safety awareness discusses the balance of both preventive and reactive action on the cases. There is an abundance of awareness-themed material available in English (which is understood by many teachers) but the main problem is in the prevailing mindset among both teachers and parents. They typically only get interested in the situation after either an actual incident or a large-
scale media coverage in that field. A good example is the “Spanish girl” incident involving a Spanish man posing as a girl to Estonian boys; a boy committed suicide after a year of harassment (The Spanish case, 2009).

The new National Curriculum for Primary and Secondary Schools prescribe the use of multitude of digital tools in the learning process: virtual learning environments (VLE), personal learning environments (PLE) and other web 2.0 resources like social networking to be used in a classroom (National Curricula 2010). A recent study shows that even with the good existing training opportunities and guided by the requirements of the new curriculum, most Estonian teachers are not ready to facilitate students in the matters of e-safety (Maadvere 2010).

In the teachers' communities there are some discussions about differences about real life needs of a 21st century learner and how should the schools meet them. There are rising new challenges like the digital divide, being a part of the global internet village, digital sociality, familiarity in communicating; the roles of student and teacher have changed as has the understanding of policies and responsibilities (Veldre 2010, Murumaa 2010).

There are plenty of materials (usually in English) that urge teachers to discuss these matters with students. But they are usually used as a reaction rather than a preventative act. At first, nobody believes it could happen to them; yet if something happens, it's not announced and discussed as people are ashamed (Hoiser 2009).

Teachers are usually reluctant about e-safety - likely most schools have some video posted in the internet featuring a teacher who is unaware that he/she is a 'movie star' or that students secretly film other students (Vasli 2011). Discussing e-safety incidents tends to lead the schools to implementing internet usage restrictions rather than looking for actual solutions. Schools and parents are interested in monitoring child's behaviour in the name of preventing cyber bullying or meeting strangers (Hunter 2005).

Studying school policies and practices, we could only find technical rules regarding computer wellbeing, time or operational policies (TDL arvutiklasside kasutamise reeglid 2004). Most schools regulate nothing at all, being afraid to create new precedents, or rely on the ‘ostrich effect’ claiming that having no incidents yet gives them no reason to act. In comparison, British schools opt for much more regulation (Children & Young People’s Services 2011). In the United States, similar documents regulating teacher-student relations are given to be signed by both parties (Ohio Policy reference manual 2011).

3. Method

In 2011, we carried out two studies of e-safety stories and bottom-up policy development.

In the first study (Stage I) we used a qualitative case study method and open coding technique (Chamaz 2006).

The aim of the Stage I was to decide who will be the focus group and what are the main topics in the stories. We used the 'go-around' exercise (Fundamental Team and Meeting Skills 2003) with empty cards and clustered the results with 50 participants (10 teachers, 6 experts, others were students aged 12-16). People were divided into 8 groups (6-7 people in the group); 7 groups with students and 1 teacher, 1 group containing teachers and experts) and the goal was to:

- decide who is involved in e-safety incidents and whom children look up to get the information or help from;
- gather and cluster data on what kinds of incidents can usually happen (the overall topics) and what would be important to the community.

The Stage I resulted in 13 different categories to code the e-safety stories.

The Stage II used storytelling as a method. The story is a useful tool for learning - when we analyse stories, we can understand more how the world works for the children (Vilke 2000).

The stories were gathered from the people selected at the Stage I: experts (police officials, teachers, psychologists, ICT experts) and students. The experts were selected from the close group if InSafe
The Estonian project using directed focusing (Teddlie 2009). Later we also used the snowball method (Gray 2007) as e-safety educational experts are rare in Estonia. The stories from students were gathered using a storytelling competition at InSafe project workshops in Estonia. We analysed the collected stories in line with qualitative case study method (Gagon 2010).

- 135 students participated in workshop “tell me your e-safety story”. We cannot prove them as authentic e-safety stories but we assume that not all of them are myths. These are the stories that parents tell their children and children tell each other.
- 19 stories that children claimed to be real.
- 20 experts’ stories were gathered from the interviews or surveys.
- 27 stories by police officials are a representative collection of what they think mostly happens to children that end up reported to the police.

The experts presented their stories as situations with solutions.

To code stories we used 13 themes (found in the results). They are more related to human behaviour than is typically discussed in studies about technical e-safety risks in e-learning (Alwy 2010) or e-safety studies like EUKids Online II survey (Livingstone 2010), where the main goal is to address sexual themes. We were more interested in the typical internet/computer interaction experience of an average student. For that we used 180 stories out of 201, as some stories were excluded due to being too short.

In the Stage III of our study, we chose 28 stories about five code groups (cyber bullying, harassment, slandering, fraud and privacy). The stories were selected with the help of the expert group (teachers, ICT experts, police officials and a psychologist) to cover most common cases that have emerged during the recent years. A lot of the stories overlap in coding - a story can be counted to be about privacy, but also about cyber bullying.

We had three groups of surveys and picked different cases from the five coding areas. All in all, 192 students aged 10-16 from 10 different schools (6 city and 4 rural) responded (the complete list of cases can be found at http://tinyurl.com/cpcona6). We proposed ten types of potential strategies for coping with each type of e-safety incidents:

- do nothing;
- find a technical solution myself;
- try to talk to the offender myself;
- block;
- counterattack;
- inform the victim;
- take it as a point to be smarter next time
- like it, will use/copy it myself;
- ask help from informal sources (friends, parents, teachers);
- ask formal help from officials (police, service providers);
- other.

Finally, we interviewed the expert group about their solutions to the cases to compare them to the student’s answers.

4. Results

We used an open coding approach to categorise the stories between 13 topics: spam, gaming, computer overuse, virus, fraud, passwords, fake accounts, cyber bullying, harassment, slandering, privacy, pornography and meeting strangers. These were the topics or labels that emerged after reading the stories several times. Every story was then labelled with one topic (primary code), which appeared to be the main focus of this story. Figure 1 illustrates the differences of stories collected from police, experts and children.
Figure 1. The distribution of primary codes after the first round of coding

As most of the stories actually contained references to multiple aspects and not just to the primary topic, we decided to do the second round of coding so that each story could be assigned multiple secondary codes. Figure 2 illustrates the differences of occurrences of secondary codes in stories collected from police, experts and children.

Figure 2. Frequency of secondary codes

Teachers and students present in the interviews some information suggesting that they do not understand what e-safety is about (or there are too many different understandings what is or what is not e-safety) and who is responsible in this matter to help the child.

Teachers claim that
- they have not faced any real e-safety incidents in past 3 years;
their school is e-safe because their students are not allowed to use WiFi or phones during the school time or they use Web filtering;
e-safety is a duty for the parents of the students;
they will create new procedures when something happens.

Students claim that

they can access internet whenever they want, the filtering of the Web does not work;
cyber bullying is an everyday act, it can start anywhere and it will not stop when teachers try to stop real-life bullying; sometimes they also punish wrong people.

We also found evidence that the story usually starts with a connection to one environment and changes later; for example, the first connection is established via web or e-mail and afterwards it moves to a social network or a direct messaging system. Most of the connections are made in social networks (Facebook, Rate, Orkut, gaming sites); 90% of the stories took place at home, but schoolmates are usually involved to some extent as well, so we can conclude that the stories are also discussed at school. In comparison with the police stories, the children's stories do not involve mobile phones yet.

The children's stories are mostly about gaming, fraud and passwords. There is a relationship between gaming, computer overuse and viruses, some stories can state relationships between gaming, harassment and pornography. Usually the games are single-player or standalone role-playing games but there was growing evidence about online gaming as well. Fraud has direct relationships to passwords, spam, harassment, slandering and privacy. Fraud is usually seen in the web or social networks, less so in direct messaging. Passwords (scamming, phishing or hacking) are related to web pages, less so to direct messaging or social networking. When we clustered harassment and cyber bullying cases, they can relate to spam, fake accounts and slandering, while harassment is related to gaming, fraud, fake accounts and pornography.

The real cases from children tell us typical stories about fraud, stolen passwords, harassment and slandering. Fraud was mentioned in relation to privacy and pornography. The stolen passwords were mostly related to cyber bullying and slandering. Slander and harassment were related to privacy infringement, and mentioning of pornography co-occurred with ones of gaming. There were no stories about spam, computer addiction and meeting strangers. There were lots of indications that direct messaging is taking place in social networks or chat rooms and there is no need to add strangers to one's MSN or Skype account - yet that is usually what parents and teachers address in e-safety trainings.

The experts' stories address mainly cyber-bullying, slandering, privacy infringement, less about fraud and stolen passwords. There are direct relationships between privacy and slandering, bullying and passwords. Most stories are related to networking or using web.

The police stories show us what kind of help parents need from the legal system. They are usually related to fraud and pornography, less related to passwords, harassment and meeting strangers. There are some relationships between gaming and passwords; harassment and pornography, meeting strangers and pornography. Fraud is usually related to mobile phone or is carried out by mobile phones. Typically, parents turn to police when they have lost money. The police cannot usually interfere when there are moral problems only. There are some relationships between direct messaging, pornography and meeting strangers because in direct messaging one can use video transfer.

The stories from police indicated which paragraphs in the Estonian Penal Code are applicable for internet crimes: PenC § 179 for showing pornography to minors, PenC § 217 for password hacking, PenC § 157-2 for identity theft, PenC § 213 for other computer frauds (Penal Code 2002).

Our analysis of e-safety policies found on the official Web sites of ten Estonian secondary schools revealed that many schools address e-safety issues not with policy measures, but with technical access restrictions, e.g. filtering some web sites or blocking some services. Only a small number of
schools had e-safety policies, which addressed topics like cyber bullying or sexting (sending sexual texts or images by mobile phone). Some schools had regulations on taking pictures in school premises or sharing the visual material originating from the school (see Table 1). The government does not impose any relevant regulations on schools, besides generic legislation (e.g. penal code). While there are regulations used to develop school internal rules, they contain no mention of e-safety. Moreover, while schools are subjected to Lesser ISKE (Estonian three-level IT baseline protection system) framework, no practical support is provided.

Table 1: Typical school rules regarding to use of ICT (based on policies of 10 schools)

<table>
<thead>
<tr>
<th>Type</th>
<th>Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical</td>
<td>Every class or user has got a different account</td>
</tr>
<tr>
<td></td>
<td>The right to install or run software or print files is restricted or limited</td>
</tr>
<tr>
<td></td>
<td>Technical filtering of the web</td>
</tr>
<tr>
<td>People</td>
<td>There are goals and priorities of the tasks what you can do with the school computers</td>
</tr>
<tr>
<td></td>
<td>There are rules regarding the use of social networking sites and direct messaging</td>
</tr>
<tr>
<td></td>
<td>Computer lab working hours and health related rules (how long can you use a computer) are set</td>
</tr>
<tr>
<td></td>
<td>Physical well-being of the computer workstation</td>
</tr>
<tr>
<td></td>
<td>Monitoring students</td>
</tr>
<tr>
<td></td>
<td>Gaming is usually not allowed</td>
</tr>
<tr>
<td>Other</td>
<td>Penalties for breaking the rules</td>
</tr>
<tr>
<td></td>
<td>Information where to turn for help</td>
</tr>
<tr>
<td></td>
<td>One can suggest ideas</td>
</tr>
</tbody>
</table>

We also found indications about what kind of regulations are needed. The common recommendations were the following: the school must be present in the network because it motivates students to behave better; the school must develop rules regarding mobile and other devices’ use in school premises; the school must filter programs and the web in computer classes; students should pledge not to make fake accounts or post in somebody else’s name; students should pledge not to share his/her passwords with others; students should pledge not to slander others on the Net; students should pledge to ask permission from other people before taking pictures in the school premises.

The students considered the most important stories to be the harassment case involving a younger sister, who was asked to share webcam sex with a stranger; the privacy story about the party pictures from the previous day were uploaded to Facebook; the story about intimate pictures which were uploaded to the Facebook by a boy after breaking up with his girlfriend; the fraud case where a mobile phone was used to extract money from the victim and also a case about buying goods online.

The topics that were given the most “other” answers were about how to react on the harassment case; a slandering case where a mother found out that her son has made a web community named “Naked butts”; a cyber bullying case where a boy made a secret account for the principal and posted humorous stories there; a case of someone having deleted all other students files from the class computer; a fraud case involving plagiarism (students were buying reports from the net); a case of someone taking a school band song and presenting it to the Eurovision Song Contest without their consent, and the last one was about buying a hairdryer from the net and getting nothing.

The solutions offered for different cases seem to reflect the lack of knowledge (awareness) and regulations in these areas. In some cases there was also disagreement between experts (teachers and police) about what is the right solution, like when to react, how to react and what is one’s responsibility to act. Police was more eager to rely purely on law, while teachers were more apt to decline to follow it literally as it was considered not educational to run to police every time when some prank was done by the students.

We distributed the cases into two (real and Net life problems and only Net related problems) and by topic into four categories by coding privacy, slandering, fraud, and cyber bullying or harassment (see Figure 3).
We also interviewed experts regarding their preferred solutions to the same problems. Results of the interviews are compared with the preferences of children in Table 2 below.

**Table 2.** The guidelines offered by adult experts in comparison with the preferred strategies of children

<table>
<thead>
<tr>
<th>Topic</th>
<th>Adults (experts and teachers)</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privacy violation</td>
<td>Raising awareness, changing one’s settings, knowing better next time, responsibility to give advice. Depending on the case one should turn to the ISP, website owner or police.</td>
<td>The person’s own problem; no explicit way to react, depends on the case.</td>
</tr>
<tr>
<td>Fraud</td>
<td>Turning to police or ICT expert for help, no reaction or ignoring (teachers).</td>
<td>Turning to police in some cases (only when there is direct money loss), no reaction in cases of fake accounts and hacking.</td>
</tr>
<tr>
<td>Cyber-bullying and harassment</td>
<td>Obligation to react and seek for help, blocking, announcing the incident, evidence gathering. Recommended to seek out trusted adults, teachers or police.</td>
<td>Mostly ignoring. Some other cases involve seeking help, informing the victim or taking initiative (counter-attack).</td>
</tr>
<tr>
<td>Slander</td>
<td>Reporting to the service provider, asking to remove the information.</td>
<td>Mostly ignoring. Some cases involve informing the victim.</td>
</tr>
</tbody>
</table>
As a summary, some general inferences can be made from our data analysis:

- students lack knowledge about where to look for help when something happens. There is a question whether to react at all, as a lot of e-safety cases are typically ignored;
- students tend to seek out the informal help (friends, family) who may turn out to be even less knowledgeable;
- the reputation of police is also high, as seen in several cases - but sometimes the police does not have the power to help, because there is no direct money loss or the legislation is ineffective or lacking;
- on student pranks aimed to teachers, the suggested solutions differ – sometimes they inform the teacher, but usually they don’t. When other children are involved in the case, they usually say “it is your own fault – be smarter next time”.
- students make distinction between school and personal problems – a school problem is something that school should deal with (even e.g. when someone of the students themselves deleted other another student's files). A personal problem sometimes ends up in the victim counterattacking the bully (e.g. somebody's account is hacked or illegally used, the victim can seek vigilante justice).
- when there is a case about leaking private data, students tend to also utter “be smarter next time”, because they might interpret it as already common knowledge. For most of them, private data is phone numbers or home addresses, not pictures and videos;
- students lack technical knowledge about how to block, report or gather evidence when using social networking tools. It seems to be selective - when some newspaper or advertising company tries to exploit the situation they know their right to seek help (usually police);
- students try to find solutions themselves rather than get adults involved - even in the situations where the correct way would be to turn directly to the police (identity theft, hacking or illegal entry to another person's account);
- when somebody is being directly harassed, the students will react - they seek help from police, parents or teachers. This is the only case when they do not ignore the problem;
- when there is direct money loss involved (usually phone-related cases), students will turn to the police. But when there is just money-making involved (like in the case where a boy tried to sell his account for money), they think it as a personal matter;
- analysing the “other” eg. “K” answers, we found a lot of implications to violence - such as in the cases where the wrongdoer is somehow known to the victim. In these cases, some victims would attempt to deal with the bully in real life or start bullying others in turn.

Often, schools do excuse their unawareness with “we'll react when it happens”(secretly believing that it will not happen). Most schools also try to delegate such problems to parents - who in turn look up on schools for help, as their only reaction to safety incidents is often to apply time limits on Internet use. We found that students tended to choose stories about illegal picture/video taking, fake accounts (identity theft) or hacking MSN/Facebook accounts. At the same time, teachers are more worried about situations like “students are spreading teacher’s picture on Facebook”. Students are more tech-savvy which in turn can lead into some unpleasant consequences like plagiarism or disregarding copyright. Schools are expected to apply new technologies in teaching and learning, but safety of student and teachers is paramount in this context.

5. Discussion

The analysis of the students’ e-safety stories revealed several issues. It is clear that many students don’t apparently understand what e-safety means. Usually, students do not think that they are in any way involved in an e-safety incident, even if they have been harassed or bullied on the internet e.g. in a YouTube video about the teacher. Gathering stories from the “storytelling” exercise and from the web-based competition give similar results. Also when we did a test with a control group giving students an e-safety topic to write about, like privacy or viruses, they would rather write something to please us and later change the story to something that they actually wanted to write about. It was quite
interesting that they were not thinking about the given topic but rather writing about their real problems. It is something we should study further on in a deeper level.

The students’ stories are highlighting the privacy issues in the social networks as it is easy to create fake accounts, gather personal information from search engines or even take pictures with mobile phones and post them. Instead, people tend to believe that privacy is someone else's problem. Also, they often state that it's difficult or they don’t have time to change privacy settings, but after an incident they suddenly start to believe that they could learn to do that.

The children's stories do not include stories about pedophilia and meeting strangers that usually are considered to be the biggest threat regarding e-safety. Children do not understand the differences between harassment and cyber-bullying – these terms are foggy to them. It can point to weak sexual education in Estonian schools because in only 4 times out of 17 cases about harassment did they see sexual topics. But it can also be a topic that is not openly discussed among students. Also, the line between privacy and personal data protection is not really understandable to students. Usually, they prefer black-and-white solutions: it's all private or nothing is.

The stories collected from the police and IT experts differ because police officials deal with these stories mostly only when there is a direct money loss. Schools often prefer to deal with the incidents secretly, finding a solution between the parties.

Looking at the results from the e-safety related policies of schools, we found that even when we did present typical sex-related stories to be discussed they were not considered a priority issue for schools. Harsh E-safety regulations at school could (in the eyes of principals) be one of the further reasons for teachers not to use VLE, PLE and m-learning with students and only keep using the teacher's computer and projector for presenting their own materials, which are considered safe.

Although our study focused on analysing e-safety incidents, it also informs the e-learning community about the need to raise awareness among teachers and students about potential threats to their privacy. This need becomes even more evident in the light of new trends related to the use of social media (blogs, wikis and social networking sites) as a new type of online learning environment (Becta 2008).

Another very interesting finding is that while e-safety trainings usually address MSN conversations and stranger issues (with the handy solution of blocking the unpleasant person), the interaction of today has moved to social networks where there is also opportunity to chat. When a child feels the pressure to have more friends than other people then blocking unpleasant persons is not really an option. This creates a privacy problem as well as the child opens his/her life to strangers even without any direct communication.

The main problems that rose from this study confirmed our presumption that the overall understanding of e-safety is weak. It is hard to understand and its reflections in real life are hard to notice. Neither teachers nor police officials can usually be found in the same online spaces with students, so it is getting harder for them to understand the problems that students are facing. For now, Estonian students are using two main social networks – the international Facebook and the local Rate.ee, but if Facebook does not provide protection personal data (or even, as sometimes suggested, is selling it for profit), the students may find another network soon, where there is less adult supervision.

There is also a problem with students' passivity in case of an incident. Is there a need for more awareness training or is it something that they have picked up from the adults? Some adults do also turn away when they see something unpleasant happening (“you see, but you don’t really see”). So how to teach students to react when some of the adults do the opposite?

Most of the e-safety awareness trainings tend to offer the guidelines in the style of rule-of-thumb, e.g. “stop-block-tell” or “don’t click everywhere”. Yet, these guidelines are something that students know but tend to never use. The “click everywhere” mentality leads to computers becoming so full of junk that it is easier to just reinstall the system (typically, students either don’t have much local data or they backup it to the clouds). The understanding to keep one’s computer up-to-date is rather weak, because even adults tend to consider it someone else’s problem - they don’t understand that their
computer can become a direct source of a wide variety of problems (illegal data storage, spam distributor, attack springboard etc).

The “Stop-block-tell” solution is something that threatens the person’s fame – to have just one friend or contact less than one’s friends is not an option. Also, there is a belief that the net is anonymous and nobody can track one's activities. It was rather surprising that students are usually unaware of the technical defence measures provided by social networks (e.g. report the offending video or picture).

The last but not the least, we were surprised to find traces of real violence that can follow when someone is stressed after an online incident. The outburst will come – it may take different forms like cyber bullying others in turn or doing a nasty prank to teachers. If adults really want to help the child in need, they need to uncover many different layers of the problem before reaching the core. Teachers may often find out that the bully is someone who has been bullied him/herself before. Regrettably, many adults do not usually have time to really go to the roots of the issue – they would rather want to make the problem go away as fast as possible. This will result the children facing the problems alone, being forced to develop their own strategies. Even if for now, there seem to be no universal strategies used by students other than “don’t care about the problem”, this is not an acceptable solution.

6. Conclusion

Our overall conclusion is that typical e-safety policies must stress topics that all stakeholder groups agree being important: gaming, fraud, password, harassment, pornography and meeting strangers. There are direct relations between gaming and passwords; fraud and privacy in social networks; passwords and slandering in social networks; harassment and pornography. Students also point out problems regarding viruses, fake accounts, cyber-bullying, slandering – these are topics at which police is usually powerless to help.

Our analysis shows that only a few schools have explicit policies which target e-safety issues. Yet, even these few existing school-level policy documents fail to address the topics which were most frequently mentioned in the stories written by students.

Next, we should turn our attention towards evaluating the e-safety risks by themselves and how the risky behaviour has changed online learning activities. If Internet use has changed children's values and patterns of online behaviours then the question is how we as parents and educators can adjust children's behaviour on the net when we still live in a different e-world. We should acknowledge that although we use mostly the same digital tools as the new generation, we still identify and handle the threats related with our online activities in a different manner.

It is easy to say that e-safety is someone else’s problem, be it ICT teachers, parents, awareness centres, police etc - but it is actually everyone’s problem. The solutions offered by many adults differ from the ones offered by students because they don’t understand the core issue – these children actually live in the Net and therefore this is real life for them.

The awareness training about “stop-block-tell” does not work as it is something fundamentally different from how our children are thinking and acting. There is a serious lack of noticing the problem and reacting on it – it is similar to real life, but on the Net, it is just easier to ignore (one just need to close his/her web browser or shut down the computer).

The solution is to include more technical and other practical aspects in the awareness training and distribute step-by-step, common-language how-to-s like how to set one’s privacy settings, how to report a page, picture, video or how to behave when someone is being bullied, or what to do when one becomes a victim of fraud or slander. The awareness in these areas is also needed for the adults who are setting the standard how their students or children behave and deal with the problems in the future.

But the question remains - is the “no action” strategy or ignoring the problem common to only Estonian children or is it something that teachers and parents from other countries are also experiencing?
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Mediating Diversity and Affection in Blended Learning: a Story With a Happy Ending

Dina Soeiro, António Dias de Figueiredo and Joaquim Armando Gomes Ferreira
University of Coimbra, Coimbra, Portugal
soeiro@dei.uc.pt
adf@dei.uc.pt
jferreira@fpce.uc.pt

Abstract: We had an Interpersonal Relationships course, a large class, around fifty students, working collaboratively in groups where students from different degrees, academic years, and ages, most of them deaf, tried, and to some extent were able, to communicate. We analyze this example of how diversity can be an asset and how learning management systems can act as mediators to overcome the challenges of diversity and the barriers of emotional isolation. We were carrying out a participatory action research project, within a blended learning environment supported by Moodle, to develop collaborative and personal pedagogical strategies to improve the inclusion and engagement of higher education students in their own learning and evaluation. We were using content analysis of the online discussions held by the students, of the reflective descriptions of the classes, of the students’ e-portfolios, and of the interviews with the students. The paper describes how, in the context of this project, we have discovered that a learning management systems can be a powerful mediator in promoting the inclusion of deaf students and in establishing emotional bridges across gaps that face-to-face environments are sometimes unable to span.

Keywords: affection, blended-learning, deaf students, diversity, higher education, inclusion, participation

1. Introduction

The inclusion and participation of the students in the collective learning process is becoming more and more a central issue in higher education. But with inclusion and participation, affection, one of the most overlooked dimensions of education, usually comes to the fore. We describe here one of our encounters with affection. It emerged in the context of a participatory action research project where we were exploring pedagogical participatory strategies, personal and collaborative, in a blended-learning environment supported by Moodle. Our major aim was to inquire into new ways of improving the inclusion and engagement of higher education students in their own learning and evaluation.

Using the discourse of the students, we present here this encounter, which illustrates how different people can interact and learn while using learning management systems in b-learning contexts, how diversity can be an asset, and how learning management systems can act as mediators in meaningful and sometimes unexpected ways. Our research resorted to content analysis of the online discussions, of the reflective descriptions of the classes, of the students’ e-portfolios, and of the interviews with the students. Roughly three hundred and eighty students were involved in the study, which extended throughout the academic years 2008/09, 2009/10 and 2010/11, covering a heterogeneous population, from the first to the senior year, taking nine different subjects, in twelve degrees, at the Polytechnic College where we teach. This population ranged from young full-time students to mature students working full-time, some of them deaf, and covered a diversity that illustrates the richness of new adult publics in higher education and creates new challenges in the academic contexts.

Cannon and Newble (2000) note that the diversity of populations in higher education demands flexible learning and teaching and the assurance of equity for all. They also identify factors such as the growing recognition of the importance of the emotional and affective dimensions in the pedagogical processes, as well as the role of technology as a tool to support learning and teaching in such contexts. Affect still remains a largely neglected field in education, in part because “the affective dimensions of learning are seen to be messy, difficult to pin down, and, to many, less important than cognitive considerations, despite the increasing recognition of the interplay between cognitive and affective processes” (Hurd 2008). This suggests that, as educators, we should be aware of the affective dimension, recognize its manifestations, and be prepared to reason and act with it in mind. It also implies that we should recognize the importance of the relationships between students and between students and teacher in higher education, the significance of supportive relationships, and
the contribution of the relational and intersubjective dimensions to the construction of meaning (Beard, Clegg and Smith 2007, Bird 2011).

As Light and Cox (2001) point out, for students who have just joined the university, the academic environment is in most cases new and strange, and its languages and practices unfamiliar. “Their encounter with higher education and learning is not simply a cognitive or intellectual grappling with new ideas, concepts and frameworks, but also a personal and emotional engagement with the new situation” (Light and Cox 2001, p. 26). Applying complexity theory to this reflection, we share with Davis and Summara (2010) the view that we need to understand learning environments in terms of co-participation, co-emergence, and co-implication, and see classrooms as knowledge spaces based on networks of relationships, rather than on teacher-centered or learner-centered contexts. The new cultures of social networks contribute to enhance this complexity and increase the pressures for change in the role of teachers and students. In the past, the students were mere consumers, but now they are increasingly becoming producers, in the sense that their participation is facilitated and encouraged, namely in blended-learning environments.

This means that we need to develop theories and practices where affect and cognition are mutually integrated (Picard, Papert, Bender, Blumberg, Breazeal, Cavallo, Machover, Resnick, Roy, Strohecker 2004). In this sense, we notice, for instance, that Rodrigues, Fdez-Riverola and Novais (2011) have proposed the inclusion of an affective module in Moodle, to help identify the learning styles and affective states of the students, and this has been recognized to be of importance for learning success.

The challenge is not just in finding out innovative approaches to the use of technology, but in “reinventing student teacher relationships” and even “give lead to our students and involve them in teaching and learning activities as partners” (Arif 2012, p. 564). As Bird (2011, p. 13) points out, the role of member or facilitator of a group is, in itself, a complex and challenging task, but “in a changing higher education system, where there is an increasing emphasis upon distance and flexibility” we must also “consider and investigate the affective and the relational elements of education, where closeness rather than distance is called for”. We would add that this certainly should apply to the cases where e-learning and blended-learning are used.

With this in mind, Beard, Wilson and McCarter (2007) propose an e-learning model that integrates emotional and interpersonal competences, and Beard (2009, p. 3) stresses that “Learning experience is enriched when it involves learning from being, doing, sensing, feeling, thinking and changing”. The case we explore is a combination of learning experiences that involve the participation of the students to promote transformation and empowerment in a blended-learning environment.

2. Methodology

Following a multiple perspective approach for tackling complex systems, as suggested by Cohen, Manion and Morrison (2007, p. 34), we have explored our study within a participatory action research approach, essentially qualitative, based on a process of content analysis applied to the online discussions, to the reflective descriptions and videos of the classes, to the students’ e-portfolios, and to the transcriptions of a set of interviews with the students.

The students were invited to participate in the study and were asked to sign consent forms. Although almost all the students signed these forms, a striking exception was the refusal by some deaf students. This was coherent with the attitude of suspicion and defense they demonstrated during the classes and using Moodle.

Our choice of an essentially qualitative approach took into account that qualitative tools let the participants elaborate on their thoughts and reflect on their experience (Hurd 2008). It also recognizes that these tools are not intended to reveal data that can be universalized, but rather to give indications of the factors at work in the ways in which learners relate to their learning environment. As Hurd (2008) points out, these methods can make research not only interesting but adventurous.

Specially in the participant observation and the interviews, we have captured perceptible evidences of the affective richness of the process, of the emotions expressed by the students, of the strategies
they fashioned to communicate, and of their own perception of this struggle. We also became aware of the advantages offered by Moodle to facilitate communication, sharing and learning.

The interviews took the form of talks of about two hours in length, were the student felt comfortable to say whatever he/she felt about the participation in the study, but it was supported by a protocol that helped us guide the conversation. The protocol for the semi-structured interviews was tested previously with a few students. For the deaf students, besides the pre-test, we have enlisted the support of a sign language interpreter, the same professional who worked with the classes. The interview protocol integrated and adapted the questions according to the development of the action research cycles. The topics and issues of the interview were the first category framework for content analysis, which was enriched with the emerging categories that resulted from a comparative analysis of the data (Bogdan and Biklen 1994, Strauss and Corbin 1998, Richards 2005, Cohen, Manion and Morrison 2007, Creswell 2008).

In agreement with our qualitative intention, we have used “purposeful sampling” (Creswell 2008, p. 214). After a preliminary exploratory content analysis, we have intentionally selected for deep analysis the materials that we felt significant for the study. This decision was inevitable, given the huge volume of data obtained. To facilitate and support the analysis we have resorted to NVivo.

Figure 1 illustrates the major initial interpretative categories of the content analysis tree.

![Figure 1: Major initial interpretative categories of the content analysis tree](image)

To strengthen validity, we have relied on the diversity of the participants and contexts, the duration of the study, and an attitude of critical reflection, as well as on the triangulation of multiple methods, multiple data, multiple sources, and multiple theories. With the same aim, we have carried out a review and verification of the written information and shared interpretations with the participants. Besides, we have resorted to a research critical friend (Messner and Rauch 1995), who is conducting an external audit (Creswell 2008).

3. Inclusion and participation of the students through Moodle

Learning is social and mediated, as argued by social constructivism (Vygotsky 1978, 1997). Participation, engagement, and collaboration are, on the other hand, processes that characterize learning communities (Wenger 1998). This is why many development theories in higher education "inherently include person in context by integrating cognitive, intrapersonal, and interpersonal dimensions, and placing making meaning in the context of social environments" (Baxter-Magolda, 2009, p. 626).

With this in mind, we have invited the students to participate democratically in the management of the courses. We have asked them to self-evaluate their interpersonal competences and to justify their answers with stories of their lives, to be shared: (1) in face-to-face classes, (2) in the discussion forum on Moodle, and (3) in their portfolios. Many learners did not feel comfortable at all talking about their feelings and emotions, a phenomenon also described by Hurd (2008). This was why this activity of sharing, in which they all participated, happened only after a preparatory phase devoted to build confidence. This was a most significant experience for them, and, for some, a very private one, because they expressed personal feelings related to aspects of their lives that were difficult to manage, even painful, such as having a sun with autism, or a sun who was a drug addict, or how they became deaf sometime in their life.
Departing from the skills, goals, and contents originally established for the course syllabus, the students have been invited to build and develop shared and negotiated learning projects. This included defining collaboratively the learning and evaluation activities, strategies, processes, and products, while negotiating the corresponding deadlines.

*Portfolio, 2008/9, PSL, Belchior, 58 years – “In this course, the teacher (...) tried to make the class responsible (...), and an example is the learning contract. I think self-evaluation is crucial for us to take responsibility for our own learning and development, and provides an opportunity for us to reflect (and act) upon our level of confidence and our personal competence in the transition and adaptation to higher education (...), to decide how to direct our own path and to be more prepared to face the challenges and achieve our personal and collective goals. These self-evaluation practices also reflect upon our self-knowledge competences and our lifelong learning and personal, academic and professional career management skills, which are key aspects in the knowledge society.”*

Each student clarified in his learning contract his intended participation in the development of the projects, and his portfolio described and reflected about his learning process, the collective learning process, and the quality of the course.

When learning groups are heterogeneous, gathering very different people, this difference can be very challenging, as illustrated in the following true story, spoken in the words of their protagonists.

We had an Interpersonal Relationships course, a large class, around fifty students, working collaboratively in groups where students from different degrees, academic years, and ages, most of them deaf, tried, and to some extent were able, to communicate.

It was an optional course, open to all the students in the school, and the students came from various degrees of the first and second years, were aged between 18 years to 58 years, and were mostly newcomers to higher education. Beyond this diversity, the group presented a much less common promise: it gathered hearing and deaf students. The class also had an Erasmus student from Poland, which challenged us to communicate in three languages: Portuguese, Portuguese Sign Language (PSL) and English. The class also learned a few words of Polish. In Moodle, the messages were written in Portuguese and English.

From the standpoint of the development of interpersonal skills, this was a great opportunity to be explored. The intention to engage in this exploration was expressed by the teacher, but was initiated by the students after the first class, with the following message at the discussion forum of Moodle:

*Moodle forum, 2008/9, CMD, Francisco, 25 years – “The name of the course was attractive, I thought it would be a great complement to the course Communication and Multimedia Design, because we need to know how to interact with different kinds of people, take decisions, express our ideas, so, ... a "bunch" of things that relate directly to "interpersonal relationships". These were mere expectations... but, today, after the first class, it started becoming a certainty. Now, I can say this course will be very useful and will make us grow as far as the relationship with each person, with each moment. I especially liked the class. I find it interesting (funny) to speak three languages in the class, mostly sign language. It has always been something that attracted me, that I want to learn now, or one day, ... but I will learn. I hope the colleagues of the PSL degree could give some tips... I promise I'll give something back, who knows, maybe some tips about Photoshop or some other software. I also want to make a proposal as a challenge to the colleagues of PSL: share the sign dictionary in Moodle. It could be a way to facilitate our communication... a bit, we could try. I will work on some images to use in the dictionary, and then you can help me to get it right, ok?”*

This message refers to the sharing the students were eager to start, not only because of the challenge and excitement that it represented, but also because of the difficulty it involved.
This was a unique context, with exceptional circumstances. Forty deaf students were registered in the course, but we had thirty deaf students who participated in the classes. This was a huge number for us. We had only worked with one or two deaf students per class, in the past.

In the report of the World Federation of the Deaf (Hauland and Allen 2009), 50 out of 93 respondent countries put no formal obstacles to deaf people entering university, but only 18 countries actually provide interpreting services at the university level. Several countries where deaf people do not have access to the university justify it with the absence of means to offer access to interpretation services. The number of countries where deaf people are not formally denied access to university might, thus, be higher, but the number of countries where deaf people experience real access is much lower (Hauland and Allen 2009).

As we did not have any experience of working with such a big group of deaf students, this was a new and challenging reality, for the teacher, for the institution, and for the students. All the deaf students knew each other before they entered higher education. They considered themselves a community, a unique cultural and linguistic minority (Brokop and Persall 2010). The teacher and the hearing students were outsiders, strangers to a community that had been previously consolidated. We decided to invite them to participate by trying to improve the collective communication, and we followed their lead. As Terry Coye (1999) says: "Deaf students may be new to you but hearing people are nothing new to them."

Although being a fluent user of sign language is a prerequisite to be a member of a deaf community, that fluency is by no means sufficient (Sacks 2009). The teacher had a course of Portuguese Sign Language, but it was insufficient to communicate with the deaf students. Only with the help of a PSL interpreter could the communication be satisfactorily, but not great. "Communication abilities, while playing a part in deaf-hearing relationships, are not the only factors that keep deaf and hearing students apart" (Kersting 1997, p. 262). The deaf students revealed a clear attitude of suspicion and defense since the first class, and it was not easy to get them to collaborate with the others. Lang (2002, p. 276) stresses the "critical nature of classroom participation and the psychosocial and communicative factors that may inhibit participation by deaf students." Research indicates that the more students participate the more academically successful they will be, but active engagement by deaf students is one of the most difficult goals to meet in the mainstream classroom environment (Lang 2002). This called for personal evolution in a dialectical process of collective evolution in overcoming difficulties.

''Interview, 2008/9, CMD, Francisco, 25 years – “The dynamics was good, we were always helping each other (…) this seemed to be deliberate, hearing students had to communicate with deaf students without knowing sign language. In my group there were two hearers and four deaf.”

It was deliberate, but it was not easy, as we can illustrate with the following case of two very different students who tried, struggled and succeeded.

He was older, old enough to be her grandpa. "Sir", as she called him! He was the leader of an association for the deaf. In fact, "he is deaf, but he doesn't listen!" she said. "Everything has to be as he wants!" They had to work together, but they didn’t listen to each other. "It was not because he is deaf, but because he doesn't listen with his heart!" she cried frustrated. And he became worried about her.

Away from the crowd, from the noise of the class, the learning management system, Moodle, was the neutral space where it was easier to communicate, more thoughtfully.

''Interview, 2008/9, PSL, Ana, 19 years – “The course was interesting, but I didn't know we were going to have deaf colleagues in the class. The thing that struck me most was the argument with Belchior. We think we are doing good things, but the other person thinks we are doing everything wrong. I was really upset. (...) Crying in the train. (...) Then I went home, thinking about the situation. How I'm going to explain my point of view? Then I realized I could use Moodle, send him a message. I wrote him, and I was lucky. (...) We solved the problem in Moodle. (...) In the heat of the moment, we are dealing with emotions. We are anxious, we have the boundary between deaf and hearer. In Moodle, it's different. We sit, think, and think again before we write a message, and the other does the same thing. Things were clarified, everything turned ok. We created a bond. I call him grandpa, he is the..."
class grandpa. Now we communicate well. I’m the only one with this relationship with him. This happened to me. It was terrible at the time, but now it is very positive, because we have a bond. Now it is funny, we laugh about it. I grew up.”

Interview, 2008/9, PSL, Belchior, 58 years – “I loved to work with her, really. In the beginning she had inflexible ideas. I punched the table. I was wrong to be that impulsive. She left crying.”

Ana explains in her portfolio:

Portfolio, 2008/9, PSL, Ana, 19 years – “There was a conflict in my learning group. It was a consequence of two different ways of communication, it was very intense. For me, a hearer, the world of the deaf was different and I wasn’t used to it. That reflected on the frustrated attempted to try to enter it. It is a friendship that started badly, but now it gives me great joy to think of all we have overcome. We ended up knowing each other, gradually understanding our worlds. It was very difficult but it was worth it. I take from this very important memories and lessons for life, for my growth as a person.”

Belchior also learned with the situation. In his portfolio he reflected about his leadership of the group, based on his conviction that, because he was more experienced and older, the things needed to be done as he though they should be. And why, at first, he did not feel right to accept the decision of the group to work with shared leadership.

Portfolio, 2008/9, PSL, Belchior, 58 years – “The stubbornness and inexperience of youth will lead to failure. Because I’m more experienced and old, I could impose a rigorous way of doing things. But the group chose shared leadership, so the youngest have to learn, as I learned, with their own mistakes. It’s the best way to learn”.

In the Moodle forum, talking about interpersonal communication, Belchior wrote: “here I confess my guilt, I admit to have lost my self control. To communicate is not just to talk. The attitude and understanding allied to an affirmative dialog, and above all, to be able to “listen”, are vital conditions to communicate.”

He realized the “girl” had an important contribution to share and that perhaps her ideas were not to be rejected. She acknowledged that his life experience was useful, but he also heard that his dominating and paternalistic attitude would not work.

After a constructive dialogue, they relied on shared leadership to overcome the conflict and difficulties. With this group decision, they made a pact to make an effort to communicate assertively and to respect each other’s ideas. Their commitment was visible and fruitful.

Report work group, 2008/9, Ana, Belchior… - “The group has been led by Belchior, because he is the oldest and more experienced of the group. We discussed and worked using Moodle. That was an innovation for us. We have decided that for the future the leadership will be shared, to include everyone and to be coherent with the course goals. (…) Good communication is possible. If we want, we can.”

Interview, 2008/9, PSL, Belchior, 58 years – “I am 58 years old, but all the ideas she shared with me, I accepted. There was communication. I learned a lot from a girl aged 19. Among young people, I feel young like them. They treat me like one of them. In certain things, I must be the youngest of them all. They may have 20 years, they could be my grandchildren. Last year they called me grandpa.”

The interaction between young and older students was an important contribution to mutual learning and shared commitment. But in this case the age was not the issue. The emotions, the previous experiences, and the expectations of the students had played an important role.

Moodle forum, 2008/9, OC, Valter, 50 years “After years of work, daily routines and being away from school, this new adaptation is still a bit confusing to me. It is a new challenge and a new goal to be capable and achieve success. I like to relate to others and talk to people, although sometimes I feel inhibited to do so.”

Uncertainty about their own abilities and effectiveness as learners (self-efficacy), negative comparisons with other students (imagined as more successful) and fear of failure are important factors (Hurd 2008). “Emotions are not finite things, with some being good for learning, for example,
‘self-esteem’, and others being bad; rather, highly situated affective states as validated by peers appeared to be powerful” (Beard, Clegg, and Smith 2007, p. 250).

Interview, 2010, ASE, Carla, 46 years – “I was afraid of failure. It is a bit difficult, it involves lots of feelings. (…) In the first year, people are gaining confidence again, after those years without being a student. (…) I was afraid, at the beginning of the course, to work with young students. I felt I wouldn’t be accepted. (…) They could think I had outdated ideas. I was completely wrong! I felt they always liked to work with me. I never felt rejected. On the contrary, there were situations where they invited me to work with them. So they believed I had skills and knowledge. Once, one of the colleagues asked my age. I told her. She said: “It's the age of my mother. I can’t imagine my mother doing this work with me”. (…) My life context is different, but I could understand them. I felt I was a mother figure (…) I was wanted in the class. I was not a strange element, which was my fear: I was loved. They wanted me to meet their mothers. They admired me because I was, at this age, studying in higher education, it was even an encouragement to their parents.”

Moodle forum, 2008/9, PSL, Ana, 19 years – “Our class is very heterogeneous, not to mention the age differences that bring different mindsets and perspectives of life.”

The life experiences have been recognized and valued by the teacher and the students. They have been invoked particularly by the older working students, as shown in the following excerpts from a discussion forum on this subject.

Moodle forum, 2008/9, PSL, Belchior, 58 years - “In about 40 years within the associative movement of the Portuguese deaf, as a leader, I have developed a solid experience of interpersonal relations and groups, of conflict solving, dealing with factions, groups, policies, sometimes in opposition, that arise in every collective movement. I've always tried to manage these situations by looking for consensus that benefited the deaf community. So, I think that, unlike some of my colleagues in the class, I have practice and experience. But I don’t have the theory (…). I’m available to collaborate with everyone for a better interaction in classes, to help us all achieve our collective goal: learning. I hope that what I have learned in the university of life can be useful now.”

Moodle forum, 2008/9, OC, Diana, 43 years – “Everybody has developed some competences in the university of life. This course is a good opportunity to share those competences. To solve conflict situations, well, sometimes the attitude depends on the people involved. What is valid for one person could not be valid for another. Usually, I facilitate dialog between the parts in conflict (…). I want to recognize here a positive note about the course and the class I have chosen. I’m loving my colleagues.”

The differences were opportunities to explore and work with the students, starting from their acknowledgment of their own goals.

Moodle forum, 2008/9, PSL, Ana, 19 years – “I’m afraid I’m not a person who is very much at ease to expose what I feel and want. I prefer someone to take the first step, because I fear the reactions of others to my opinions (I sometimes even stutter) (…). What I need to accomplish in this course is to be able to communicate mine, fight for them, but also respect the others’ opinions, because I’m stubborn.”

She accomplished her goal, because she was the one who took the first step to solve the conflict, and Belchior acknowledged that and praised her:

Moodle forum, 2008/9, PSL, Belchior, 58 years – “Dear Ana. I’m thinking about your words here in the forum. Congratulations, you are gradually coming to understand how a deaf person feels in daily life. One of the things I learned at the university of life, about interpersonal relationships, is that constructive dialog and good will can solve everything.”

Moodle forum, 2008/9, PSL, Belchior, 58 years – “I have followed your evolution since the first class. You have developed an autonomy that you didn’t have in the first days. I’m pleased to see that you can defend your opinion, fight for it when you think it is fair and consistent. It’s been a pleasure in my life experience to see you grow. Keep it up, I will help you.”
Ana replied: “Dear Belchior, you don’t know how happy I am with your message! The beginning was hard, different mentality, life experiences! It is important to communicate here. I hope to learn more with you and in the future laugh about our beginning. Respectful kisses.”

Moodle forum, 2008/9, PSL, Belchior, 58 years – “I already laugh a lot thinking of the early days. I’m used to these confrontations in daily life. I talk, listen to the others’ opinions, but in the end I do what I had in mind since the beginning! Ehehehe! But your enthusiasm, joy, participation in the group, is changing my mind, and I can now leave to you most of the responsibility and leadership: so you can learn more, because you are the future and I’m a relic. And to see the results, I think it’s worth: congratulations. I leave richer in terms of maturity, with a different vision about interpersonal relationships, specially about the interaction between two distant and different worlds, but simultaneously, so close and similar.”

The participation of the students creates problems because conflict is inherent to democracy. But open dialog and conflict took students to their “zone of proximal development” (Vygotsky 1978), with the students managing their conflicts, with no direct action from the teacher. The teacher only opened space for dialog, online or in person. Interestingly, the conflicts at the collective level were usually discussed and solved in classroom, while the conflicts with one or two students were overcome with messages in Moodle, to avoid confrontation face-to-face.

Most of the deaf students were not comfortable participating in Moodle, because of their poor writing skills. They did not want to expose themselves to teachers and colleagues (whether deaf or hearers). They would rather communicate only by sign language. To answer this need, some teachers use video. Straetz, Kaibel, Raithel, Specht, Grote and Kramer (2004) have presented a learning management system designed to meet the needs of deaf learners: bilingual information (text and sign language), a high level of visualization, interactive, explorative and self-directed learning, and the possibility of learning in peer groups via video conferencing. E-learning does, in fact, create new opportunities for deaf students (Mason and Rennie 2006), and, as proposed by Capuano, Monte, Groves, Roccaforte and Tommasulo (2011), the e-learning environment should focus on utilizing the visual skills of the users.

However, there should be no indulgence towards the dismissal of the exercise of writing. The teachers must challenge deaf students to write often and write more (Brokop and Persall 2010). The ability to write is a crucial skill to be successful in an era where most activities extend to the virtual world, where most of the interaction happens in writing. Besides, writing is the highest level of communication and the most critical ability to create meaning (Giddens 2009).

We cannot, thus, avoid imposing the exercise of writing and include it in the student evaluation, even more because the students have difficulties in that respect. Inside the deaf community, as they call themselves, there are the born deaf, the deaf who became deaf, and the deaf who use a device to hear: the deaf student population is not homogeneous (Sacks 2009). A differentiation exists between these groups. Those who write correctly are those who could hear at a time in their lives, particularly if they had learned to read and write before they became deaf. The others who cannot write well do not want to expose their writing. Brokop and Persall (2010) explain that writing is often used as a testing tool, rather than as a learning tool, so the students approach the act of writing with the fear of being incorrect. An advantage of interactive writing is that it incorporates elements of writing while supporting the learners in a non-threatening way that allows them to develop writing skills alongside more experienced writers (Giddens 2009). They are not used to being asked to express their opinions or ideas in writing, so they tend to feel insecure.

Despite these difficulties, the students recognized the utility of Moodle as a means to support communication and learning in heterogeneous groups.

Portfolio, 2008/9, PSL, Ana, 19 years – “With easy access, Moodle greatly facilitated communication between colleagues and access to information on interesting topics, promoting discussion. For me and for many of my colleagues, this was a revolutionary suggestion. It was a new experience, where I obtained useful information that enabled cultural enrichment and promoted greater acceptance of the others’ opinions, leading to good communication between everyone. In fact, we have eliminated communication barriers
between students, because in Moodle we could communicate in various ways. It was not just a course, it was a dynamics, using new technologies for personal development.”

Portfolio, 2008/9, PSL, Ana, 19 years – “For those who felt uneasy about the world of silence, I learned a lot from the development of the activities and dialogues that have been achieved through Moodle.”

Moodle forum, 2008/9, PSL, Belchior, 58 years – “Through Moodle, deaf and hearers maintained a positive dialogue that they didn't have in the face-to-face classes.”

We have thus promoted flexibility, autonomy and sense of community using blended-learning strategies. In Moodle, the students had their own space, with no need to rush, so they had the time to reflect, communicate, and discuss — the time that was insufficient in face-to-face classes. There were too many students, in a two-hour weekly class, to be able to explore the subject collectively and face-to-face. Diana, another working student, confessed, in the Moodle forum: “I wish it was Thursday. I long for our class.” While they were waiting for the class, they could be at Moodle, and they liked it.

Despite the difficulties of communication and of building relationships, the satisfaction, engagement and motivation of most of the students were evident in their participation in face-to-face classes and in Moodle. Just as observed by Richardson, Long, and Foster (2004), the students with a hearing loss indicated that communication in distance education was easier than in campus-based settings and enabled levels of interaction that led to a sense of belonging to a community of learners faced with shared intellectual challenges. We could unmistakably recognize this sense of belonging to the learning community, fostered by the participation in the Moodle environment. Technology was, thus, important to promote democratic participation, and the students could say, as the working student Carla observed: “we are connected to the class and the teacher”.

The projects developed by the students also improved inclusion, communication and interaction between and with other students beyond the course and the class, a feature that stresses the open character of the course as a complex adaptive system (Davis and Sumara 2010). The strategies we have used were diverse, but they were all oriented to enable the communication between the students. They were also oriented to improve the inclusion in class and in the academic context where they had to expose themselves, get beyond their limits, share, collaborate, negotiate, manage conflicts, and lead. These tasks were not easy to accomplish by the majority of the students, but they contributed, in various ways, to their development. It was an evolutionary process that resulted in the engagement of the students with each other, with the teacher and with the institution. It generated closeness and understanding and sustainable relationships that contributed to a greater, more inclusive, community.

4. Conclusions

Rather than proving anything, this narrative had the intention of inspiring the reader. As Friesen (2008) argues, the knowledge that can be derived from a particular narrative for research and learning in eLearning is situated, practical, and, in some ways, personal. Research into the affective and experiential aspects of eLearning is growing (Pachler and Daly 2011), and the qualitative approach can be useful to tackle these highly complex issues. This is what we have tried to do, in what we hope was an inspiring and, to some extent, reproductive way.

The paper describes the challenges and potential use of a learning management system in a learning context where deaf students interact with hearing students, and where young and older students try to learn together. It illustrates how a learning management system can facilitate the inclusion and participation of the students in a democratic context. It also shows how such a system can be effective in the integration of working students. On the other hand, it illustrates how deaf students who do not want to expose themselves can benefit from the experience of community learning afforded by pedagogical strategies and tools that could never exist face-to-face. It also illustrates how students can be learning resources to each other (Pachler and Daly 2011) and how students who learn together can find ways of communicating and self-organizing themselves to improve their learning and development. Despite the difficulty of the process, the story has a happy ending, epitomized by the shared understanding discovered between the young girl who was afraid to talk and her deaf foster ‘grandfather’. Beyond what is often described as the coldness of technology, educators and
students can help each other find technology-supported contexts that never existed and where people can learn (together) to listen with their hearts.

References


Empathy and Dignity through technology: using lifeworld-led multimedia to enhance learning about the head, heart and hand

Andy Pulman, Kathleen Galvin, Maggie Hutchings, Les Todres, Anne Quinney, Caroline Ellis-Hill and Peter Atkins
School of Health and Social Care, Bournemouth University, UK
apulman@bournemouth.ac.uk

Abstract: A person’s sense of dignity is a complex phenomenon and is intertwined with their sense of feeling human and being respected as a human being. In 2010, the School of Health and Social Care developed a collaborative lifeworld led transprofessional curriculum for health and social work disciplines harnessing technology to connect learners to a wider view of evidence based practice. The purpose was to increase use of technology-enhanced learning, introduce lifeworld-led philosophy to the curriculum, release staff potential, and expose students to research undertaken within the School. Delivered to undergraduate students the Exploring Evidence to Guide Practice Unit was facilitated by a number of resources including lectures, group work and a variety of web-based learning materials.

Central to the unit were seventeen web-based case studies which included the human experience of the impact of specific illnesses (such as stroke and living with dementia) and more general experiences (such as social isolation and homelessness). Each case study provided stories and poems, qualitative and quantitative research and policy and practice issues related to specific topics.

At the heart of the philosophy underpinning the unit was an opportunity for students to integrate understandings about different kinds of knowledge for practice, conventional evidence, understandings about the person’s or service user’s experience and the student’s own insights that came from imagining ‘what it was like’ for the person experiencing a condition or situation and encountering human. The project built on the successful development of Wessex Bay, a virtual community of case scenarios, used as problem-based triggers to engage students in learning activities relating to residents.

This paper discusses the development of the web-based case studies and how they integrated visual and audio materials with the aim of enhancing the lifeworld experience of students and helping to show the importance of humanising healthcare.

Keywords: Lifeworld, technology, transprofessional, web, humanising care, healthcare

1. Humanising Healthcare and the Concept of Lifeworld

A person’s sense of dignity is a complex phenomenon and is intertwined with their sense of feeling human and being respected as a human being. The Commission on improving dignity in care (2012a) has been trying to understand how and why older people’s care is failing on dignity and in February 2012 it published a draft report and recommendations for public consultation (2012b). The report drew on the body of evidence that the Commission had gathered over eight months, including written evidence submitted from over 40 organisations, public hearings and expert opinion from academic, medical and nursing communities. On the day the report was launched, the Commission co-chairs suggested a need to trigger a major cultural shift in the way everybody in care thought about dignity.

The draft report (2012b) set out ten key recommendations for hospitals and ten key recommendations for care homes to help them tackle the underlying causes of undignified care, as well as recommendations on the changes the Commission believed needed to take place across the wider health and social care system. Amongst the ten recommendations for hospitals the report suggested that hospital boards must understand how people experience care in their particular hospital, and view dignity as a key measure of performance and that hospitals should introduce facilitated, practice-based development programmes - ‘learning through doing’ - to ensure staff caring for older people were given the confidence, support and skills to do the right thing for their patients. Amongst the ten recommendations for care homes the report suggested that Care homes needed to work with
residents to create an environment that made their lives happy, varied, stimulating, fulfilling and dignified and that all care home staff must take personal responsibility for putting the person receiving care first, and also that staff should be urged to challenge practices they believed were not in the best interests of residents.

The Commission’s use of written evidence (2012c) to help inform its questions during oral evidence sessions and to help shape the draft report and recommendations highlighted many areas of concern and problems noted throughout the care pathway of patients such as:

I just feel those receptionists just treat you as a number and not a person. I am really very upset.

As mum was not given anything to eat or drink for three days whilst awaiting a minor procedure she became distressed and aggressive as she was not given her anti-psychotic medication. I consider I was bullied and abused by these [Nursing] Aides who are not qualified nurses.

but

staff nurses were kind and helpful.

The report and written evidence submitted was another timely reminder that the humanisation of care agenda is something which still needs to be urgently addressed within the health and social care system.

The rise of technology could perhaps be seen as a distraction from compassion in the caring professions (Todres et al. 2009). However, technology can also be harnessed for educational development to support compassion in practice. In their article on the concept of lifeworld, Todres, Galvin and Dahlberg (2007) listed ideas about the values and philosophy of life world-led care, which could translate into practice. These included phenomenological and narrative studies, which deepened insights into lifeworld phenomena such as palliative care (Seymour and Clark 1998), myocardial infarction (Johansson, Ekebergh and Dahlberg 2003) and non-caring encounters in an emergency unit (Nystrom, Dahlberg and Carlsson 2003). They also noted ways of disseminating qualitative research findings to make them valuable to users and help to deepen professionals’ lifeworld understanding (Ziebland 2004). Todres et al. (2007) also highlighted the central foundations of life world-led care: its humanising value, the holistic contextuality of lifeworld experience, and its benefits of experiential credibility and citizen empowerment.

2. Integrating Lifeworld with Technology - The Carer's World

In 2006, staff from the School of Health and Social Care (HSC) at Bournemouth University were investigating ways to make their health and social care curriculum more innovative and interactive (Pulman, Scammell and Martin 2009). One approach concerned integrating the methods and themes of lifeworld with Hypertext narrative into an interactive educational resource concerning the experience of Alzheimer’s. The project began as a text-to-screen adaptation of Todres and Galvin’s 2006 article, which aimed to contribute to a deeper understanding of caring for a partner with advancing memory loss with particular concern for communicating findings in evocative and empathic ways. In their article Todres and Galvin (2006) suggested that by engaging with descriptions and interpretations offered, carers, professionals and family could be better equipped to understand the issues discussed. The initial project idea was centred on an interactive hypertext narrative utilising the transposition model of adaptation (Pulman, Galvin and Todres 2010) aiming to generate a deeper understanding of six related phenomena within an intimate carer’s journey. The carer - Mervyn Richardson - who featured in the article (Todres and Galvin 2006) was approached about participating in the project and agreed to work alongside HSC. He also gave permission to use personal photos, diary extracts and video clips from the award winning *A Sweeter Pill to Swallow: Beryl’s Story* (Richardson 2002).

After production of two prototypes, a third iteration - *The Carer’s World* - was created (Pulman, Galvin and Todres 2010) - designed to give users greater knowledge about, and insight into, the challenges
of caring for people with Alzheimer’s. The package was based on the idea that learning to become a competent professional required not only knowledge about the condition and its treatment, but also what it was like to be with a person who was suffering from the condition in their everyday lives. An important access to this understanding might come from the experience of family carers who lived with them throughout the whole journey (Galvin, Todres and Richardson 2005). The aim of the resource was to offer users opportunities to engage not only with technical knowledge about the condition, but more importantly with understandings of the world of the carer. Imagining more deeply what the world of the carer might be like might provide direction for enhancing person-centred practice, which required situated judgement and ethical sensitivity. This capacity being important when applying evidence to unique situations requiring imagination and sensitivity. Work on The Carer’s World was completed in Spring 2008.

3. Integrating Lifeworld with Technology - Exploring Evidence to Guide Practice

Pulman, Galvin and Todres (2010) had noted that there was exciting potential in working with healthcare professionals in their education, using new media to focus on the experiences of people in ways that could help them understand and learn from issues and personal views, becoming more effective and empathetic in supporting people. The use of interactive media to convey narrative stories around diseases and their effects also offered a uniquely potent way of harnessing public awareness and engaging policy makers, practitioners, students and carers in health and social care issues. With the potential to work with the public and health and social care professionals in exploring society’s big issues in interesting new ways, it was hoped that other innovative resources based on the lifeworld framework could be created and utilised within the HSC curriculum.

During 2010, HSC began development of a collaborative lifeworld led transprofessional curriculum for health and social work disciplines through harnessing technology to connect learners to a wider view of evidence based practice. The purpose was to increase use of technology-enhanced learning, introduce lifeworld-led philosophy to the curriculum, release staff potential, and expose students to research undertaken within HSC. The project was supported by the Higher Education Academy (HEA) Discipline-focused Learning Technology Enhancement Academy through the HEA Subject Centre for Social Policy and Social Work (SWAP). The aim was to capitalise on the School’s expertise and scholarship in utilising a range of evidence around lifeworld service user and carer stories (demonstrated in the creation of The Carer’s World) in the form of clips from television and radio programmes, films, podcasts, poetry, drama and narrative case studies, and associated evidence from journal articles and policy documents, to immerse health and social care students in the lifeworld of the people they might encounter in their future professional roles.

A key feature of the project was to raise student awareness of a range of evidence, including narratives and material from the arts and humanities (such as film) to consider how practice could be guided. In this way, HSC wished to introduce students to evidence in a situated way, embedded in practice and to make transprofessional learning explicit. Interestingly, previous studies of the education of teachers by Bousted and Ozturk (2004) and Downey et al. (2003) had both noted that film might have particular advantages in helping those who worked in complex and demanding social situations to develop observational skills and become more adept at noticing. At the heart of the philosophy underpinning the educational resource (Figure 1) was an opportunity for students to integrate understandings about different kinds of knowledge for practice, conventional evidence, understandings about the person’s or service user’s experience and the student’s personal insights that came from imagining ‘what it was like’ for the person experiencing a condition or situation and encountering human services (Todres 2008, Galvin 2010, Galvin and Todres 2011).
Early evaluations of Wessex Bay (Pulman, Scammell and Martin 2009) confirmed that students had enjoyed the uniqueness of the problem based learning triggers used in the community as opposed to other methods experienced during a conventional academic year. However, feedback also suggested there was a thirst for more interactive experiences and pointed to the need to enhance profiles and structure of the community for future years. This particularly concerned the framework around the characters used in case studies - their neighbours, friends and supporting network that weren’t currently in evidence. It was recommended that there was development of targeted interactive web-based learning embedded within case scenarios and a streamlining of scenarios to provide fewer more developed cases. The key beneficiaries of this initiative would be future HSC students, with the focus on creating an undergraduate intermediate (Level I, Year 2), transprofessional unit to be delivered to over 600 students in consecutive blocks of 300 from nursing fields, midwifery, social work and community development, occupational therapy, physiotherapy, operating department practice, and paramedic practice. The project implementation impacted directly on working practices within HSC and the wider University with key stakeholders including academics, programme leaders, the School’s management team, and professional staff in advisory and support roles within the School and centrally, including web development, educational and learning technology, academic staff development, quality and enhancement and examination co-ordination. The scale of transformational change was immense given that all professional groups within the School were participating, with forty staff taking part as academic developers, champions and facilitators.

In the first quarter of 2011 the unit went live, facilitated by a number of resources including lectures, group work and a variety of web-based learning materials. Over five weeks groups of between five and nine students worked together on one of seventeen different case studies initially exploring evidence from poems, stories and qualitative research (what might be expressed in a metaphorical way as ‘knowledge for the Heart’); then exploring quantitative research and policy (‘knowledge for the Head’) and finally considering how the evidence could be integrated with their other studies and own experience to inform their practice (‘knowledge for the Hand’). This was supported by podcasts describing research terminology and student managed guided learning activities. Students wrote weekly individual blogs and a final group blog which was assessed (50%) and also undertook an online multiple choice examination (50%) during the final week of the unit. By building a lifeworld framework which informed and incorporated rational ‘Head’ knowledge it was felt students were more likely to develop the confidence to draw on evidence not only from research and policy documents, but also to value the stories of service users and their own human experiences to create the

4. Case Study Development

Central to the overall philosophy of the unit was the creation of seventeen different web-based case studies (Figure 2 and Figure 3) which included the human experience of the impact of specific illnesses (such as stroke and living with dementia) and more general experiences (such as social isolation and homelessness). A wide variety of cases was required to cope with the large cross-section of health and social care students taking the unit:

- EVP 01 - The experience of the impact of Stroke
- EVP 02 - The experience of Illegal Drug Use
- EVP 03 - The experience of the impact of Parental Substance Misuse
- EVP 04 - The experience of the impact of Multiple Sclerosis
- EVP 05 - The experience of the impact of Social Isolation
- EVP 06 - The experience of the impact of Back Pain
- EVP 07 - The experience of the impact of Birth
- EVP 08 - The experience of the impact of Learning Difficulties
- EVP 09 - The experience of the impact of Mastectomy
- EVP 10 - The experience of the impact of Long-term Skin Conditions
- EVP 11 - The experience of the impact of Type 2 Diabetes
- EVP 12 - The experience of Fall Management in the Elderly
- EVP 13 - The experience of the Management of Fever in Young Children
- EVP 14 - The experience of the impact of Spinal Cord Injury (knowledge for Occupational Therapy)
- EVP 15 - The experience of the impact of Homelessness
- EVP 16 - The experience of the impact of Dementia
- EVP 18 - The experience of the impact of Spinal Cord Injury (knowledge for Paramedic Practice)

From the beginning of 2010, academic champions for each case study were identified and invited to complete a pro-forma with their initial ideas. They were prompted to look at The Carer’s World as this might give them some useful ideas on how they might want their case to be designed. Academics were also advised that at the beginning of the creative process, the information supplied and the layout or design was not finalised, so that they could build their case studies iteratively before the actual live date. They were also requested to include a narrative from the person’s perspective which could be written, or be from a video clip from Healthtalkonline (2011) or another similar resource.

Figure 2 – Case List (EVP 01 – EVP 07)
The clips could be supplemented by the use of short extracts from films which had been on television or from television or radio documentaries that were about the wider issues in the case. Poetry or extracts from literature or diaries or images could be used, with the only limit being the imagination. The aim was to build up knowledge from many sources around the central narrative. The sources also needed to include three or more academic articles with a variety of quantitative approaches and three or more academic articles using qualitative approaches to highlight peoples' experiences and perspectives, the film clips and poetry as well as links to any interesting policy documents and relevant websites (such as associated charities or organisations).

Basic HyperText Mark up Language (HTML) - a language used to construct, arrange and present text and graphics through a user’s web browser - was used for the creation of each case study. Internal audio visual elements were supported by using Apple’s Quicktime technology for video clips and the MP3 audio file format - based on MPEG technology which creates a very small file suitable for streaming or downloading over the Internet - for audio clips and podcasts. Once all cases had been drafted, the central project team were able to look at each in turn and suggest changes, to ensure that the student experience would be equitable whichever case students studied. Individual sections of each case were continuously revised and redrafted before the live date to ensure there was an acceptable level of standardised content across each one.

5. Case Study 16: The experience of the impact of Dementia

Focusing on Case Study 16 - *The experience of the impact of Dementia* (Figure 4), this paper will now discuss the individual case components in depth.

The *Homepage* of each case serves two purposes: aiming to guide the user simply and effectively to the various learning tools and also highlighting a current campaign about the topic under discussion - in this case “Putting Care Right” (Alzheimer’s Society 2011), a campaign to ensure that people with dementia have access to good quality care whether at home, in a care home or on a hospital ward.
6. The Getting Started section sets the scene, describing what students will be experiencing:

- Learning about a range of issues in dementia.
- Watching and listening to video clips of people talking about their experience.
- Imagining what it might be like caring for someone they loved who had dementia and imagining what it might be like for the person with dementia, through a range of immersive materials.
- Imagining what dementia might feel like by reading Haiku poetry written by people with dementia.

This section also discusses the other parts of the case study and reminds students of the three qualitative and three quantitative papers that they need to read to support their experience and understanding. The Background section contains introductory information on the condition or situation - in this case a definition of dementia and some suggested additional reading, which includes journal articles and fact sheets from the Alzheimer's Society. For each case, these might be demographic papers, research pointing to the extent of the situation or condition and the difficulties it presents, or scientific, biomedical information about the case/condition, where relevant.

The focal point of each case study, the Imagine This section is where as well as resources there are a number of scenarios that are aimed at giving students insight and information on the experience of the impact of dementia. For this case study there are four different scenarios and a learning activity involves choosing one particular scenario to investigate in more depth.
The first scenario contains a character from Wessex Bay (Pulman, Scammell and Martin 2009) and is an extension of the theoretical approach previously used during the IPE curriculum. The character of Duncan Galloway (Figure 4) is a 62-year-old man who has dementia and arthritis. Ellen, his wife of 30 years, is caring for Duncan and their daughter lives close by, but she is kept busy with her children. A situation is described and students are asked to consider what can be done at a particular moment in time. In this case, Ellen sees that her outside life will become more limited and she wants to be able to fully care for Duncan - she does not want to think about care for Duncan in a home in the longer term.

The second scenario features the first person to be diagnosed with Alzheimer's - Frau Auguste Deter, a 51-year-old woman who was admitted to hospital and examined by Dr. Alois Alzheimer. Because of her age, Deter was diagnosed with presenile dementia; today, the diagnosis would be early-onset Alzheimer’s Disease, which is defined as development of the condition before the age of 65. Frau Deter died in April 1906, aged 55. Psychiatrists rediscovered her medical records in 1995, in archives at the University of Frankfurt. The 32-page file contained her admission report, and three different case histories, including notes written by Alzheimer himself. An extract from the file, written by Alzheimer in 1901 is highlighted and the students are asked to imagine themselves back in that time and consider their reflections on his notes.

The third scenario concentrates on five different Visions of Dementia, portrayed through audio-visual materials that can be experienced by students:

- Malcolm and Barbara - A Love Story (Watson 1999) won critical acclaim for the moving account of Malcolm and Barbara Pointon who had their lives radically altered when Malcolm developed Alzheimer’s. Paul Watson’s film told the story of how love sustained a relationship in even the most difficult of times. After spending eleven years with the couple, Malcolm and Barbara - Love’s Farewell (Watson 2007) followed Malcolm as Alzheimer’s took control of his body, mind and marriage. This second film followed Malcolm just after he was diagnosed with the disease aged 51 through to his final conscious moments.
- Being Together (Cash 2009) is a film produced by Marilyn Cash who has worked with older people in both the voluntary and statutory sectors; in social care and as a researcher. Her research explores how the findings of qualitative research could be utilised to improve the quality of life for people with dementia and their carers. Being Together was made as part of Marilyn’s PhD from Bournemouth University and relates to the experience of living with dementia from both partners’ perspectives in a relationship.
- A Sweeter Pill To Swallow - Beryl's Story (Richardson 2002) is a documentary, which tells the personal story of Mervyn Richardson’s fight to get a prescription of Galantamine for his wife Beryl, who was diagnosed with Alzheimer’s disease. An expose of the immense difficulties faced by Alzheimer’s disease sufferers and their carers in obtaining anti-dementia medication, the film highlights the first patient in Dorset to receive an NHS prescription for Galantamine, a drug that Mervyn would like to encourage.
- Ex Memoria (Appignanesi 2006) - takes the viewer through a day in the life of Eva, putting them face to face with her experience of old age and dementia. In 2003, the director Josh Appignanesi wanted to make a short film based on his experiences of visiting his grandmother - a Jewish refugee - in a care home, when she had dementia. During the war, she had lost touch with her brother and his fate was never discovered, which became a key theme in her experience of dementia. The resulting film has been distributed to carers, residential home managers, charities and specialists in the field, as part of a Wellcome Trust scheme.
- The Lion’s Face (2011) is a tale of love, loss and family with music by Elena Langer and words by Glyn Maxwell. When a man loses his way home it signals an irreversible return to childhood. Compassionate, heartfelt, strikingly dramatic and often witty, the work is an original, richly-textured story on ageing, memory and the incomprehension of getting old in the minds of the young. Working in partnership with Professor Simon Lovestone and his team, the Opera Group developed the opera over the course of two years to find a way of creatively exploring the experiences of the person with Alzheimer’s, their carers and a research scientist. A BBC Wales news report on the drama and a link to the company’s website offer a different perspective rather than featuring the actual opera.

The fourth scenario offers a viewpoint of dementia from the world of poetry. Haiku poetry celebrates the beauty of the ordinary moment. Derived from the Japanese tradition, it is characterised not only by simplicity, but also by reverence for nature. Haiku is one of the most important forms of traditional
Japanese poetry, and is, today, a 17-syllable verse form consisting of three metrical units of 5, 7, and 5 syllables. Philomene Kocher began writing haiku in 1991 and her work has been published internationally, most recently in a Canadian haiku anthology (Kocher 2008). In 2008, she completed her Master of Education studies in which she explored haiku as a way of connection with persons with dementia. Her haiku can be read by students in the September 2007 archives of a haiku website.

The Research Evidence section of the case study provides direct library links to PDF versions of the three qualitative (evidence that gives a rich perspective of the condition or situation) and three quantitative (findings about the condition or situation which are technical evidence) papers which each student needs to access during the unit. Students are required to compare, explore and learn from a range of published research evidence embedded within a practice issue relevant to their field and consider how these research studies could usefully guide practice.

From the Research Process and Methods section, students can access a range of supplementary resources and material to facilitate their learning about research approaches and methods. There are links to a Thinking about Research guide - a web based resource which provides an overview of the research process and acts as a reference document to introduce students to core terms and differing research processes. There are also links to 45 short podcasts designed for students to listen to, in conjunction with other unit materials. The podcasts feature professors discussing and explaining a variety of key research approaches, methods, and aspects of the papers that students would be accessing in their case study. Students are also able to access a range of Policy Documents, which are relevant to their case and additional interesting information in Useful Links. In the dementia case study this included links to show students what charities and national and international agencies have been focusing on in relation to dementia, such as The Alzheimer's Society and the Social Care Institute for Excellence’s Dementia Gateway.

7. Evaluating the Impact of Integrating Lifeworld with Technology

Early indications from group blog postings undertaken during the first and second blocks of the unit highlighted the powerful effect that the dementia case study materials had on student perceptions and emotions. One student felt that although it was important to learn the facts of dementia, to understand the illness through the eyes of someone with the condition was an important opportunity as understanding patient’s fears and how their life changed and how they coped with those changes were very important to the way that individual health professionals cared. Another student had not personally worked with someone with dementia or looked closely into the condition itself and was shocked at how little they actually knew. They had expected the primary caregiver to experience feelings of anger, stress, upset and confusion, but reflected that to watch the person with condition go from an active, happy, loving person to an aggressive person that could do very little for themselves in a short space of time as portrayed in Malcolm and Barbara - Love’s Farewell (Watson 2007) was shocking and hard hitting. The film Ex Memoria (Appignanesi 2006) affected another student concerning the sort of care that some people received, and how important it was to think about the person behind the disease. They found that many of the resources had reminded them of a particular person they’d met or looked after in the past, and that this had affected them more than some of the other narratives had. When one student attempted to imagine what it was like, they felt quite upset because even after years of trying to understand the disease they acknowledged that it was still forgotten that, regardless of the condition, people with dementia were first and foremost individuals. They reflected that this feeling would guide them in future practice to always see the person behind the condition. These impacts were also noted in the other case study group blog postings.

The student experience of the unit was also monitored and evaluated by means of weekly deployment of questions using the ARS (audience response voting system) and an end of unit online evaluation completed by students following their online exam sittings (first block n=301, second block n=243). A staff focus group (n=12) was also conducted with academic champions and developers interested in, or contributing to, the unit. This evaluative data (Hutchings et al. 2011) showed that students appreciated the relevance of different kinds of research evidence for their practice and the value of engaging with service user and carers’ stories:
The qualitative evidence stood out for me as I began to empathise with the patients. I was able to understand their thoughts and feelings, and began thinking of how this can be applied to practice.

They also appreciated the integration of lifeworld-led theoretical perspectives:

I just really loved the idea that the evidence comes from the arts and humanities as well as the sort of traditional research evidence.

The introduction of technology mediated learning also affected the roles of academics as developers, champions, and facilitators, demonstrating role transitions, from unit teachers and research staff to resource developers, from uniprofessional programme leads to transprofessional champions, and from research-focused professoriate to unit facilitators. Possible impacts on working practices and changing roles were identified by staff:

The model of the unit challenges the traditional way in which we have viewed how we carve out our time as academics and teachers. I’d quite like to develop a case study so how does that fit with my role in the rest of the world of my work. It’s not a case of contact hours, but it’s about what role do I play?

Staff also felt the technology would change how they interacted with students. One of the case study developers described how she felt distanced from the body of knowledge she had created and concerned the facilitators would do justice to her work:

I feel slightly detached now which has been quite difficult. It’s like giving birth...! Well there you go and look after it and make sure that you get across what I want you to get across.

8. Conclusion

Murray (1997) felt that the right stories could open hearts and change who we were. By exploring narratives and qualitative research (to obtain ‘knowledge for the Heart’); exploring quantitative research and policy (‘knowledge for the Head’) and then reflecting on how that evidence could be integrated with other studies and their own experience to inform practice (‘knowledge for the Hand’) it is hoped that this unique lifeworld led approach will continue to assist and benefit health and social care professionals of all disciplines in their holistic understanding and further help them to guide and improve theirs and others future practice. Especially in helping to increase the levels of empathy and dignity in health and social care.

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Getting the Message: supporting students’ transition from Higher National to degree level study and the role of mobile technologies

Julia Fotheringham and Emily Alder
Edinburgh Napier University, Edinburgh, UK
j.fotheringham@napier.ac.uk
em.alder@napier.ac.uk

Abstract: In this paper, we explore roles that mobile technologies can play in supporting students’ transition to second and third year of university degree study, specifically along articulation routes from completing a Higher National Certificate (HNC) or Higher National Diploma (HND) at college. Articulating students face particular challenges associated with, typically, adjusting to the demands of moving up a level in their academic studies, acclimatising to an unfamiliar academic culture, and integrating into an existing cohort of students. Message of Support, a project funded by the Edinburgh, Lothians, Fife and Borders Regional Articulation Hub (ELRAH), developed a range of SMS, podcasts, and DVD resources, drawing on the voice and experience of existing students, in order to support new students and staff in their respective parts in the articulation journey. Through a process of action research, it was found that such resources can aid the transition process by offering timely contact, reassurance, and information to students as well as valuable development materials for staff. Responses to the challenges of using mobile technologies as support mechanisms for articulating students were identified. Additionally, other areas of transitional support provision outwith tertiary education were identified. The Message of Support project is sharing lessons learned and helping to inform good practice in this context.

Keywords: articulation; student support; SMS; mobile technologies; podcast; ELRAH

1. Introduction

The creation of articulation pathways into university has become a strategic priority for many Higher Education Institutions (HEIs), representing a key element of the development of flexible access to Scottish higher education (Scottish Funding Council, 2011). Articulation describes a particular route through higher education by which an initial qualification (in Scotland, usually HNC or HND qualifications at Scottish Curriculum Quality Framework (SCQF) levels 7 and 8 respectively ([SCQF 2009]) gains a student access to a university degree with advanced standing, directly into second or third year. Such progression often reflects a formal agreement or partnership between institutions (Gallacher 2006). A successful articulation route relies not only on careful curricular alignment between the courses in the two institutions, but also depends upon staff at both ends of the articulation journey ensuring that students are as well prepared as possible to respond to the academic and personal challenges that await them upon arrival at university and during their studies (MacAskill 2010). This type of access route to higher education supports the Scottish Government’s commitment to providing efficient, flexible learner journeys (Scottish Government, 2011).

This paper explores the role of mobile technologies in helping to address some of the challenges faced by articulating students. The Message of Support project, funded by the Edinburgh, Lothians, Fife and Borders Regional Articulation Hub [ELRAH] developed podcasts, SMS texts and a DVD to provide point-of-need support for articulating students from Scottish colleges, and professional development for academic staff at Edinburgh Napier University. ELRAH is one of six regional articulation hubs in Scotland funded by the Scottish Funding Council (Scottish Funding Council, 2008). ELRAH’s work promotes the creation and development of articulation routes between college and university and supports the transition of students into degree level study. The hub comprises several university and college partners located in its regional area (see www.elrah.ac.uk/Elrah.htm). In this way, although the Message of Support project was primarily focussed on students articulating to degree programmes Edinburgh Napier University, students articulating to degrees at Heriot-Watt, and Queen Margaret Universities also fell within its remit.

In this paper we describe how interviews with students who had made successful articulation journeys to Edinburgh Napier University were used to create a series of podcasts for new students and a DVD to provide point-of-need support for articulating students from Scottish colleges, and professional development for academic staff. We also discuss our experience of using SMS texts to encourage students to engage with various strands of academic support provision. For many students, the first few weeks in a new University environment can result in a severe loss of
confidence (Christie et al. 2008) which may result in withdrawal from their programme. Our experience at Edinburgh Napier confirms that students welcome advice and encouragement from other students in whose footsteps they follow. They recognize the value of structured support such as academic skills workshops, but also feel strongly about the contribution of individual academic staff to restoring and building their confidence and helping them to adjust to the unfamiliar academic and social demands of university life. Our project confirmed that the deployment of a range of different technologies at different stages in the articulation journey and amongst the different partners in the articulation process can enhance a student’s experience of joining a degree programme as a direct entrant. Other areas of transitional support provision outside tertiary education were also identified, and lessons learned from the Message of Support project are already helping to inform good practice in online support provision in other contexts.

2. Background and context

2.1 Supporting student transitions to university study

New university students of all kinds face challenges as they make the transition to university study (Lowe and Cook 2003). For Scottish undergraduates, the traditional ‘first year’ (SCQF Level 7) is a period during which students build social networks, familiarise themselves with institutional systems and learn how to learn as a university student (Tait and Godfrey 2001). Research has shown that direct entry students articulating to year 2 or year 3 (SCQF Level 8 or 9) face particular challenges. These include integration into a cohort of students who have already learned together for one or two years, the step up to a more advanced level of study, and acclimatisation to a different academic culture. Cree et al. (2009) describe a picture of ‘dislocation and loss’ amongst students struggling to adjust to degree study. Barron and d’Annunzio-Green (2009) point to a catch-up phase in which students must not only adjust to these differences but also to familiarise themselves with the one or two previous years of learning undertaken by their peers; they highlight the importance of maintaining student support and building students’ academic self-confidence during the early months of their degree study. However, since articulating students progress from an HNC or HND, their academic career begins long before they join the university, and thus developing academic skills and confidence must also begin well before that point (MacAskill 2010). Pike and Harrison (2011) emphasise the importance of a ‘smooth’ transition, to which good communication between institutional partners is essential. Continuity of support between levels is thus one of the keys to successful transition.

Amongst the difficulties identified by articulating students in this research was lack of awareness of what to expect from university study. New students attach considerable value to hearing from previous articulating students about their experiences (MacAskill 2010; Kivlichan and Chirnside 2011). This is particularly relevant for students from widening participation groups, who may often be the first generation of their family to go to university and thus lack the benefit of informally shared knowledge about university (Cree et al., 2006). This can act as a barrier to first generation students entering higher education (Furlong and Cartmel, 2009) and thus make transition into later years of study even more challenging. Further, in Scotland, students from widening participation backgrounds, which often includes students articulating from college, are more likely to live at home or locally and continue with their familiar lifestyle. Christie et al. (2005) argue that the normative conception of a student as a middle-class school-leaver moving away from home for the first time is no longer adequate. They found that students are now forging new pathways and identities in Higher Education and expect their institutions to respond. These students, less closely knit within the university environment than the traditional student ideal, acutely felt the disadvantage of not benefiting from ‘the more informal, peer-generated knowledge about how things work and can be made to work more advantageously’ (Christie et al., 2005: 24). Further, Pike and Harrison (2011) suggest that raising awareness among new direct entrants that their concerns are shared by peers could reduce feelings of isolation.

Research points to the key role played by academic staff in supporting the student transition. This indicates a need for staff development so that academic staff are aware of articulating students in their classes and are equipped to address their needs. Bingham and O’Hara (2007) found that students felt some of their Higher Education (HE) lecturers were unaware of the prior learning they had experienced; Pike and Harrison (2011) recommend that university teaching teams should be aware of new direct entrants in their classes and be prepared to respond to their needs.
2.2 Institutional context

At Edinburgh Napier University, student feedback has indicated a similar range of challenges associated with direct entry to university. The University operates an annual survey, Students Calling Students, mid-way through the first trimester, in which trained students telephone new students to ask them informally about their experience of settling in. Their target group includes direct entry students as well as first years. While the majority of direct entry students settle in well to university in the first trimester, Students Calling Students in 2010/11 found that direct entrants were much more (46%) likely to have experienced difficulties with the transition to university than year one students (18%) (Kivlichan and Chirnside 2011). In particular, issues were encountered with use of IT systems, challenges with particular modules, producing lab reports, time management, and personal or financial matters. When asked what further help the university could have provided, responses included more information provided while students were still at college (e.g. timetables, course content, and explanations of the amount of work required), examples of assignments, and hearing from existing direct entry students about their experiences (Kivlichan and Chirnside 2011: 14).

In the 2011/12 wave of the initiative, although Students Calling Students found fewer (30%) of direct entrants reporting difficulties, the findings reinforced the challenges students were experiencing with finance, time management, and learning about the university’s systems (Kivlichan and Johnston, 2011). In comparison to first years, however, direct entrants were still more likely to be reporting difficulties. In the 2011/12 wave, Students Calling Students also asked students about their attendance or non-attendance at additional classes or services such as academic skills workshops. The most popular reason for non-attendance at such activities was reported as lack of time (21%) followed by employment commitments (15%) (Kivlichan and Johnston, 2011). Mobile technology initiatives like the Message of Support project, therefore, have a key role to play in addressing the need for additional transition support during the crucial early weeks of the students’ first trimester. For students with limited opportunities to access face-to-face support offered on campus, mobile technology-mediated support provision allows these students to access support as and when they need it and have time to do so.

Research by Howieson and Croxford (2011) into the experience of direct entry students across four universities (Edinburgh Napier, Heriot-Watt, Queen Margaret and Stirling) in the ELRAH partnership supports these findings. After three months of degree study, direct entry students to year two or three were less likely (47%) to feel they had been very or quite well prepared for their course than college students entering year one (72%). Direct entrants felt that advance preparation before starting university was crucial, including awareness raising about available support, the chance to experience aspects of degree study, and opportunities for integration with existing students. Many students also considered online information and materials to be valuable resources (Howieson and Croxford 2011) and Scottish Higher Education institutions continue to explore ways of making pre-entry and induction online resources and materials as widely accessible as possible. For example, In May 2011, Edinburgh Napier University launched SPOCE-UK which is a pre-entry induction resource designed specifically for direct entry students, in which students work through interactive units relating to what they should expect from degree study, and to key study skills. SPICE-UK was modelled on the pilot, SPICE, originally developed by Foster (2011) and adapted for different student groups including international, direct entry, and postgraduate students. Complementing web-based resources therefore, mobile technology becomes a crucial tool in enabling models of transitional support to be congruent and consistently available to students passing to a new stage of their education.

2.3 Role of mobile technology in student support

The functionality of mobile devices is well documented. They are portable, versatile, easy to use, wireless and can integrate and synchronise with a variety of other technology platforms. These factors contribute to their widespread popularity and the extent to which they are regarded as indispensable (Chai et al: 2007). Song (2011) reminds us that it is not the functionality of the technology alone which makes mobile technology such a powerful tool for learning, but rather the abilities of the learner to take action in certain environments and to recognize how the resources or interactions mediated by mobile technologies may be able to shape their learning. Traxler and Kukulska-Hulme (2005: 1) acknowledge the potential for mobile learning to address the needs of ‘the new constituency of learners’, given the flexibility and near ubiquity of mobile technologies. Data from a recent Edinburgh Napier survey of student usage of mobile technologies (2010, unpublished) confirms this; 99.5% of our survey respondents own a mobile phone/device. Recent mobile student
support pilot studies in universities and colleges reveal three main consistent themes; first, students value the use of mobile technologies in their interactions with the University (Riordan and Traxler 2005); secondly they feel socially connected by these interactions (Lunsford 2010; Mentor 2011) and thirdly, institutional strategies for mobile student support are likely to feature different mobile devices and materials (Lunsford 2010).

Riordan and Traxler (2005) highlight technical and pedagogical issues in the effective and appropriate use of SMS texting. Student acceptance and engagement is enhanced where SMS interventions are short, personalised and focussed (Riordan and Traxler 2005). Elsewhere, SMS student-support initiatives are motivated by differing administrative and pedagogical priorities. The UK Council for International Student Affairs (http://www.ukcisa.org.uk/pmi/case_studies_support.php) provides collection of best practice case studies which describe projects where podcasts and SMS are used to provide support for international students. For example, the Loughborough College initiative is designed to assist its International Office to keep touch with students, on the other hand Sheffield Hallam’s initiative responds to international student demand for support materials such as podcasts, maps and web resources on arrival in the UK. While these case studies provide examples of mobile student support practice, the students’ experiences of these initiatives are not described in any detail.

Mentor (2011) explores the potential for SMS texts to offer a sense of social connectedness to students experiencing isolation from their college community. Although connections between the perception of emotional well-being and improved academic performance still require further exploration (Mentor 2011), Tinto’s seminal model of student integration (1975) continues to provide a frame of reference for understanding the connections between social interaction, integration with academic systems and student retention. Models of student retention and engagement have evolved since then (Tinto 2007) to reflect a broader range of institutional contexts and student circumstances including online and distance learning (Rovai 2002), but the concept of involvement, (or engagement) remains a key element for almost all mobile technology-mediated student support initiatives.

The benefits of mobile accessible materials for enhancing social connectedness for distance learning students at the Open University (OU) (Lunsford 2010) appears to be broadly consistent with Mentor's (2011) findings. The OU investigation comprised several strands of activity each making different use of mobile technologies and learning materials. Lunsford (2010) observes the important affective impact of the interactions mediated by mobile technologies, where students report feeling more connected and involved with the organisation as a result. An important outcome of that project is a ‘model of student support using handheld technologies’ (Lunsford 2010). This model offers a flexible but coherent framework recognizing that different parts of the organisation will make use of mobile technologies in different ways. A particular mobile device may be more useable in one context than in another (Kukulska-Hulme 2005).

2.4 Action research

A commitment to improvement is of paramount importance in any action research project (McNiff and Whitehead 2010). Despite the differences amongst the various typologies of action research offered in the literature, most share a common way of thinking about the role of the researcher as practitioner (Cohen 2000), the value of collaboration in offering differing perspectives (Reil 2011), the cyclical and systematic nature of enquiry that is undertaken in the name of action research (Norton 2009) and the inherent contribution that transparent reflection makes to every part of the research and its outcomes (McNiff and Whitehead 2010).

3. Methodology

Messages of Support explored the potential of mobile technologies to improve the transition experience of students coming to university as direct entrants from Scotland’s colleges. Messages of support, information and encouragement were embedded in a suite of podcasts and in a timeline of SMS texts messages. The target audience for podcasts and SMS were students in Lothians, Fife and Borders colleges, as well as students just arrived at Edinburgh Napier University. Locating the podcasts within the University student portal would have made them inaccessible to college students given the need for a matriculation identity. As a result, we hosted the podcasts on Podbean, an open-access podcast hosting service, and distributed the text messages from an SMS server based in Edinburgh Napier University, accessible online from various college locations. Action research, carried out by practitioners on their own practice, presented a strong methodological framework with
which to underpin our collaborative exploration of the potential benefits of mobile accessible materials for transition support. We established a project team of practitioners from colleges and University and although the membership of the team varied as the project developed, the mixture of expertise and professional focus ensured that at every stage the reflective process was collaborative and participative. Norton’s (2009) five-step action research process provided the most useful way of sharing the practicalities of our different but related reflective cycles of activity. We started by producing a suite of podcasts for students (Table 1) and generating a timeline of SMS texts (Table 2,) then out of the experience of Reflective Cycles 1 & 2 we produced a DVD for staff (Table 3).

### Table 1: Reflective cycle 1 (podcasts)

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Identifying the issue</th>
<th>Research provided evidence of the challenges that students face joining university as direct entrants from college.</th>
</tr>
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<tbody>
<tr>
<td>Step 2</td>
<td>Thinking of ways to tackle the issue</td>
<td>Interest in mobile technologies and the rise of mobile learning initiatives across the university and the HE sector provided a catalyst to develop a series of podcasts for direct entrants. A project team of academics and student support staff in colleges and the university established the podcast topics (see Figure 1), which complemented other existing university student support podcasts. This project sought to recognize the value of student voice in providing reassurance and authentic material for the podcasts.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Doing it</td>
<td>Students who had joined second or third year of undergraduate degree programmes were interviewed. The interview questions were informed by Tinto’s model of student integration (1975). We asked questions about our interviewees’ experience of academic integration during their first trimester (whether or not they were enjoying their subject and coping with academic assignments) and in relation to social integration (whether or not they had friends and the nature and extent of the contacts that they had with university staff). We asked them what advice they would give to students who would follow them from college to university. Student interviews were recorded, edited and developed into a suite of podcasts. Podbean site (<a href="http://college2uni.podbean.com">http://college2uni.podbean.com</a>) was developed and podcasts were launched on a time-released basis. Publicity posters helped to publicize the initiative.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Evaluating it</td>
<td>We counted the number of visits to the site, and the number of ‘hits’ on each of the podcasts. Each podcast has an online ‘comments’ form on which participants were invited to submit feedback or to suggest other podcasts. Invitation to participate in interviews or focus group discussions Informal comment and feedback from members of the project team</td>
</tr>
<tr>
<td>Step 5</td>
<td>Modifying practice</td>
<td>We address this in more detail in the Discussion. There is no doubt that when using open access platforms such as Podbean, it is essential for evaluation purposes to find ways of making contact with the students who are likely to be accessing the site.</td>
</tr>
</tbody>
</table>

### Table 2: Reflective cycle 2 (SMS texts)

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Identifying the issue</th>
<th>As for podcasts in Table 1.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>Thinking of ways to tackle the issue</td>
<td>As part of other projects, ELRAH staff produced a timeline of interventions to facilitate successful articulation. A series of SMS text messages could be deployed across the span of that timeline, from the process of application to university until the end of the first university trimester. The working group drew upon the expertise of the University’s Lead IT Developer. The University’s SMS interface system enables bulk text messages to be sent directly to individual students’ personal mobile numbers. The SMS system is web-enabled, and access is thus not restricted to the university campus. This enables both college and university staff to operate the system to reach students at all stages.</td>
</tr>
</tbody>
</table>
Step 3
A series of SMS text messages was designed according to the timeline described in Step 2. The SMS messages aimed to support students’ sense of belonging to the university and to reinforce their induction programme with reminders of activities such as academic skills workshops or where to find advice on exam techniques. Students in the target group at college or direct entrants to university were invited to register by sending a text message to the SMS system. Students would receive no more than 2 SMS messages each month, between July and December. The initiative has run twice, in 2010/11 and 2011/12. Each year, between 7-11 messages were issued between July and December, variously targeted to students while at college, and then after matriculation to university.

Step 4
Analyzing the number and range of students taking part in the initiative. Evaluations from project team on the method and management of the SMS interface.

Step 5
We explain in the discussion how we are adapting our approach for the coming academic session 2012/13.

Table 3: Reflective cycle 3 (DVD)

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Identifying the issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first round of interviews (for the podcasts) told us that some articulating students reported serious difficulties during their first year as direct entrants, including social isolation and problems with assimilating the HE academic culture.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2</th>
<th>Thinking of ways to tackle the issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>We recognized that the student narratives could make a powerful impact on academic staff. A DVD was selected as a suitable format for a professional development resource. We anticipated that the material on the DVD was likely to be sensitive and not appropriate for student use, so in order to limit access, the resource has not been web-enabled.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3</th>
<th>Doing it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both student and staff accounts were used in order to maximise the impact of the DVD. We re-interviewed and filmed students from the podcast interviews. We also interviewed one new member of academic staff who had valuable experience of working with groups of students that included a significant proportion of direct entrants. The DVD has been used for the purpose of Academic Induction and as a resource for CPD for staff in the university.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 4</th>
<th>Evaluating it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback from participants at Academic Induction and from members of the project team</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 5</th>
<th>Modifying practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of the DVD with new groups of staff and with programme teams will be monitored and re-evaluated throughout the forthcoming academic session. We explore this further in the discussion.</td>
<td></td>
</tr>
</tbody>
</table>

4. Results
The evaluation of each of the three cycles of activity represented the most challenging aspect of our project. The table below takes Step 4 (Evaluating it) from each of the reflective cycles documented above and illustrates the results associated with each of the evaluation methods.

Table 4: Results for reflective cycle 1 (podcasts)

<table>
<thead>
<tr>
<th>Evaluating it</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counting visits to the site and hits on each podcast</td>
<td>Between January and July 2011 the College2uni Podbean site (<a href="http://college2uni.podbean.com/">http://college2uni.podbean.com/</a>) received 1618 visits. The number of ‘hits’ on the podcasts vary from the least popular (Staying on for Honours) with 13 hits and the most popular (Personal Development Tutor [PDT]) with 337 hits.</td>
</tr>
<tr>
<td>Comments forms for each podcast</td>
<td>None were completed.</td>
</tr>
<tr>
<td>Invitation to participate in interviews or focus groups to discuss their experience of the podcasts or to provide feedback by way of email.</td>
<td>In May an email was issued to all 2nd and 3rd year students who came to Edinburgh Napier University from College in 2010, inviting them to offer feedback about their experience of the ‘college2uni’ podcasts. We received no responses.</td>
</tr>
</tbody>
</table>
Evaluating it

Results

Feedback from articulation support staff and from others working in Scotland’s colleges

Three articulation support advisors who had actively used the podcasts responded to the invitation to provide feedback. A consistent theme emerges from their responses around the importance attached by students to the student-voice perspective of the podcasts:

‘I think it’s beneficial to hear this information first hand, as in my experience students will listen to staff, but tend to believe other students.’

The podcasts were well-received by staff working in central support roles in ELRAH partner colleges. We received requests from all of the colleges for the publicity posters and several colleges sought permission to upload the podcasts on their own student portals.

Figure 1: Number of hits per podcast

Table 5: Results for reflective cycle 2 (SMS)

<table>
<thead>
<tr>
<th>Evaluating it</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>2010/11</td>
</tr>
<tr>
<td>9 students registered with the SMS system. Of these, 3 articulated to Edinburgh Napier (plus 1 to year one), 1 to Heriot-Watt, and 2 to an Edinburgh Napier degree in Carnegie College. The remaining 2 did not go on to university. This uptake rate was disappointingly low, and participation was more actively promoted in following year. The range of student destinations, however, demonstrated the system’s potential to reach a diverse and dispersed student population. A closing message requesting feedback on the messages elicited no responses.</td>
<td></td>
</tr>
<tr>
<td>2011/12</td>
<td></td>
</tr>
<tr>
<td>43 students were registered with the SMS system. Of these, 31 articulated to Edinburgh Napier, 5 to Heriot-Watt, and 7 to Queen Margaret. This uptake represented an improvement on the previous year and will be maintained in the third year of this project strand. A closing message requesting feedback on the messages elicited no responses.</td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>2010/11</td>
</tr>
<tr>
<td>Participation relied on students contacting the SMS system. The following year we tried a different method.</td>
<td></td>
</tr>
<tr>
<td>2011/12</td>
<td></td>
</tr>
<tr>
<td>Student mobile numbers were collected, with their permission for use for Message of Support, at a range of contact opportunities such as Get Set for University workshops which take place before the end of the college term.</td>
<td></td>
</tr>
</tbody>
</table>
Evaluating it | Results
--- | ---
Interface | Administrators found the interface to be straightforward to use. It allowed students to be variously grouped (e.g. by year of study, college of origin, university, or university course) for ease of targeting messages.

Table 6: Results for reflective cycle 3 (DVD)

| Evaluating it | Results |
--- | ---
Feedback from academic induction | Feedback from induction participants was positive. Comments were made about the powerful impact of hearing actual student stories. Other participants had not previously considered their role in supporting direct entry students prior to viewing the DVD. |

5. Discussion

5.1 Podcasts

Figure 1 displays the distribution of hits on each podcast. One podcast, ‘What is a PDT?’, received nearly 5 times as many hits as the next most popular. We speculate this may have been caused by the acronym and the podcast’s title being posed in the form of a question. If so, this may point to the importance of demystifying jargon such as PDT (personal development tutor). The other podcasts average 38 hits. Allowing for the uncertainty over how many users were students, this may suggest the need of more active and directed promotion of the podcasts to the target group in the future.

As noted in Table 4, the lack of qualitative data from students means we are unable to analyse how and why students (if indeed they were students) accessed the podcasts, whether or not they subscribed to the whole series, why there was such a variation in the number of hits on each podcast (from 13 to 337), nor, perhaps most importantly, how valuable they found the form and content of the series. We were pleased to support colleges to host the podcasts within their own institutional virtual environments. However, given the dispersed location of the podcasts across various student portals, and the anonymity of the College2uni podbean site users, evaluating the usage and value of the podcast series became unachievable.

5.2 SMS

The SMS project was successful in testing the bulk mailing system, which its administrators found reliable and straightforward to use.

In 2010/11, student recruitment to the SMS system proved a challenge. Although 6 of the 9 students participating in the initiative progressed to enrol as undergraduates at Edinburgh Napier University, the sample size was too small to draw any conclusions about its impact. Students were required to register their mobile number by sending a text message to the system, but very few students actually took this step despite having expressed interest in taking part. As a result, opportunities to assess the impact of the SMS support in 2010/11 were limited.

Consequently, in 2011/12, mobile phone numbers were collected in advance for entry by the system’s administrator. Student mobile numbers were collected, with their permission for use for Message of Support, at a range of opportunities such as visits to the universities and Get Set for University workshops which take place before the end of the college term. The effect of this change was immediately evident. Although some students understandably chose to withhold their number, or in the event did not gain a place or choose to matriculate onto their intended course, in total 43 students at QMU, HW, and Edinburgh Napier were registered. This indicates that the success of this strand of the project is dependent not on the technology but on its management.

Nevertheless, the project team intended to increase this number next year to around 50 students. Due to the low uptake in the first two years, there is enough credit left in the system as originally budgeted by the project for at least a third further year, depending on student uptake. At this stage, it becomes essential to evaluate the impact of the SMS strand of the project to determine whether continued investment in it is worthwhile.

In 2010/11 and 2011/12, evaluating the SMS strand posed a challenge. Students were contacted by text message and by email, and offered the opportunity to give feedback by text message, phone or email. In 2011/12, feedback questions were sent by email to facilitate easy response, and purposely kept simple: Did you like it?
Should we keep doing it?
What should we do differently?

Nevertheless, students did not respond to these requests, suggesting that different ways of assessing impact and collecting feedback may be required for certain mobile technologies. In 2012/13, the project team will explore other methods, including promoting student engagement further by beginning the cycle of messages earlier, encouraging participation in other activities such as social networking, and seeking evaluation on an individual as well as a group level, including by phone.

5.3 DVD

We expected to make regular use of the DVD at academic induction, but the small numbers of new academic staff and the lack of induction events mitigated against this. However, at the start of academic session 2012/13 we expect to respond to requests from programme teams who will be using the resource in preparation for the new intake of direct entrants in September 2012. This should provide us with ongoing evaluation data.

6. Cascading the Messages of Support approach

While we are unable to understand the exact nature or the intricacies of use relating to the Messages of Support podcasts, nor to analyse what determined the popularity of some of the podcasts over others, the feedback received by some of the ELRAH Articulation Support Advisers has been encouraging. Furthermore, the ethos of the podcasts in providing themed guidance to direct entrant students at key points during their transition into university, using the voices of students who have already successfully made the transition, has begun to attract interest within other areas of transitional support provision.

One potentially very promising development relates to the work of charities and other third sector agencies that provide various forms of service-user support. Within recent explorations of opportunities to share experience of providing online student support between Edinburgh Napier University and third sector organisations in central Scotland, the Messages of Support approach has been widely demonstrated and found to be particularly relevant to the provision of timely interventions for service users at various stages of drug and alcohol recovery. The idea here is that service users at later stages of the recovery process could help produce podcasts that would provide encouragement and peer support to those at earlier stages in their recovery journey. The podcasts would complement other forms of support available in face-to-face meetings while also improving outreach for agencies that support service-users who are distributed across wide catchment areas.

Initial explorations of the above with a number of agencies in central Scotland has led to one of the authors, and colleagues, to secure a grant to implement and evaluate the use of online social media and other digital tools in order to support the work of a major Scottish charity in its work with service-users at potential risk of suicide. At the time of writing, the initial stages of this project are well underway, and the Messages of Support project is providing a key reference point and template for a series of podcasts to be created collaboratively by the charity and its service-user group.

Within Edinburgh Napier, the Messages of Support project is also providing a valuable model currently being explored within the context of the fully online MSc Blended and Online Education programme, and other online modules and courses. The aim is to provide ‘point of time’ guidance for online students at key stages of undertaking major individual projects. The intention here is to provide an indication of where students should be at on a week-by-week basis, so as to increase encouragement and motivation, and provide an equivalence to the kind of tutor and peer support for independent projects that is more readily available formally and informally in campus-based contexts.

Parts of the podcast series were also adapted for use as audio resources in an Edinburgh Napier overseas programme. On a top-up degree in nursing for students based in Singapore, student feedback had indicated that the formal induction, although thorough and detailed, had not answered all their questions and concerns. Students had received a certain quantity of paper information in their programme handbook, and had been guided through the available online resources, but were still left unsure about how university would differ from their previous educational experiences and how they were expected to engage with university study. The ‘Get ready for University’, ‘Difference between college and University’, and ‘Independent Learning’ audio files were embedded in WebCT (Edinburgh
Napier’s VLE) to enable students to hear the stories of real students and gain some insight into the university experience from a student point of view. The relevance of the podcasts to other student groups, including those studying in other countries, demonstrates the adaptability and versatility of mobile technology-mediated resources in supporting student transitions in a variety of situations.

Message of Support has shown itself to be versatile on two levels. Both the concept behind Message of Support, and the products themselves, proved to be reusable and readily transferable to new contexts.

7. Conclusions

In the Message of Support project, the use of podcasts made the voice and experience of existing students readily and widely available online to all, circumventing the restrictions of access often associated with institutional logins. The podcasts and SMS messages can also promote a sense of belonging and connectivity to the institution, as well as raising awareness of key topics known to present challenges to students not only within ELRAH regional partners but also nationally and internationally. Student feedback has highlighted the importance of staff awareness of the articulating student experience, and the DVD promotes a wider understanding amongst academic staff of the needs of this student group. We are also encouraged by the wider value that the Messages of Support project is being seen to have in other areas of online support for individuals undertaking different kinds of transitional journey, as well as in other educational contexts.

The project offers support that is consistent, inclusive, and longitudinal, spanning the college to university transition. Mobile technologies offer real advantages by making it as easy as possible for students to engage on their own terms with open access resources. However, as use of open access resources grows more widespread, familiar monitoring and evaluation techniques may increasingly prove to be insufficient. In the rapidly evolving world of mobile technologies, new approaches to managing these initiatives are required to ensure that their potential for student support can be fully exploited.

Acknowledgements

The authors would like to thank Keith Smyth and Anne Waugh of Edinburgh Napier University for sharing their practice in relation to the Message of Support project and for their contributions to this paper.

References


Exploring a ‘middle ground’: engagement with students in a social learning environment.

Anne MJ Smith and Sonya Campbell
Glasgow Caledonian University, UK
anne.smith@gcu.ac.uk
sonya.campbell@gcu.ac.uk

Abstract: The twenty first century student demands more from universities in terms of engagement that is flexible, accessible and immediate. This means universities revisiting their engagement agenda at a time when financial constraints can least afford expensive technologies and resource dependent engagement solutions. Solutions are likely to be varied however they must fundamentally deliver what students expect in terms of engagement. Engagement requires a partnership between academy and student body, but often this relationship is a tension between what universities want to deliver, and what students expect to receive. This complex environment of constraint, tension and expectation means that solutions will be tested by both parties on those variables. In pursuit of solutions it is presumed that there could be a ‘middle ground’ that would be acceptable to both parties. The aim of this paper is to present the concept of ‘middle ground’ engagement, where parties engage in learning using a simple, cost effective and easily accessible communication tool. ‘Middle ground’ is an emerging concept informed by results from a study of student communication, interaction and social learning. It enables freedom of movement for the user to communicate, engage and participate with others. The tool tested in the study is not a formal learning space such as a VLE, or a branded social space such as facebook, but rather a flexible, social learning environment allowing simultaneous access to social networking sites and formal academic space. The subsequent challenge is to shape and roll out a communication tool that is ‘middle ground’.

Keywords: engagement, participation, formal/informal learning, social learning, collaborative learning, social interaction

1. Introduction

It is hard to avoid the influence that Web 2.0. and social software has within the 21st century (The Department of Education, 2010; ESRC, 2011). The above terms are referred to with regularity in all spheres of our lives, and whether we choose to engage with them or not, they are now a major feature of our world. To understand their impact, we must first understand what they actually mean. The term Web 2.0, attributed to Tim O’Reilly in 2005, defined Web 2.0 as the network platform, spanning all connecting devices; Web 2.0 applications are those that will make the most of intrinsic advantages of that platform. Social software on the other hand is seen as one of the applications working with, and from the platform. Parameswaran and Whinston (2007) define social software as “applications and services that facilitate collective action and social interaction online with rich exchange of multi-media information and evolution of aggregate knowledge.”

Within Higher Education (HE) there has been a growing awareness that these technological advances are having an impact on teaching and learning (Jones, Blackley, Fitzgibbon and Chew, 2010; Selwyn, 2007). This paper will focus on understanding the student experience and their perceptions of social software in regard to its importance to their engagement with learning. Its aim is to provide evidence to support the assertion that the boundaries between learning and social usage are expanding, and that there is not, in fact, a need to make clear definitions between formal and informal usage for social software to be used in an academic setting (Margaryan and Littlejohn, 2008). This paper will review the theories and concepts that underpin understanding of Web 2.0 in social learning environments thus locating the emerging consensus. A methodology will present the methods employed in the study before discussing the findings and the emergent concept. The paper concludes with a clear trajectory for future research into this emergent area of study; a space where social learning exists.

2. Literature review

As a population of new learners are born and raised within this setting, the ‘net generation’ appears to be distinct from previous generations in their abilities, expectations and motivations (Oblinger and Oblinger, 2005; Prensky, 2001). Specifically, Prensky (2001) considers the current generation to be ‘digital natives’ and the previous generations to be ‘digital immigrants’. Within this distinction is the difference in the way learners will engage and move within the sphere of Web 2.0, the assumption being that the natives will find it easier to adopt and use these technologies than the immigrants.
With an awareness that learners themselves are changing, there is a growing need to understand how learning and teaching should change to support their needs (Schroeder et al, 2010; Skiba and Barton, 2006; Williams and Chinn, 2009). It appears traditional models which use ‘The TTT’ approach (talk, text, and test) are not valued by the net generation (Oblinger and Oblinger, 2005). Although research into the impact of social software and Web 2.0 is increasing, it is still very much in its infancy (Selwyn, 2007). There is consensus however in the evidence of tensions, functionality and applicability linked to its uses and applications within Higher Education (Cole, 2008; Margaryan and Littlejohn, 2008; Williams and Chinn, 2009). Further commonality is emerging through research into the use of social software in relation to collaborative learning opportunities without the need for face to face contact (Belderrain, 2006). In a review of the role of social software in education, Minocha (2009a) highlighted the view that although the tools provided opportunities for group learning, the need to share and collaborate brought with it additional responsibility and workload which some students found inflexible and forced. Other areas of student concern raised were usability and the distinction between privacy and public nature. In summary, Minocha (2009a) argues that as adoption rates of social networking tools increase, then reasons for adoption, the benefits gained and challenges faced by students, all require investigation. Barnes, Marrateo and Piy Ferris (2007), cited in Williams and Chinn (2009) found that students chose to use different tools to deliver a variety of different ends, and were often multi-tasking within various roles at any given time. Within this research it was found that the ability to relate prior experiences to given situations led to positive interactions in learning environments. As students already possessed certain levels of technology skills, potentially acquired whilst using the tools for social means, as ‘digital natives’ they could then use these skills as a platform (Prensky, 2001).

There is consensus that students benefit in terms of technology skills from using tools in an informal setting, but there is evidence that highlights their reluctance to use informal tools in which to formally learn (Madge et al, 2009; Jones et al, 2010). Research conducted by Madge et al (2009) found that 91% stated they never used Facebook (FB) for communication with university staff, and only 10% used FB throughout the year to discuss academic work. Nonetheless the results also include statistics which show that 46% used FB informally to discuss academic work on a daily/weekly basis, and 53% were positive about FB being used in a formal but administrative way to support learning. The ways stated were social/peer led academic support, possible revision opportunities and notification of changes to lecture times. Their conclusion recognised that although FB was an important tool, caution concerning the ways it was used is required as it was apparent that students felt this was their area for social, rather than academic purposes.

In a recent study, Jones et al (2010) reviewed multiple case studies pertaining to the student experience of social software from an educational perspective. They describe the perceived differences as “Learning is a painful process where as social life is pleasure to many students.” There was a perceived conflict in using social software as students felt it was important to separate life and study spaces. However, rather than insist that two distinct spaces be created for students, Jones et al created the ‘Continuum of socio-learning divide’. They argued that although there were separate domains within the continuum, at any given point these might overlap to address the needs of both the institution and individual leaning preferences. It is within this area of overlap that this study looks to achieve a better understanding of learner preference and usage.

The area of overlap described by Jones et al (2010) involves interaction and communication in the form of social learning; learning that occurs as a result of peer observation and interaction involving experiences with others that influence what is known (Reed et al, 2006). However, social learning has attracted some debate in terms of its nature and dynamic (Franz and Nunn, 2009; Hanaki, 2005; Hyysalo, 2009; Reed et al, 2006; Rodela 2011; Wenger, 2000). The debate traverses disciplines and
schools of thought but common to all are ideas of interaction, observation and influence. From an anthropologic perspective, Franz and Nunn (2009) explore the idea that cumulative complex social learning is more desirable than individual learning, securing the avoidance of learning by trial and error. Both Franz and Nunn (2009) and Hanaki (2005) consider social learning in cultural and evolutionary terms and yet the emergent social media exhibits a behavioural usage capable of traversing generations with rapid adoption and diffusion (Rogers, 1983). This might suggest that what is being created is a social learning phenomenon evolving at a rapid pace beyond the normal expectations of cultural and generational understandings in social learning. In contrast Hyysalo (2009) investigates how learning is considered in relation to technological innovation. Hyysalo considers the problem of social learning treatment in the context of social change, and highlights the differences between designer and user frameworks. Hyysalo describes learning ‘in the wild’ which is underpinned by socio psychology theory and engages the works of Engestrom (2008) and Vygotsky (1978). The view creates discussion around how social learning might bridge gaps between designers and users. This prior work is particularly useful in this paper and will inform thinking around a “middle ground”, the communication technologies and their development for universities.

The study attempts to identify and explore ‘middle ground’. In summary the literature shows that although there has been some adoption in formal contexts of Web 2.0 there continues to be a high level of social networking sites being used in learning contexts. The literature shows that a level of confusion still exists in relation to the questions how do students want to connect during their engagement with university life, and what tools would they prefer to use? Universities are challenged with the need to provide contemporary learning solutions to a generation with high levels of connectivity, and high levels of choice. This study captures evidence of that need as well as a solution that might contribute towards the levels and type of connectivity desired and the social learning practices. The following section details the methodology applied in the study.

3. Methodology

Mixed methods were applied in this study, specifically, an action research approach over a 4 week period which involved testing an application supplied by ‘Youthwire’ in conjunction with semi structured questionnaires investigating communication and interaction (Borrego, Douglas, Amelink, 2009; Bryant, 2007; Hohenthal, 2006). Mixed methods have been criticised essentially because of contradictions created in terms of philosophies and approaches relating to analytical validity (Borrego et al, 2009). In this case however, mixed methods were considered highly appropriate in order to triangulate the results (Borrego et al, 2009). The students, n=8, were organised into two groups of 4 and all were asked to complete a semi structured questionnaire on communication and interaction at university. These students were enrolled on a 4th year undergraduate BA (Hons) Management, Technology and Enterprise programme. The nature of their programme meant that they were technology users but not specialists. Except for one student all were under twenty five years of age. Students joined a 4 week block of testing using a communication tool supplied by ‘Youthwire’. A second group of students n=13, were then recruited for a repeat block of testing. Unfortunately group 2 were less engaged and the results were unsatisfactory due to coincidental timing of assessment deadlines. Nonetheless, sufficient data for the purposes of the study was generated from group 1 enabling the study to progress. During the test with group 1, students met every week in labs to use the communication tool in a group project environment. The following section presents and discusses the findings from group I.

4. Findings and discussion

This section will firstly introduce the communication tool before providing an overview of the action research findings. The section proceeds with an insight to current usage by students of social networking, before capturing student voices through statements of their experiences and thoughts towards social media and formal learning; these sections are structured to capture perspectives on student led connectivity and then VLE led connectivity. Finally, the findings and discussion inform the conceptualisation of ‘middle ground’ and social learning practices.

4.1 The communication tool

The communication tool being tested to inform the conceptualisation of middle ground was provided under licence by ‘Youthwire’. The tool can be installed on PC’s and appears as a visual on lab screens in the university. Visually, the tool appears on the home screen as a rectangle in the top corner of the screen with app style function buttons. The ‘apps’ offer an array of university services as well as access to FB and similar sites. Students can use this tool by registering on line. The research
team were using this product to test a new ‘app’ style function for ‘middle ground’. Table 1 below presents findings from the action research tests. During the 4 week period student needs were recorded through discussions with staff and observations. Discussions with students and developers at ‘Youthwire’ created potential solutions.

**Table 1: Action research findings**

<table>
<thead>
<tr>
<th>Action Research Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student brief was to undertake a small research project that involved collecting information on a new business opportunity for a recycling company. They were instructed to collect data in a group and share their findings using the new ‘app’ style function provided by ‘Youthwire’. They were required to do this in a lab environment meeting once a week for two hours over a four week period.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Needs</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students want intuitive tools that look like social software.</td>
<td>A simpler way of registering and accessing friends (i.e. the group) was requested by students.</td>
</tr>
<tr>
<td>Students use chat functions continuously whilst working in labs with each other.</td>
<td>Switch between Chat ‘app’ and Share ‘app’</td>
</tr>
<tr>
<td>Students share snippets of information such as tables, videos, images, websites and so on rather rather that completed documents and larger swathes of work</td>
<td>Multi tasking options required on main screen. Refresh issues to be resolved</td>
</tr>
<tr>
<td>Students will not use a tool that does not offer immediate solutions i.e. any bugs in a system will disengage individuals.</td>
<td>Design required to function more intuitively</td>
</tr>
<tr>
<td>Students want control over who they work with, what they share and with whom they share.</td>
<td>Selection and filtering required on selection of group members that can include academics</td>
</tr>
<tr>
<td>Students while working on one assignment will switch directly into another; coursework multi tasking.</td>
<td>Document multitasking required</td>
</tr>
<tr>
<td>Students surfing the net identify relevant information for a variety of coursework resulting in them wanting to share with multiple individuals on separate group pieces.</td>
<td>Share options required for multi groups and multi shares of information to single users.</td>
</tr>
</tbody>
</table>

In summary, students desire a ‘middle ground’ communication tool that controls who they share with, extensive multi-tasking features and selection and communication filtering. While literature provides consensus that students desire high level connectivity, it is more than evident that the applications and tools are contested for purpose, as is the space in which they occupy (Madge et al, 2009; Jones et al, 2010). The following sections present and discuss the results from the semi structured questionnaires; first social networking usage by students is established, second student led connectivity and third academic VLE space and connectivity.

### 4.2 Social networking usage

Students were asked about their social networking usage and the majority demonstrated that they accessed a site at least ‘once a day’. There were other responses that indicated their usage to be more than once a day. Students in the study clearly recognised social websites as being designed for social purposes, stating that they used them ‘to keep up-to-date and in touch with friends and family’. Students were also aware of the interaction that the platforms offered and commented that they often were able to ‘interact with friends and family’ (Madge et al, 2009). However, it is also notable from Table 2 that students had specific ‘likes’ about social networking and were prepared to concede ‘dislikes’.

**Table 2: Social networking - student likes and dislikes**

<table>
<thead>
<tr>
<th>Likes</th>
<th>Dislikes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to access</td>
<td>Security issues</td>
</tr>
<tr>
<td>Easy to use</td>
<td>Confidentiality issues</td>
</tr>
<tr>
<td>Multiple uses – upload photos, play games, create events etc</td>
<td>Usability issues - slow</td>
</tr>
<tr>
<td>User friendly</td>
<td>Difficult to manage who sees what</td>
</tr>
<tr>
<td>Free communication tool</td>
<td>Extended networks – keeping in touch</td>
</tr>
<tr>
<td>Convenience</td>
<td></td>
</tr>
</tbody>
</table>

These initial comments capture the net generation views and the consensus that they desire convenience, connectivity, sharing and interaction (Paul, 2001; Weiler, 2004). These initial responses
show that social interaction using social tools is embedded in everyday life of the sample and the trends for internet and social website usage depict continuing growth for the future (Mori, 2007).

4.3 Student led connectivity

Once the overall understanding of usage had been established, the views sought required a contextual change. The student sample was asked to consider social networking, interaction and communication in the university and learning context; where social ties might be new and or developed through common ground at university either through study or social commonalities. The space for networking begins to expand as students appreciate the unique mix of friendships and learning. Students were asked if they ever used their personal networking sites to facilitate any group communication about coursework. Replies included:

- ‘Yes, for group work and to get advice on homework from other students.’
- ‘Yes to discuss coursework or course content, to arrange meetings, to share ideas, to catch up on work missed in class.’

The social confusion with formal learning space becomes evident. Students do use social networking sites for group work and communication. Interaction is important to the net generation and the cognitive processes are being mixed with communication tools resulting in what might be considered a confused and dynamic state between social and formal learning (Minocha 2009).

Given that boundaries are being stretched, expanded and crossed, and that industry demands collaborative working practices (Cole, 2009; Engestrom, 2008; Margaryan and Littlejohn 2008; Williams and Chinn, 2009), students were asked to comment on what they considered to be the ‘best’ ways to communicate and interact at university.

- ‘Something like Facebook where you can restrict certain people seeing what you are doing and you can only add the people who you wish to add. This would be great as we could all communicate about coursework without thinking what others would think of our work’
- ‘Also students can discuss their group work on Facebook and I see a lot of students logged onto their Facebook account while doing their work but then some students may not be happy with this idea as they wouldn’t wish to add some people whom they don’t know.’

Other solutions were more pragmatic:

- ‘I think the best way to contact someone is through maybe email or text message’

In summary, students show a need for connectivity to support learning and interaction. The study group clearly see the benefits of social networking sites as providing the connectivity solution, but equally the provision through existing social media contains several compromises involving personal space. The next section considers the routes to connectivity through academically driven Virtual Learning Environments or VLE’s.

4.4 Academic VLE led connectivity

The idea that there is a need for ‘middle ground’ in student learning is supported through responses to questions about formal and academic led University spaces such as Virtual Learning Environments (VLE’s). Students were asked about their usage:

- ‘.only when necessary, so very little’.

Clearly a VLE formal space is perceived to offer an unfavourable space.

- ‘Don’t like the fact that there is so much going on in it. Would rather just receive e-mails from lecturers and have an online library. Sometimes it runs quite slowly’.

The functionality of VLE’s is also a negative for students.

- ‘The layout is something I don’t like and also how I have problems accessing modules I should be attached to’.

The VLE is designed to be academic led, but this is a different usage from the concept of student led connectivity. Students were asked about connectivity with academic staff. One student responded:
‘if the lecturer can see and contribute then they can ensure that work is on track. Also, this ensures the lecturer can see that equal contribution is being made or that students are recognised for the contribution which they do make’.

The opportunity to ‘free-ride,’ the lack of activity on the part of other students has been expressed as a concern in other recent studies. (Minocha, 2009a; Minocha, 2009b). This view of being connected with an academic through VLE or otherwise was supported by others:

‘I don’t mind as they could possibly direct us in the right way if we are doing something wrong’ and ‘it will be helpful when groups are having difficulties, a lecturer would help keep on track of contributions’.

Students were also able to address the sharing and contribution requirements on formal group learning tasks and a student/academic connectivity was important for equality and fairness:

‘The fact that they can see who is and isn’t pulling their weight.’

Nonetheless, there were negative views about connectivity with academics:

‘Don’t really like the idea of the lecturers “listening in” to our discussions’ and ‘May feel like my every action is being watched’.

In summary, students are seeking opportunities to chat and share, but with selected stakeholders only. Unfortunately the existing dislike of academic VLE led approaches move student learning towards social media usage and away from an academically crafted learning space which should provide value.

4.5 Conceptualising middle ground

It appears that connectivity should be a solution that allows self management on the part of the student in conjunction with value laden academic learning requirements. This is perhaps ‘middle ground,’ connectivity using a communication tool to support a mix of academic learning; intellectual, cognitive and social interaction with selected peers and academics. This concept is distinguished from the social space supported by social networking sites that is to ‘interact with friends and family.’

‘(its) Not that important as there are benefits for the lecturer being able to see the work, and if there was something that I didn’t want the lecturer to see then I would use another communication tool to discuss this’.

‘It would be preferred as a group communication but then again having lecturers seeing our work could also be an advantage’.

‘One member of the group can post a comment which everyone can then see and comment on, and also because it is online, group work can then be done at any time without needing to meet up outside of class time’ and ‘It means that we can all talk together at once without having to arrange any meetings and we can be clear about what we want each other to do because there is not limit to how long the conversation can go on for’.

‘………students may not be as willing to contribute to discussions if they know that the lecturer is watching’

‘………it would be about the assignment and not a personal space.’

The requirements for student connectivity in academic contexts, creates the concept of ‘middle ground’ see Figure 1. This requirement includes communication for group working remotely, sharing images & videos, documents and links whilst chatting (Belderrain, 2006). ‘Middle ground’ is depicted in the diagram below showing a space that exists between formal learning and social networking, a space that is populated with social learning behaviours.

Essentially ‘middle ground’ has been explored through results from an action research study, and student comments retrieved from semi structured questionnaires. The overall narrative has been rich enough to reveal a particular view of communication and interaction in university and is shaping what might be solutions to the contested space between social and formal learning. The step forward using results from the action research test is to shape a tool that has the capability to provide the desired level of student connectivity in this space.
5. Social learning in middle ground

Evidently social learning is occurring in ‘middle ground’. Students utilise the chat, share and comment activities thus supporting their peers. Furthermore, observation revealed their willingness to share the information they capture with others; specifically formal academic work. Their chat and share activity allows students to discuss how they are approaching an essay or report. This practice can promote self efficacy (Bandura, 1977) and it is an expression of Vygotsky’s (1978) zone of proximal development where individuals learn from peer activity. Learning conditions of this nature are generated by the students using their social skills. They have learned that by sharing with their friends they can make the process of learning less time consuming. They offer each other confidence by sharing, reducing risk of mistakes and avoiding the process of individual trial and error; a behaviour not exhibited in formal VLE space. Students engaged in sharing are influencing and reinforcing positive activity. Harnessing these inclinations and behaviours, and managing the user/designer frameworks, is the challenge for HEI’s (Hyysalo, 2009). How do we set the appropriate social learning conditions in HEI’s, how do we integrate processes to formal learning and how do we measure through these concepts what is actually being learned in social learning? This will impact on what should be designed in terms of communication, interaction and academic study. Our argument therefore is that ‘middle ground’ is a crucial space where students experience social learning. ‘Middle ground’ is problematic in so far as it exhibits social learning which is not a controlled space in terms of what students learn, but can be influenced by directed learning. On this basis the authors propose that tools which bridge the gap or the overlap between personal space and formal space might be useful in the design of teaching and learning strategy (Jones et al, 2010). However limitations are evident in this study; the study did not detail, what was learned, the learning conditions or the facilitating processes. The next phase in research would be to monitor what was learned over a time period and consider diffusion rates of social learning across social groups and wider communities (Wenger, 2000).

6. Conclusion

The paper has focussed on a contested space between formal and informal learning. The view is that this space is not best serviced by either social networking sites or VLE’s and that there are gains to be made by understanding ‘middle ground’. The paper has approached the problem firstly by attempting to better understand the 21st century student, their learning and connectivity needs. Supported by literature there is consensus that student connectivity is highly important and levels are only likely to increase with demand for more convenience and more accessibility. The tensions arise when more formal academic activities seep into social spaces and personal networking sites. Students recognise this as being a problem. Rather than a contested space, evidence from the study suggests that there are benefits to be gained from harnessing social learning behaviours in this space.

In conclusion, the study has enabled the concept of ‘middle ground’ to be explored. As a result the specification for a tool able to meet the connectivity requirements has been developed; the
requirement essentially includes communication for remote academic group working, sharing images & videos, documents and links whilst chatting (Belderrain, 2006). Future developments in this study will involve the rollout to a larger community of students, of a low cost communication tool designed to support connectivity.

Furthermore, the concept of a ‘middle ground’ has been explored and developed. ‘Middle ground’ involves social learning and is easily distinguished from the social space supported by social networking sites that is to ‘interact with friends and family’. Additionally, it is set apart from the VLE that directs and controls flow of academic knowledge and information. Finally, it is evident that social learning behaviours populate ‘middle ground’ suggesting that further thought may unlock new approaches to learning and teaching design; learning over a given time period, learning cultures, social learning across social groups (Wenger, 2000).

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Fostering a web 2.0 ethos in a traditional e-learning environment

Marie Martin and Michaela Noakes
Duquesne University, Pittsburgh USA
Martin684@duq.edu
Noakes495@duq.edu

Abstract: As technology continues to flatten the world and as Web 2.0 changes the way knowledge is created and shared, tertiary education institutions are turning increasingly to e-learning to extend access to students globally as well as to improve the quality of their learning experience. Learning Management Systems (LMS) currently dominate the delivery of e-learning at this level. Though these systems have extended functionality by including some Web 2.0 tools, they are generally perceived as a “walled garden”, essentially embodying the traditional transmission paradigm of teaching and learning rather than the philosophy of Web 2.0. This is leading, particularly in the blogosphere, to calls to break down the walls of the LMS and to explore more open online courses. There is, however, an emerging view that Web 2.0 ideals can be realised within an LMS environment, provided the environment is aligned with these ideals. This paper supports that view. It presents a case study of an eight-week e-learning course based on this premise, offered first in spring 2011, with a second iteration in spring 2012, as part of a doctoral programme in Instructional Technology by Duquesne University, Pittsburgh, USA, and designed and delivered within an LMS by an instructor living in Northern Ireland. The course is underpinned by the concept of learning by wandering. The pedagogy is aligned with the fundamental Web 2.0 philosophy. Within broad parameters, it is flexible, student-centred and, from an early stage, student-led. Students are encouraged to use a variety of Web 2.0 tools, according to their preferences, to collaborate in preparation for their leadership role and as a language to express their ideas and to share their learning. The teacher’s role is identified as sage at the side. This case study is intended to contribute to the provision of a framework for transformative e-learning through fostering a Web 2.0 ethos within a traditional learning environment.

Keywords: learning management systems; Web 2.0 ethos; case study; learning by wandering; sage at the side; transformative e-learning

1. Introduction

As technology continues to flatten the world (Friedman, 2007), and as Web 2.0 changes the way knowledge is created and shared (Guth and Helm, 2010), tertiary education institutions are turning increasingly to e-learning to extend access to students globally as well as to improve the quality of the learning experience (Beetham and Sharpe, 2007). Learning Management Systems (LMS) are currently “the most representative e-learning applications” (Georgouli, Skalkidis, & Guerreiro, 2008) and dominate the delivery of e-learning at this level (Kyong-Lee and Bonk, 2006). Though these systems have extended functionality by including some Web 2.0 tools, they are still generally perceived as a “walled garden”, essentially embodying the traditional transmission paradigm of teaching and learning rather than the philosophy of Web 2.0 (Katsifli, 2010; Lee and McLoughlin, 2011). This is leading, particularly in the blogosphere, to calls to explore “massive open online courses” (Stein, 2008; Siemens, 2011). Huijser and Sanker (in Lee and McLoughlin, 2011: 267-283) argue, however, that Web 2.0 ideals can be achieved within an LMS, provided the environment is aligned with these ideals.

This paper supports that view. It offers a descriptive case study of an eight-week e-learning course, based on this premise, which endeavoured to create this environment and to bring the new Web 2.0 mindset to bear on the delivery of e-learning within a traditional LMS. Reference will also be made to the second iteration of the course, to its distinctive features and new dimensions, as well as to the enhancement effected by the application to this iteration of the lessons learned and the insights gained from the first course. The study is based on qualitative data derived from the following sources: notes made by the lead author as participant observer (Quinn Patton, 2002), archives of the synchronous weekly class, discussion board activity, and student assignment. Particular attention will be paid to the students’ perspective of their e-learning experience, and, in the interest of “thick description” (Quinn Patton, 2002: 331), the paper will capture the views of students mainly in their own words. It aims, therefore, to highlight the human dimension and provide an inside view of the two courses as experienced by both teacher and students. The paper also deals with well founded concerns that e-learning might be used “simply to enhance inherently deficient practices (e.g. lecturing)” rather than to try to release its “potential to transform the educational transaction”
The specific focus was on two questions: How can this course, delivered within a traditional LMS, embody the Web 2.0 ethos? Does this process lead to a transformative e-learning experience for the students?

The eight-week online course on Education in a Global Society was first offered as part of a doctoral programme in Instructional Technology by Duquesne University, Pittsburgh, USA in spring 2011. A second iteration, delivered in spring 2012, has just been completed at the time of writing. The course was designed and delivered by an instructor living in Northern Ireland (the lead author). The paper will outline the rationale, aims and objectives of the course, the demography of the doctoral cohorts, the course design in the context of high expectations of delivery by e-learning, the pedagogy, the technologies used, and the lessons learned – and subsequently applied to the second iteration of the course. It is hoped that this case study can contribute to a framework for transformative e-learning for both students and teachers and support the argument that the Web 2.0 ethos can be realised within a traditional LMS environment.

2. Rationale, aims and objectives

The rationale for the course was to address the need to raise the level of global awareness of students with regard to education in order to prepare them to function effectively as educators in a multicultural society and in a world without borders. The aim was to enable students to understand the socio-cultural context of education globally, beginning with their own as a basis for the comparative study of other systems. The objectives were to understand the history of educational ideas in the western world and evaluate these in the context of a global society; to compare and contrast American education with education systems in other selected countries; to assess the students’ personal educational experience and philosophies, and to critique how their philosophies affect the roles of educators, students, and organisations.

3. The first cohort

The first doctoral cohort comprised eight graduate students, all with responsible positions in education or training, all with limited exposure to other cultures, and all with previous experience of e-learning. The level of digital literacy ranged from good to very high. By contrast, the level of digital literacy of the teacher was quite basic, a situation that led to unexpected and invaluable outcomes which will be discussed later in the paper.

4. The course design

The design was grounded in the firmly held view of the teacher/designer that e-learning could actually break down the barriers to learning encountered in the ‘limited and closed world of the traditional classroom’ (Martin, 2010: 75) and, with appropriate e-pedagogy, could “sustain a form of learning that is equivalent, if not superior, to that provided by traditional classroom settings” (Kuriloff, 2005). It was also grounded in the belief that this form of learning could provide students with a challenging, enjoyable and transformative e-learning experience. The design was underpinned by the concept of learning by wandering – using technology, in accordance with one’s own way of learning, to embark in a spirit of “serious playfulness” and with an ever-open mind on a largely uncharted voyage over the seas of cyberspace in an endless quest of other ways of knowing, thinking and being in the world (Martin, 2010: 85). This way of learning necessarily involves being willing to “travel tangentially … and to share with and learn from others” (Martin, 2010: 24), and the course design sought to facilitate that approach. The sharing with and learning from others was to take place asynchronously in Blackboard and in real time in Wimba Classroom where weekly class sessions were to be held. Virtual visits were to be undertaken first as a class group to a small number of identified educationally high performing countries. Additionally, each student was given complete freedom to select a country - other than one already visited - for individual wandering and exploration. All such learning and reflections were to be shared. For this purpose, students were given the option of using Web 2.0 technologies.

5. An appropriate e-pedagogy

Mindful that many educators tend to regard “on ground” classroom-based teaching as the optimal learning experience and therefore tend to see online learning simply as an “alternative delivery system for traditional pedagogy” (Kuriloff, 2005), the teacher sought to create an appropriate e-pedagogy that would help release the transformative potential of e-learning. Foremost in the pedagogy was the establishment of a high quality relationship with the students. Hargreaves (2003) stresses that good teachers understand the importance of caring relationships and emotional
engagement with learning. This applies particularly in e-learning because of the potential in this environment for personal and social isolation and disaffection (Croft, Allison and Duff, 2010). The teacher therefore considered it essential to move from a view of the web as an “information revolution” to that of a “relationship revolution” (Schrage, 2001). Additionally, within broad parameters, in accordance with the philosophy of learning by wandering, the e-pedagogy was flexible – to allow for some productive off-course wandering and reversal of roles. It was also aligned with the open, collaborative and relational mindset of Web 2.0 (Guth and Helm, 2010: 22). Blackboard and Wimba, and - in accordance with students’ preferences – Web 2.0 technologies were used as shared spaces for “collective intelligence”, and there was a strong focus on “participative and collaborative user experiences” and on “dialogical conversations” (Guth and Helm, 2010: 41). Specifically, the e-pedagogy was student-centred and, from an early stage, student-led, as students worked in pairs to lead a part of the group learning journey, as well as undertaking independent individual explorations to a country of their choice. A shared learning approach within a community of learners was fostered throughout the course to allow them to experience learning as a collaborative, social and enjoyable activity, inclusive of both students and teacher. The underpinning metaphor for this approach is Thornburg’s (2004) Campfires in Cyberspace, with the campfire as the more formal learning place where the elders (the teacher or the student leaders) tell the story and initiate discussion, and the watering hole as the informal space where wanderers take turns to be storytellers and listeners and where peer learning takes place.

6. Implementation

In the context of maintaining a caring relationship in which each student felt that his/her progress mattered to the teacher, the latter made two major commitments. One was to offer students who were unsure about the direction of their assignments the opportunity to submit them as work-in-progress for monitoring by the teacher without prejudice to the final grade. This option was welcomed by the students and availed of responsibly - usually in the form of Google docs to facilitate pre-submission sharing and editing as the student deemed appropriate. The second commitment was to email individual formative feedback after each assignment. This was enormously appreciated by the students and increased their motivation to give of their best. One student’s reaction was typical: I appreciate that you personally email each of us after a project or assessment. ... I find it validates the hard work we put into our assignments. ... I understand it takes time, but it does mean so much to me that you send a personal email with strengths and weaknesses.

The first form of learning by wandering to which the students were introduced was “time travel” to enable them to follow in outline the story of educational ideas in the western world from ancient Greece to the Digital Age. This served as context for the ongoing exploration into the direction education should be taking in our global society. Another form of tangential wandering introduced at an early stage was “The Journey into Self”. This encouraged students to keep a reflective journal to monitor their own inner wandering and to consider whether this journey was transformative of them as learners.

Travelling tangentially was encouraged throughout the course. Initially, this took the form of looking briefly at the theme of learning by wandering in myth and legend (Martin, 2010) as well as in ancient and more modern history and in literature. The students saw tangential travelling as a rich contributory source to their learning and felt comfortable with going off course to share readings and learning experiences from their “real life”. An example was the sharing at one point by a student discussion leader of an issue, which, though introduced under the subject title of “entirely unrelated”, evolved into a fecund sharing of experiences on the importance of the teacher in the learning process.

7. Scaffolding students as leaders of learning

The strategy of having students lead the learning by putting two in charge of a particular section of the group wandering proved to be highly effective in terms of learning as well as being an enjoyable and potentially transformative experience for the leaders. Over the period of eight weeks, the class as a group virtually visited four countries selected from the course textbook with emphasis being placed on additional shared research. This meant that all students could take turns at being both teacher and learner – or storyteller and listener according to Thornburg’s campfire and watering hole metaphor. The teacher provided scaffolding for the leaders in a number of ways prior to their undertaking their roles. Simple guidelines for leading asynchronous discussion were made available. The teacher also drew up a content analysis model for online discussion, based on the model devised by Gunawardena, Lowe and Anderson (1997). The model illustrates how knowledge construction and
negotiation of meaning online proceed through five phases, identifying at each stage the Process Variables (how learners negotiate and interact) and the Product Variables (content and outcomes of learner interactions). For convenience, the teacher’s version of this model is reproduced in table form in Table 1. This provided all students with a tool to enable them to analyse the content of the particular group discussion they were leading. It also helped them to self-evaluate their own contributions to discussions.

Finally, the teacher held a short tutorial in the Wimba Classroom with each pair of leaders just prior to their undertaking the role. This was totally non-directive. Its purpose was simply to give the leaders a voice, to ensure they understood their mission and assure them of teacher intervention only when or if requested. They appreciated this freedom and empowerment, and without exception, rose to the challenge, using mainly wikis and Google docs to collaborate in preparation for their task. The weekly synchronous class was the forum where each pair of leaders prepared their peers for the next stage of the learning journey. They also took great care with the identification and formulation of the main discussion question to be followed up asynchronously in Blackboard, where they succeeded in initiating and monitoring well-reasoned and stimulating posts, often enhanced by reference to websites researched by students and illustrated by videos from YouTube and other video-sharing websites.

Table 1: Model for online discussion content analysis (based on Gunawardena, Lowe and Anderson, 1997)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Process variables</th>
<th>Product variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sharing and comparing information</td>
<td>Statements, observations</td>
</tr>
<tr>
<td>2</td>
<td>Discovery and exploration</td>
<td>Questions, clarifications, elaborations</td>
</tr>
<tr>
<td>3</td>
<td>Negotiation of meaning Co-construction of knowledge</td>
<td>Joint meaning making Shared understanding</td>
</tr>
<tr>
<td>4</td>
<td>Testing ideas Revising ideas</td>
<td>Testing &amp; revising against personal knowledge</td>
</tr>
<tr>
<td>5</td>
<td>Awareness of new knowledge</td>
<td>Metacognitive statements Reflections Summarising (to reflect consensus or diversity of perspectives)</td>
</tr>
</tbody>
</table>

While the class travelled as a group to four selected countries, the teacher was engaged in individual exploration of other parts of the world. The weekly synchronous class was the “campfire” around which the students gathered with the teacher as listeners to the tales of their peer leaders, before turning their attention to the teacher in the role of storyteller. In practical terms, the teacher’s input enriched the learning journey by increasing the number of countries the class could “visit” in the short period of eight weeks. In terms of class dynamics, it subtly blurred the distinction between teacher and learner. This was to become a positive feature of the course and to lead to “a model in which the old teacher/student relationship [was] replaced by learning together” (Papert, 1999).

8. Teacher-as-learner

The teacher-as-learner role became more pronounced when the class returned from their individual wandering. As indicated earlier, the teacher’s digital literacy was quite basic, but, aware of the students’ superior prowess in this domain, she encouraged them to work in whatever medium they felt they could best articulate their stories. She asked only that those who chose the digital option would provide her with a “dummy’s guide” to their selected medium to help her create an assessment rubric. Half the class – four students – were in this category. The learning curve for the teacher was steep and exhilarating, as her mind and senses were drawn into stories told in the form of movies, a Glog, and a Prezi. In different ways, these digital formats vividly captured and imparted to teacher and students alike not just the factual, but the emotional reality of the social fabric and the education systems of the countries visited, illustrating that “technology is a language in which powerful ideas can be expressed” (Papert, 1999) and multiple perspectives dramatically conveyed. Explaining his choice of medium for sharing his story of the “level of chaos for students and educators” in a particularly troubled part of the world, one student wrote: No amount of data on politics, economics, or
governmental oversight can ever adequately paint a picture of turmoil in areas currently afflicted by poverty, injustice, and violence, [so] I assembled a Glog which can be found below. The videos and songs paint a picture that, at least to my eyes, [is truer] of the daily world experienced by those under immense political and social pressures. From the teacher’s point of view, the discovery of the Glog with its apparently chaotic collage of videos was enlightening and invaluable. It seemed a near-perfect match of content and expression in that it captured visually the chaos which the student wanted to convey and which was authenticated by the scenes in each video and by the “insider view” of the people caught up in the chaos. The fact that the videos could be viewed in any order without diminishing the impact also made the Glog a most appropriate form of expression for learning by wandering.

The student who used the Prezi explained her choice during a synchronous Wimba class by saying that, having bought into the freedom and the curvilinear approach of learning by wandering, she wanted some way of expressing herself in a non-linear, more impactful way than by the linear format of text or PowerPoint. A classmate with whom she discussed this introduced her - as part of our shared learning ethos - to the Prezi which is curvilinear in design, allowing the user to zoom as appropriate either on the big central picture in view on the screen or on the smaller pictures or texts surrounding it. This layout proved in effect to be a metaphor for her theme of the “mosaic” of the country she was describing. The “dummy’s guide” provided by one of the “movie makers” gives an idea of the complex and time-consuming process required by her choice of medium: I used Google docs to create slides of relevant … information that I researched and read about both in books and online. I took screenshots as jpgs and inserted them into iMovie. Also looked for images that would enrich the movie. Then I worked on editing, cutting, cropping and animating everything. The last step was to research free Creative Commons podcast music and create background sound while editing for volume and ducking in and out. The same student remarked ruefully that it would have been so much simpler to write a paper, but she felt the movie was a more powerful form of expression. It should be stressed at this point that those students who did choose to write a paper also exploited their medium and enriched the learning of peers and of the teacher – albeit more within the latter’s comfort zone!

Peer response to the digital stories was uniformly enthusiastic. The following is a typical example: I am so honoured to have such a talented cohort! You guys have given me so many great ideas for future projects. What a great way to teach kids about other cultures - instead of PowerPoints or lecture! Wow! These and other similar responses to the experience of sharing and learning with and from one another might perhaps give some indication of the strong element of what Guth and Helm (2010: 16) call the Web 2.0 philosophy, a “relationship revolution” driven by “ideals such as sharing, openness, collective intelligence, flexibility and collaboration”.

9. Teacher 2.0

Dooley (in Guth and Helm, 2010: 277-303) speaks of “Teacher 2.0” whose teaching approach is learner-centred, not technology-centred, who focuses on being able to use available technology as a means of collaboration and development of shared knowledge and of equipping students with the skills needed for professional life in today’s globalised world. She also depicts some of the traits of Teacher 2.0. Among these are a willingness to experiment and take risks, to integrate technologies that are more familiar to the learners than to the teacher, and effect a “symbiosis of truly collaborative learning ... by actively involving teachers in the learning process and students in the teaching process”. Teacher 2.0 also uses technology to provide opportunities for students to take ownership of the learning process. Above all, Teacher 2.0 makes the required shift from the transmission education paradigm to the “mutual sharing of knowledge-building between teacher-student, student-student and student-teacher”. Dooley asks bluntly: “Does Teacher 2.0 exist?” The experiences of the lead author as teacher in the e-learning course which is the subject of this paper would suggest that it is only if this type of teacher does exist that e-learning can begin to reach its transformative potential.

10. Teacher as sage at the side

In moving away from transmission education in e-learning, the teacher has also to move away from the traditional role of being sole repository of learning and to seek a role that best empowers the e-learner. This is frequently seen as moving from teacher to facilitator, from sage on the stage to guide at the side. The role adopted by the teacher in the case of the e-learning course described in these pages was rather that of sage at the side, setting the students free to learn by wandering and take ownership of their learning, scaffolding them when necessary, but always endeavouring to “bring
wisdom, perspective and [experience] to the learning” (Papert and Caperton, 1999). In this way, it becomes possible to move toward the goal that Hargreaves (2003) suggests is the ultimate achievement of the teacher - not to deliver learning, but to develop learners. This is exactly how the authors of this paper understand transformative learning – developing learners who love learning and for whom it becomes a lifelong commitment.

11. Students as critical friends

Students also responded as critical friends to the teacher’s request for suggestions for improving the course. In general, these took two forms. One, surprisingly, was a suggestion to do more learning by wandering along the “road less travelled by” – from Robert Frost’s poem which we had also made our own. One student felt that all would have benefited from having “more room to wander” as this might have led to some interesting tangential discussion. The second suggestion, unsurprisingly, was to introduce other technologies, including Skype or videoconferencing. Ironically, the teacher of this course is a champion of the use of videoconferencing in education, has used this medium in previous e-learning courses, and had hoped to try Skype group conferencing with the first cohort, but was frustrated by time and other logistics. She occasionally used the video feature in Wimba, but it functioned only on a one-to-one basis and tended to slow down the pace of the class. This was more thoroughly explored for the next iteration of the course. The ideal would be, as the same student suggested, to seek videoconferencing opportunities with people from the target countries. Another very useful suggestion that will hopefully be acted upon in a future iteration was to “encourage more PBL (project-based learning) during the Wimba sessions, such as break-out activities, online whiteboard activities, etc”. As the course continues to evolve, it will obviously be important to incorporate the use of desktop sharing and to place more emphasis on integrating Web 2.0 technologies into the Blackboard management learning system. Ideas suggested by the co-author include screen capture video software for digital storytelling, desktop application sharing tools to enable future students to begin to build a timeless and virtual “wandering library” to share their experiences as a teaching tool for those that follow, and, if appropriate, to create unique user names to allow them reach out to the web in search of “virtual tour guides” for them as they wander.

12. The second Iteration

The second cohort, which consisted of seven doctoral students, was broadly similar to the first, in that they were mature professional educators, holding responsible positions in their field, and had considerable experience of e-learning. The main difference was that they were geographically more dispersed than the first cohort. Although the majority were Americans living in Pennsylvania, one student lived in Virginia, and one, a Chinese academic, joined the class from his home in China. This somewhat unusual mix offered us both opportunities and challenges which helped shape and enrich the course in ways we will discuss briefly.

A major challenge was to establish a solid foundation for the community of learners for this more diverse group in order to allay feelings of isolation or alienation and to ensure a high level of emotional engagement with learning. The teacher’s belief in “the centrality of emotion to the process of learning, specifically ... of e-learning” (O’Regan, 2003) had been reinforced from her experience with the first cohort, as evidenced in the student comments cited above. These demonstrated that emotion is present in e-learning in the relationship between teacher and students, in students’ relationships with one another, and in their relationship with the learning process, and that positive emotions, such as enthusiasm, appreciation, a feeling of belonging, of pride in one’s own and in the group’s achievements, foster good learning. To promote this from the earliest possible stage, in advance of the starting date of the course, the teacher sent a welcome email to the cohort introducing herself, giving an overview of the course, stressing that she wanted this course to be a “productive and enjoyable learning experience” for each student, and pleading that she would do everything she could to make it so. She also invited the students to let her know any time during the course if they had any suggestions for improving the learning process, or if they individually had issues with any aspect of it for either personal or academic reasons. Her final message to them at this early stage was: “I want your voice to be heard as well as mine”. This provoked a warm response. All students replied appreciatively and with enthusiasm, telling a little about themselves, and expressing interest and excitement about the course. An additional personal email to the Chinese student elicited a charming acknowledgement of the teacher’s “considerate concern about non-American student”.
Another strategy that proved very effective in strengthening the affective element of learning in the course was the adoption of a suggestion made by the first cohort to use Skype as a regular means of communication. The students eagerly responded to the invitation to have a one-on-one tutorial by Skype. This face-to-face encounter significantly mitigated any sense of isolation, and helped give each student the feeling of being “in the front row”, which they welcomed, as both the cognitive and non-cognitive aspects of the course – and the link between the two – were explored in a leisurely but focused manner. The agenda for the tutorial was a simple one – to invite the student to share how he/she was experiencing the course, to put forward any suggestions as to how that experience might be improved, and to deal with any specific problems, academic or personal, that had arisen, and might negatively impact on their learning. A measure of the trust that was created between teacher and student was the sharing by some students of external stress factors. These were discussed, and where possible, measures were put in place to alleviate the pressure. This was an important issue for the teacher, who believes firmly in taking into consideration, where appropriate, the non-academic issues that impinge on the well being and the joy in learning of adult students. There was also great humour in these encounters, as students relaxed and talked of their families and their lives outside academia. The Skype meetings also greatly enhanced the relationship of each student with the teacher, and consequently increased their sense of belonging and their motivation. It helped both teacher and students to develop a stronger social presence – the ability to project themselves socially and emotionally as “real people”, thereby greatly enhancing the human dimension in the e-learning environment. Students were given the opportunity to initiate further Skype calls as required or desired. The Chinese student, who found that these virtual face-to-face meetings greatly enhanced his feeling of being part of a community of learners, availed happily of this opportunity. He and his US partner also made use of Skype to prepare their “leading learning” assignment – a presentation to their peers on education in China.

This presentation was a superb example of the flat world in education. It was prepared by electronic communication – Skype, email, and the special small group forum created on Blackboard – and was delivered jointly in the Wimba classroom by a “leader” from China and one from the US. It captured the imagination of the students, some of whom explicitly stated on the discussion board their awareness of the enrichment of the course brought about by such trans-global collaboration, and by the presence in their cohort of a Chinese educator who, as one student expressed it, could “provide [us] with … insights about [his] country’s education system and personal experiences”. Another student wrote: Our cohort is lucky enough to have [someone] who not only studied in China, but is also actively involved in the education system in China [within a private university]. The students also appreciated that, through the discussion board, they were given the opportunity to relate what they were learning to the real life education issues in that university.

The challenge of being a leader of learning was eagerly taken up by all the members of this cohort, some of whom seized the opportunity to “learn new software tools and present our work in a creative and engaging manner”. One student, in particular, who learned about making a movie and who used this medium to share the story of her individual learning journey, derived great satisfaction from contributing to “an inspiring environment for scholarly thoughts to be dynamically presented and preserved in a digital repository for the enrichment of future cohorts”. Another student used facebook to source current, authentic information for his teaching on education in South Korea. He contacted a US friend now teaching in that country. The friend in turn enlisted the help of some South Korean educators, who also engaged through facebook. Together, they put flesh on the dry bones of factual learning, and dealt with many of the comments and queries that were beyond the scope of the student leader of learning, and were far beyond the ability of the textually - or Internet – sourced information to give the “feel” of teaching and learning in another country.

Surprisingly perhaps, for this cohort, the discussion board played a major role in both the social and cognitive elements of their e-learning. A strong social presence was evident in the lively exchanges as the students co-constructed knowledge. In an academic context, social presence may be understood as “creating a climate that supports and encourages probing questions, skepticism, and the contribution of explanatory ideas. Sustaining critical thinking and discourse requires a sense of belonging … “(Garrison, 2011: 32). One student expressed this simply: For me, the highlight of this portion of our journey was on the class discussion. He particularly liked how easy everyone found it to express our opinions and challenge those of others. Another student considered the matter in greater depth. A final reflection from the group discussion is the passionate and engaging dialogue that
ensued between us. Each of us demonstrated our willingness to continually “raise the bar”. We did so through compelling arguments and with credible sources to further our metacognitive process. As I now have come full circle in this portion of my academic journey, it is with the appreciation that learning is indeed a social process where through the postings of my colleagues I have entertained new perspectives, new thoughts and ideas, and have considered hypothetical, alternative solutions to improving education on a global platform. The summary and evaluation - based on the online discussion content analysis model - made by the leaders of learning of the discussion points following the study of each country was found to be “of particular value”. One student commented in a final reflection: [We] effectively created a digital repository of the key insights and contributions made by everyone. This blended work when knitted together over these past eight weeks has resulted in a unique tapestry of our shared global insights and personal contributions which has enriched our wisdom as future members of the Professoriate.

The concept of learning by wandering found particular favour with this cohort, who appreciated the freedom and flexibility it gave them to learn in a non-linear fashion. One student expressed this succinctly: Our wandering journey has been a wonderful learning experience. Thank you again for this very insightful, creative and engaging approach to constructing new knowledge. Our Chinese student felt strongly that learning by wandering is an effective teaching method. This method can motivate learners to involve in the learning environment by wandering without boredom. The instructor makes a design of the journey to meet the learners’ needs. Learners can choose different routes and different combination formats to finish the journey collaboratively. The … guide leads the journey according to the requirement of the syllabus.

13. Conclusion

How did this course, delivered within a traditional LMS, endeavour to embody the Web 2.0 ethos? It sought to do so, firstly, by highlighting the importance of the teacher’s attitude and the impact of this on students (Katsifli, 2010). From the outset, attention was focused on the course teacher’s high expectations of quality e-learning and awareness of importance of the human dimension, with emphasis on building and sustaining meaningful relations with students, so that each felt valued and supported. Secondly, the focus was on the need for appropriate pedagogy, leading to a paradigm shift from transmission teaching to student-centred and student-led learning, and scaffolding students to be leaders of learning. Thirdly, sustained effort was made to build a learning community with strong emphasis on collaborative learning and sharing of resources. Fourthly, the teacher’s role was defined as “sage at the side”, offering wisdom, experience, and support to enable students reach their next level of development. Additionally, the open mind aspect of the underpinning concept of learning by wandering was stressed in order to facilitate the necessary change of mindset. Finally, Blackboard and Wimba were used as shared learning spaces for collective intelligence, and creating space for students to use Web 2.0 tools for creative expression and sharing of learning.

Did this process lead to a transformative e-learning experience for the students? Written feedback from them would suggest that something of this nature was experienced by at least a few. In an email to the teacher one student in the first course wrote: I thank you for being the kind of teacher that allows me to grow [not just] as a student but as an educator! As part of a Blackboard discussion about “teaching to the test” and the consequent lack of ownership of the learning process, a student’s post read: I think that is why [the] idea of wandering … and student generated learning is so much more meaningful. And from the student who chose to present her final assignment as a “Jog”, a tool that enables multiple websites to be presented as a package: For the final reflective project I would like to put together a brief synopsis of learning from this class: A Jog on the Web (wandering). I would like to use this technology because it will help me in the future [to] refer back to some of the learning and contain the pertinent links to information we learned about. In the introduction to the ‘Jog’, she states: Like Ulysses, we as educators must not remain stationary, but wander and learn from the world around us. She also includes (with attribution) in her ‘Jog’ the wandering tales of some of her peers and she posted a note to them on the discussion board: Thanks to the class for sharing their learning this semester! ... It has been a blast! I am still adding to the learning from this course but here is the start of my Jog. Students also welcomed being given the leeway to learn [and to share their learning] in the manner that [suits them] (personal email from a student). Another student wrote to express appreciation of the teacher’s willingness to push the envelope with Web 2.0 technologies. Above all, students valued the teacher as sage at the side. One student expressed this in her final email: I appreciate all of the wisdom and insight you were able to offer as you guided us through our journey.
... It truly was a spectacular learning experience! And a student in the second iteration offered this perspective: I have gained new, deeper and clearer perspectives on strategies and techniques for teaching and engaging students. Cultural aspects and beliefs are becoming more relevant to the content materials I want to share with my students. This wandering experience has profoundly changed me as a teacher. And because of it, I will be a more effective and enlightened educator.

The literature reflects the tension between two opposing views of the LMS. The first is the widely held view that, even with the addition of Web 2.0 tools, an LMS remains essentially an electronic replication of existing practice. The more recent view stresses the transformative potential of LMS mediated learning when it is informed by the Web 2.0 ethos. The two iterations of the e-learning course described in this paper support the latter view. While very much a work-in-progress, it still serves to illustrate that the quality of e-learning is determined not by simply adding Web 2.0 tools to the traditional environment, but rather by embodying the Web 2.0 mindset within that environment. In this context, the case study is offered tentatively as a contribution to the development of a framework for transformative e-learning within a traditional LMS.

References


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Fostering a web 2.0 ethos in a traditional e-learning environment

Marie Martin and Michaela Noakes
Duquesne University, Pittsburgh USA
Martin684@duq.edu
Noakes495@duq.edu

Abstract: As technology continues to flatten the world and as Web 2.0 changes the way knowledge is created and shared, tertiary education institutions are turning increasingly to e-learning to extend access to students globally as well as to improve the quality of their learning experience. Learning Management Systems (LMS) currently dominate the delivery of e-learning at this level. Though these systems have extended functionality by including some Web 2.0 tools, they are generally perceived as a “walled garden”, essentially embodying the traditional transmission paradigm of teaching and learning rather than the philosophy of Web 2.0. This is leading, particularly in the blogosphere, to calls to break down the walls of the LMS and to explore more open online courses. There is, however, an emerging view that Web 2.0 ideals can be realised within an LMS environment, provided the environment is aligned with these ideals. This paper supports that view. It presents a case study of an eight-week e-learning course based on this premise, offered first in spring 2011, with a second iteration in spring 2012, as part of a doctoral programme in Instructional Technology by Duquesne University, Pittsburgh, USA, and designed and delivered within an LMS by an instructor living in Northern Ireland. The course is underpinned by the concept of learning by wandering. The pedagogy is aligned with the fundamental Web 2.0 philosophy. Within broad parameters, it is flexible, student-centred and, from an early stage, student-led. Students are encouraged to use a variety of Web 2.0 tools, according to their preferences, to collaborate in preparation for their leadership role and as a language to express their ideas and to share their learning. The teacher’s role is identified as sage at the side. This case study is intended to contribute to the provision of a framework for transformative e-learning through fostering a Web 2.0 ethos within a traditional learning environment.

Keywords: learning management systems; Web 2.0 ethos; case study; learning by wandering; sage at the side; transformative e-learning

1. Introduction

As technology continues to flatten the world (Friedman, 2007), and as Web 2.0 changes the way knowledge is created and shared (Guth and Helm, 2010), tertiary education institutions are turning increasingly to e-learning to extend access to students globally as well as to improve the quality of the learning experience (Beetham and Sharpe, 2007). Learning Management Systems (LMS) are currently “the most representative e-learning applications” (Georgoulis, Skalkidis, & Guerreiro, 2008) and dominate the delivery of e-learning at this level (Kyong-Lee and Bonk, 2006). Though these systems have extended functionality by including some Web 2.0 tools, they are still generally perceived as a “walled garden”, essentially embodying the traditional transmission paradigm of teaching and learning rather than the philosophy of Web 2.0 (Katsifli, 2010; Lee and McLoughlin, 2011). This is leading, particularly in the blogosphere, to calls to explore “massive open online courses” (Stein, 2008; Siemens, 2011). Huijser and Sanker (in Lee and McLoughlin, 2011: 267-283) argue, however, that Web 2.0 ideals can be achieved within an LMS, provided the environment is aligned with these ideals.

This paper supports that view. It offers a descriptive case study of an eight-week e-learning course, based on this premise, which endeavoured to create this environment and to bring the new Web 2.0 mindset to bear on the delivery of e-learning within a traditional LMS. Reference will also be made to the second iteration of the course, to its distinctive features and new dimensions, as well as to the enhancement effected by the application to this iteration of the lessons learned and the insights gained from the first course. The study is based on qualitative data derived from the following sources: notes made by the lead author as participant observer (Quinn Patton, 2002), archives of the synchronous weekly class, discussion board activity, and student assignment. Particular attention will be paid to the students’ perspective of their e-learning experience, and, in the interest of “thick description” (Quinn Patton, 2002: 331), the paper will capture the views of students mainly in their own words. It aims, therefore, to highlight the human dimension and provide an inside view of the two courses as experienced by both teacher and students. The paper also deals with well founded concerns that e-learning might be used “simply to enhance inherently deficient practices (e.g. lecturing)” rather than to try to release its “potential to transform the educational transaction”.

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(Garrison, 2011). The specific focus was on two questions: How can this course, delivered within a traditional LMS, embody the Web 2.0 ethos? Does this process lead to a transformative e-learning experience for the students?

The eight-week online course on Education in a Global Society was first offered as part of a doctoral programme in Instructional Technology by Duquesne University, Pittsburgh, USA in spring 2011. A second iteration, delivered in spring 2012, has just been completed at the time of writing. The course was designed and delivered by an instructor living in Northern Ireland (the lead author). The paper will outline the rationale, aims and objectives of the course, the demography of the doctoral cohorts, the course design in the context of high expectations of delivery by e-learning, the pedagogy, the technologies used, and the lessons learned – and subsequently applied to the second iteration of the course. It is hoped that this case study can contribute to a framework for transformative e-learning for both students and teachers and support the argument that the Web 2.0 ethos can be realised within a traditional LMS environment.

2. Rationale, aims and objectives

The rationale for the course was to address the need to raise the level of global awareness of students with regard to education in order to prepare them to function effectively as educators in a multicultural society and in a world without borders. The aim was to enable students to understand the socio-cultural context of education globally, beginning with their own as a basis for the comparative study of other systems. The objectives were to understand the history of educational ideas in the western world and evaluate these in the context of a global society; to compare and contrast American education with education systems in other selected countries; to assess the students’ personal educational experience and philosophies, and to critique how their philosophies affect the roles of educators, students, and organisations.

3. The first cohort

The first doctoral cohort comprised eight graduate students, all with responsible positions in education or training, all with limited exposure to other cultures, and all with previous experience of e-learning. The level of digital literacy ranged from good to very high. By contrast, the level of digital literacy of the teacher was quite basic, a situation that led to unexpected and invaluable outcomes which will be discussed later in the paper.

4. The course design

The design was grounded in the firmly held view of the teacher/designer that e-learning could actually break down the barriers to learning encountered in the ‘limited and closed world of the traditional classroom’ (Martin, 2010: 75) and, with appropriate e-pedagogy, could “sustain a form of learning that is equivalent, if not superior, to that provided by traditional classroom settings” (Kuriloff, 2005). It was also grounded in the belief that this form of learning could provide students with a challenging, enjoyable and transformative e-learning experience. The design was underpinned by the concept of learning by wandering – using technology, in accordance with one’s own way of learning, to embark in a spirit of “serious playfulness” and with an ever-open mind on a largely uncharted voyage over the seas of cyberspace in an endless quest of other ways of knowing, thinking and being in the world (Martin, 2010: 85). This way of learning necessarily involves being willing to “travel tangentially … and to share with and learn from others” (Martin, 2010: 24), and the course design sought to facilitate that approach. The sharing with and learning from others was to take place asynchronously in Blackboard and in real time in Wimba Classroom where weekly class sessions were to be held. Virtual visits were to be undertaken first as a class group to a small number of identified educationally high performing countries. Additionally, each student was given complete freedom to select a country - other than one already visited - for individual wandering and exploration. All such learning and reflections were to be shared. For this purpose, students were given the option of using Web 2.0 technologies.

5. An appropriate e-pedagogy

Mindful that many educators tend to regard “on ground” classroom-based teaching as the optimal learning experience and therefore tend to see online learning simply as an “alternative delivery system for traditional pedagogy” (Kuriloff, 2005), the teacher sought to create an appropriate e-pedagogy that would help release the transformative potential of e-learning. Foremost in the pedagogy was the establishment of a high quality relationship with the students. Hargreaves (2003) stresses that good teachers understand the importance of caring relationships and emotional
engagement with learning. This applies particularly in e-learning because of the potential in this environment for personal and social isolation and disaffection (Croft, Allison and Duff, 2010). The teacher therefore considered it essential to move from a view of the web as an “information revolution” to that of a “relationship revolution” (Schrage, 2001). Additionally, within broad parameters, in accordance with the philosophy of learning by wandering, the e-pedagogy was flexible – to allow for some productive off-course wandering and reversal of roles. It was also aligned with the open, collaborative and relational mindset of Web 2.0 (Guth and Helm, 2010: 22). Blackboard and Wimba, and - in accordance with students’ preferences – Web 2.0 technologies were used as shared spaces for “collective intelligence”, and there was a strong focus on “participative and collaborative user experiences” and on “dialogical conversations” (Guth and Helm, 2010: 41). Specifically, the e-pedagogy was student-centred and, from an early stage, student-led, as students worked in pairs to lead a part of the group learning journey, as well as undertaking independent individual explorations to a country of their choice. A shared learning approach within a community of learners was fostered throughout the course to allow them to experience learning as a collaborative, social and enjoyable activity, inclusive of both students and teacher. The underpinning metaphor for this approach is Thornburg’s (2004) Campfires in Cyberspace, with the campfire as the more formal learning place where the elders (the teacher or the student leaders) tell the story and initiate discussion, and the watering hole as the informal space where wanderers take turns to be storytellers and listeners and where peer learning takes place.

6. Implementation

In the context of maintaining a caring relationship in which each student felt that his/her progress mattered to the teacher, the latter made two major commitments. One was to offer students who were unsure about the direction of their assignments the opportunity to submit them as work-in-progress for monitoring by the teacher without prejudice to the final grade. This option was welcomed by the students and availed of responsibly - usually in the form of Google docs to facilitate pre-submission sharing and editing as the student deemed appropriate. The second commitment was to email individual formative feedback after each assignment. This was enormously appreciated by the students and increased their motivation to give of their best. One student’s reaction was typical: I appreciate that you personally email each of us after a project or assessment. ... I find it validates the hard work we put into our assignments. ... I understand it takes time, but it does mean so much to me that you send a personal email with strengths and weaknesses.

The first form of learning by wandering to which the students were introduced was “time travel” to enable them to follow in outline the story of educational ideas in the western world from ancient Greece to the Digital Age. This served as context for the ongoing exploration into the direction education should be taking in our global society. Another form of tangential wandering introduced at an early stage was “The Journey into Self”. This encouraged students to keep a reflective journal to monitor their own inner wandering and to consider whether this journey was transformative of them as learners.

Travelling tangentially was encouraged throughout the course. Initially, this took the form of looking briefly at the theme of learning by wandering in myth and legend (Martin, 2010) as well as in ancient and more modern history and in literature. The students saw tangential travelling as a rich contributory source to their learning and felt comfortable with going off course to share readings and learning experiences from their “real life”. An example was the sharing at one point by a student discussion leader of an issue, which, though introduced under the subject title of “entirely unrelated”, evolved into a fecund sharing of experiences on the importance of the teacher in the learning process.

7. Scaffolding students as leaders of learning

The strategy of having students lead the learning by putting two in charge of a particular section of the group wandering proved to be highly effective in terms of learning as well as being an enjoyable and potentially transformative experience for the leaders. Over the period of eight weeks, the class as a group virtually visited four countries selected from the course textbook with emphasis being placed on additional shared research. This meant that all students could take turns at being both teacher and learner – or storyteller and listener according to Thornburg’s campfire and watering hole metaphor. The teacher provided scaffolding for the leaders in a number of ways prior to their undertaking their roles. Simple guidelines for leading asynchronous discussion were made available. The teacher also drew up a content analysis model for online discussion, based on the model devised by Gunawardena, Lowe and Anderson (1997). The model illustrates how knowledge construction and
negotiation of meaning online proceed through five phases, identifying at each stage the Process Variables (how learners negotiate and interact) and the Product Variables (content and outcomes of learner interactions). For convenience, the teacher’s version of this model is reproduced in table form in Table 1. This provided all students with a tool to enable them to analyse the content of the particular group discussion they were leading. It also helped them to self-evaluate their own contributions to discussions.

Finally, the teacher held a short tutorial in the Wimba Classroom with each pair of leaders just prior to their undertaking the role. This was totally non-directive. Its purpose was simply to give the leaders a voice, to ensure they understood their mission and assure them of teacher intervention only when or if requested. They appreciated this freedom and empowerment, and without exception, rose to the challenge, using mainly wikis and Google docs to collaborate in preparation for their task. The weekly synchronous class was the forum where each pair of leaders prepared their peers for the next stage of the learning journey. They also took great care with the identification and formulation of the main discussion question to be followed up asynchronously in Blackboard, where they succeeded in initiating and monitoring well-reasoned and stimulating posts, often enhanced by reference to websites researched by students and illustrated by videos from YouTube and other video-sharing websites.

Table 1: Model for online discussion content analysis (based on Gunawardena, Lowe and Anderson, 1997)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Process variables</th>
<th>Product variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sharing and comparing information</td>
<td>Statements, observations</td>
</tr>
<tr>
<td>2</td>
<td>Discovery and exploration</td>
<td>Questions, clarifications, elaborations</td>
</tr>
<tr>
<td>3</td>
<td>Negotiation of meaning</td>
<td>Joint meaning making</td>
</tr>
<tr>
<td></td>
<td>Co-construction of knowledge</td>
<td>Shared understanding</td>
</tr>
<tr>
<td>4</td>
<td>Testing ideas</td>
<td>Testing &amp; revising against personal knowledge</td>
</tr>
<tr>
<td></td>
<td>Revising ideas</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Awareness of new knowledge</td>
<td>Metacognitive statements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reflections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Summarising (to reflect consensus or diversity of perspectives)</td>
</tr>
</tbody>
</table>

While the class travelled as a group to four selected countries, the teacher was engaged in individual exploration of other parts of the world. The weekly synchronous class was the “campfire” around which the students gathered with the teacher as listeners to the tales of their peer leaders, before turning their attention to the teacher in the role of storyteller. In practical terms, the teacher’s input enriched the learning journey by increasing the number of countries the class could “visit” in the short period of eight weeks. In terms of class dynamics, it subtly blurred the distinction between teacher and learner. This was to become a positive feature of the course and to lead to “a model in which the old teacher/student relationship [was] replaced by learning together” (Papert, 1999).

8. Teacher-as-learner

The teacher-as-learner role became more pronounced when the class returned from their individual wandering. As indicated earlier, the teacher’s digital literacy was quite basic, but, aware of the students’ superior prowess in this domain, she encouraged them to work in whatever medium they felt they could best articulate their stories. She asked only that those who chose the digital option would provide her with a “dummy’s guide” to their selected medium to help her create an assessment rubric. Half the class – four students – were in this category. The learning curve for the teacher was steep and exhilarating, as her mind and senses were drawn into stories told in the form of movies, a Glog, and a Prezi. In different ways, these digital formats vividly captured and imparted to teacher and students alike not just the factual, but the emotional reality of the social fabric and the education systems of the countries visited, illustrating that “technology is a language in which powerful ideas can be expressed” (Papert, 1999) and multiple perspectives dramatically conveyed. Explaining his choice of medium for sharing his story of the “level of chaos for students and educators” in a particularly troubled part of the world, one student wrote: No amount of data on politics, economics, or
governmental oversight can ever adequately paint a picture of turmoil in areas currently afflicted by poverty, injustice, and violence, [so] I assembled a Glog which can be found below. The videos and songs paint a picture that, at least to my eyes, [is truer] of the daily world experienced by those under immense political and social pressures. From the teacher’s point of view, the discovery of the Glog with its apparently chaotic collage of videos was enlightening and invaluable. It seemed a near-perfect match of content and expression in that it captured visually the chaos which the student wanted to convey and which was authenticated by the scenes in each video and by the “insider view” of the people caught up in the chaos. The fact that the videos could be viewed in any order without diminishing the impact also made the Glog a most appropriate form of expression for learning by wandering.

The student who used the Prezi explained her choice during a synchronous Wimba class by saying that, having bought into the freedom and the curvilinear approach of learning by wandering, she wanted some way of expressing herself in a non-linear, more impactful way than by the linear format of text or PowerPoint. A classmate with whom she discussed this introduced her - as part of our shared learning ethos - to the Prezi which is curvilinear in design, allowing the user to zoom as appropriate either on the big central picture in view on the screen or on the smaller pictures or texts surrounding it. This layout proved in effect to be a metaphor for her theme of the “mosaic” of the country she was describing. The “dummy’s guide” provided by one of the “movie makers” gives an idea of the complex and time-consuming process required by her choice of medium: I used Google docs to create slides of relevant … information that I researched and read about both in books and online. I took screenshots as jpgs and inserted them into iMovie. Also looked for images that would enrich the movie. Then I worked on editing, cutting, cropping and animating everything. The last step was to research free Creative Commons podcast music and create background sound while editing for volume and ducking in and out. The same student remarked ruefully that it would have been so much simpler to write a paper, but she felt the movie was a more powerful form of expression. It should be stressed at this point that those students who did choose to write a paper also enriched the medium and enriched the learning of peers and of the teacher – albeit more within the latter’s comfort zone!

Peer response to the digital stories was uniformly enthusiastic. The following is a typical example: I am so honoured to have such a talented cohort! You guys have given me so many great ideas for future projects. What a great way to teach kids about other cultures - instead of PowerPoints or lecture! Wow! These and other similar responses to the experience of sharing and learning with and from one another might perhaps give some indication of the strong element of what Guth and Helm (2010: 16) call the Web 2.0 philosophy, a “relationship revolution” driven by “ideals such as sharing, openness, collective intelligence, flexibility and collaboration”.

9. Teacher 2.0

Dooley (in Guth and Helm, 2010: 277-303) speaks of “Teacher 2.0” whose teaching approach is learner-centred, not technology-centred, who focuses on being able to use available technology as a means of collaboration and development of shared knowledge and of equipping students with the skills needed for professional life in today’s globalised world. She also depicts some of the traits of Teacher 2.0. Among these are a willingness to experiment and take risks, to integrate technologies that are more familiar to the learners than to the teacher, and effect a “symbiosis of truly collaborative learning ... by actively involving teachers in the learning process and students in the teaching process”. Teacher 2.0 also uses technology to provide opportunities for students to take ownership of the learning process. Above all, Teacher 2.0 makes the required shift from the transmission education paradigm to the “mutual sharing of knowledge-building between teacher-student, student-student and student-teacher”. Dooley asks bluntly: “Does Teacher 2.0 exist?” The experiences of the lead author as teacher in the e-learning course which is the subject of this paper would suggest that it is only if this type of teacher does exist that e-learning can begin to reach its transformative potential.

10. Teacher as sage at the side

In moving away from transmission education in e-learning, the teacher has also to move away from the traditional role of being sole repository of learning and to seek a role that best empowers the e-learner. This is frequently seen as moving from teacher to facilitator, from sage on the stage to guide at the side. The role adopted by the teacher in the case of the e-learning course described in these pages was rather that of sage at the side, setting the students free to learn by wandering and take ownership of their learning, scaffolding them when necessary, but always endeavouring to “bring...
wisdom, perspective and [experience] to the learning" (Papert and Caperton, 1999). In this way, it becomes possible to move toward the goal that Hargreaves (2003) suggests is the ultimate achievement of the teacher - not to deliver learning, but to develop learners. This is exactly how the authors of this paper understand transformative learning – developing learners who love learning and for whom it becomes a lifelong commitment.

11. Students as critical friends

Students also responded as critical friends to the teacher’s request for suggestions for improving the course. In general, these took two forms. One, surprisingly, was a suggestion to do more learning by wandering along the “road less travelled by” – from Robert Frost’s poem which we had also made our own. One student felt that all would have benefitted from having “more room to wander” as this might have led to some interesting tangential discussion. The second suggestion, unsurprisingly, was to introduce other technologies, including Skype or videoconferencing. Ironically, the teacher of this course is a champion of the use of videoconferencing in education, has used this medium in previous e-learning courses, and had hoped to try Skype group conferencing with the first cohort, but was frustrated by time and other logistics. She occasionally used the video feature in Wimba, but it functioned only on a one-to-one basis and tended to slow down the pace of the class. This was more thoroughly explored for the next iteration of the course. The ideal would be, as the same student suggested, to seek videoconferencing opportunities with people from the target countries. Another very useful suggestion that will hopefully be acted upon in a future iteration was to “encourage more PBL (project-based learning) during the Wimba sessions, such as break-out activities, online whiteboard activities, etc”. As the course continues to evolve, it will obviously be important to incorporate the use of desktop sharing and to place more emphasis on integrating Web 2.0 technologies into the Blackboard management learning system. Ideas suggested by the co-author include screen capture video software for digital storytelling, desktop application sharing tools to enable future students to begin to build a timeless and virtual “wandering library” to share their experiences as a teaching tool for those that follow them, and possibly Twitter to support community building among students and, if appropriate, to create unique user names to allow them reach out to the web in search of “virtual tour guides” for them as they wander.

12. The second Iteration

The second cohort, which consisted of seven doctoral students, was broadly similar to the first, in that they were mature professional educators, holding responsible positions in their field, and had considerable experience of e-learning. The main difference was that they were geographically more dispersed than the first cohort. Although the majority were Americans living in Pennsylvania, one student lived in Virginia, and one, a Chinese academic, joined the class from his home in China. This somewhat unusual mix offered us both opportunities and challenges which helped shape and enrich the course in ways we will discuss briefly.

A major challenge was to establish a solid foundation for the community of learners for this more diverse group in order to allay feelings of isolation or alienation and to ensure a high level of emotional engagement with learning. The teacher’s belief in “the centrality of emotion to the process of learning, specifically ... of e-learning” (O’Regan, 2003) had been reinforced from her experience with the first cohort, as evidenced in the student comments cited above. These demonstrated that emotion is present in e-learning in the relationship between teacher and students, in students’ relationships with one another, and in their relationship with the learning process, and that positive emotions, such as enthusiasm, appreciation, a feeling of belonging, of pride in one’s own and in the group’s achievements, foster good learning. To promote this from the earliest possible stage, in advance of the starting date of the course, the teacher sent a welcome email to the cohort introducing herself, giving an overview of the course, stressing that she wanted this course to be a “productive and enjoyable learning experience” for each student, and pledging that she would do everything she could to make it so. She also invited the students to let her know any time during the course if they had any suggestions for improving the learning process, or if they individually had issues with any aspect of it for either personal or academic reasons. Her final message to them at this early stage was: “I want your voice to be heard as well as mine”. This provoked a warm response. All students replied appreciatively and with enthusiasm, telling a little about themselves, and expressing interest and excitement about the course. An additional personal email to the Chinese student elicited a charming acknowledgement of the teacher’s “considerate concern about non-American student”.

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Another strategy that proved very effective in strengthening the affective element of learning in the course was the adoption of a suggestion made by the first cohort to use Skype as a regular means of communication. The students eagerly responded to the invitation to have a one-on-one tutorial by Skype. This face-to-face encounter significantly mitigated any sense of isolation, and helped give each student the feeling of being “in the front row”, which they welcomed, as both the cognitive and non-cognitive aspects of the course – and the link between the two – were explored in a leisurely but focused manner. The agenda for the tutorial was a simple one – to invite the student to share how he/she was experiencing the course, to put forward any suggestions as to how that experience might be improved, and to deal with any specific problems, academic or personal, that had arisen, and might negatively impact on their learning. A measure of the trust that was created between teacher and student was the sharing by some students of external stress factors. These were discussed, and where possible, measures were put in place to alleviate the pressure. This was an important issue for the teacher, who believes firmly in taking into consideration, where appropriate, the non-academic issues that impinge on the well being and the joy in learning of adult students. There was also great humour in these encounters, as students relaxed and talked of their families and their lives outside academia. The Skype meetings also greatly enhanced the relationship of each student with the teacher, and consequently increased their sense of belonging and their motivation. It helped both teacher and students to develop a stronger social presence – the ability to project themselves socially and emotionally as “real people”, thereby greatly enhancing the human dimension in the e-learning environment. Students were given the opportunity to initiate further Skype calls as required or desired. The Chinese student, who found that these virtual face-to-face meetings greatly enhanced his feeling of being part of a community of learners, availed happily of this opportunity. He and his US partner also made use of Skype to prepare their “leading learning” assignment – a presentation to their peers on education in China.

This presentation was a superb example of the flat world in education. It was prepared by electronic communication – Skype, email, and the special small group forum created on Blackboard – and was delivered jointly in the Wimba classroom by a “leader” from China and one from the US. It captured the imagination of the students, some of whom explicitly stated on the discussion board their awareness of the enrichment of the course brought about by such trans-global collaboration, and by the presence in their cohort of a Chinese educator who, as one student expressed it, could “provide [us] with ... insights about [his] country’s education system and personal experiences”. Another student wrote: Our cohort is lucky enough to have [someone] who not only studied in China, but is also actively involved in the education system in China [within a private university]. The students also appreciated that, through the discussion board, they were given the opportunity to relate what they were learning to the real life education issues in that university.

The challenge of being a leader of learning was eagerly taken up by all the members of this cohort, some of whom seized the opportunity to “learn new software tools and present our work in a creative and engaging manner”. One student, in particular, who learned about making a movie and who used this medium to share the story of her individual learning journey, derived great satisfaction from contributing to “an inspiring environment for scholarly thoughts to be dynamically presented and preserved in a digital repository for the enrichment of future cohorts”. Another student used facebook to source current, authentic information for his teaching on education in South Korea. He contacted a US friend now teaching in that country. The friend in turn enlisted the help of some South Korean educators, who also engaged through facebook. Together, they put flesh on the dry bones of factual learning, and dealt with many of the comments and queries that were beyond the scope of the student leader of learning, and were far beyond the ability of the textually - or Internet - sourced information to give the “feel” of teaching and learning in another country.

Surprisingly perhaps, for this cohort, the discussion board played a major role in both the social and cognitive elements of their e-learning. A strong social presence was evident in the lively exchanges as the students co-constructed knowledge. In an academic context, social presence may be understood as “creating a climate that supports and encourages probing questions, skepticism, and the contribution of explanatory ideas. Sustaining critical thinking and discourse requires a sense of belonging ... “(Garrison, 2011: 32). One student expressed this simply: For me, the highlight of this portion of our journey was on the class discussion. He particularly liked how easy everyone found it to express our opinions and challenge those of others. Another student considered the matter in greater depth. A final reflection from the group discussion is the passionate and engaging dialogue that
ensued between us. Each of us demonstrated our willingness to continually “raise the bar”. We did so through compelling arguments and with credible sources to further our metacognitive process. As I now have come full circle in this portion of my academic journey, it is with the appreciation that learning is indeed a social process where through the postings of my colleagues I have entertained new perspectives, new thoughts and ideas, and have considered hypothetical, alternative solutions to improving education on a global platform. The summary and evaluation - based on the online discussion content analysis model - made by the leaders of learning of the discussion points following the study of each country was found to be “of particular value”. One student commented in a final reflection: [We] effectively created a digital repository of the key insights and contributions made by everyone. This blended work when knitted together over these past eight weeks has resulted in a unique tapestry of our shared global insights and personal contributions which has enriched our wisdom as future members of the Professoriate.

The concept of learning by wandering found particular favour with this cohort, who appreciated the freedom and flexibility it gave them to learn in a non-linear fashion. One student expressed this succinctly: Our wandering journey has been a wonderful learning experience. Thank you again for this very insightful, creative and engaging approach to constructing new knowledge. Our Chinese student felt strongly that learning by wandering is an effective teaching method. This method can motivate learners to involve in the learning environment by wandering without boredom. The instructor makes a design of the journey to meet the learners’ needs. Learners can choose different routes and different combination formats to finish the journey collaboratively. The … guide leads the journey according to the requirement of the syllabus.

13. Conclusion

How did this course, delivered within a traditional LMS, endeavour to embody the Web 2.0 ethos? It sought to do so, firstly, by highlighting the importance of the teacher’s attitude and the impact of this on students (Katsifli, 2010). From the outset, attention was focused on the course teacher’s high expectations of quality e-learning and awareness of importance of the human dimension, with emphasis on building and sustaining meaningful relations with students, so that each felt valued and supported. Secondly, the focus was on the need for appropriate pedagogy, leading to a paradigm shift from transmission teaching to student-centred and student-led learning, and scaffolding students to be leaders of learning. Thirdly, sustained effort was made to build a learning community with strong emphasis on collaborative learning and sharing of resources. Fourthly, the teacher’s role was defined as “sage at the side”, offering wisdom, experience, and support to enable students reach their next level of development. Additionally, the open mind aspect of the underpinning concept of learning by wandering was stressed in order to facilitate the necessary change of mindset. Finally, Blackboard and Wimba were used as shared learning spaces for collective intelligence, and creating space for students to use Web 2.0 tools for creative expression and sharing of learning.

Did this process lead to a transformative e-learning experience for the students? Written feedback from them would suggest that something of this nature was experienced by at least a few. In an email to the teacher one student in the first course wrote: I thank you for being the kind of teacher that allows me to grow [not just] as a student but as an educator! As part of a Blackboard discussion about “teaching to the test” and the consequent lack of ownership of the learning process, a student’s post read: I think that is why [the] idea of wandering … and student generated learning is so much more meaningful. And from the student who chose to present her final assignment as a “Jog”, a tool that enables multiple websites to be presented as a package: For the final reflective project I would like to put together a brief synopsis of learning from this class: A Jog on the Web (wandering). I would like to use this technology because it will help me in the future [to] refer back to some of the learning and contain the pertinent links to information we learned about. In the introduction to the ‘Jog’, she states: Like Ulysses, we as educators must not remain stationary, but wander and learn from the world around us. She also includes (with attribution) in her ‘Jog’ the wandering tales of some of her peers and she posted a note to them on the discussion board: Thanks to the class for sharing their learning this semester! … It has been a blast! I am still adding to the learning from this course but here is the start of my Jog. Students also welcomed being given the leeway to learn [and to share their learning] in the manner that [suits them] (personal email from a student). Another student wrote to express appreciation of the teacher’s willingness to push the envelope with Web 2.0 technologies. Above all, students valued the teacher as sage at the side. One student expressed this in her final email: I appreciate all of the wisdom and insight you were able to offer as you guided us through our journey.
... It truly was a spectacular learning experience! And a student in the second iteration offered this perspective: I have gained new, deeper and clearer perspectives on strategies and techniques for teaching and engaging students. Cultural aspects and beliefs are becoming more relevant to the content materials I want to share with my students. This wandering experience has profoundly changed me as a teacher. And because of it, I will be a more effective and enlightened educator.

The literature reflects the tension between two opposing views of the LMS. The first is the widely held view that, even with the addition of Web 2.0 tools, an LMS remains essentially an electronic replication of existing practice. The more recent view stresses the transformative potential of LMS mediated learning when it is informed by the Web 2.0 ethos. The two iterations of the e-learning course described in this paper support the latter view. While very much a work-in-progress, it still serves to illustrate that the quality of e-learning is determined not by simply adding Web 2.0 tools to the traditional environment, but rather by embodying the Web 2.0 mindset within that environment. In this context, the case study is offered tentatively as a contribution to the development of a framework for transformative e-learning within a traditional LMS.

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