Designing for open learning environments: what role for social media and e-Learning 2.0?

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Introduction
This symposium aims to provide a forum for sharing the outcomes of research on the use of social media and 2nd generation e-learning (e-Learning 2.0) in teaching situations and learning environments across a range of educational contexts. In particular it will draw on experience from the European Commission Transversal Project e-Jump 2.0 which has focussed on the professional development needs of teachers in implementing the use of social media and e-Learning 2.0 in their daily practices. The project has involved over 120 participants from East and West Europe, Central Asia, the Far East and China in courses which have focussed on the pedagogical aspects of new technologies of e-Learning 2.0 (Hudson et al., 2009). The aims of the project have included raising the competence and confidence of teachers in the use of e-Learning 2.0, developing e-courses and identifying success factors for and obstacles to such implementation. A framework of action research has been developed to support associated professional and educational development and the sharing of practice amongst the participants through the documentation of small scale action research projects.

The context
The e-Jump 2.0 project has involved the development of three courses and a framework for action research. The experiences reported on in this paper mainly relate to development of the course on New Technologies of e-Learning 2.0 (NeTEL) and the action research framework. The NeTEL course is centrally concerned with the design, development and evaluation of teaching, studying and learning processes that are supported by the use ICT and social media applications. The course content focuses on the use of Web 2.0 and in particular on the ways in which this allows users to create content in such a way that allows others to both read and write to a such a web environment. Social media is seen as a feature of Web 2.0 involving tools that are used to communicate in different settings such as one-to-many (blog or podcast) and many-to-many (wiki). A major feature of social media is that it enables people to connect together, providing a space in which they can interact and share ideas, experiences and knowledge. Such use of ICT and social media applications can be seen to encourage social networking (Buchberger et al., 2005) and active and inquiry-based approaches to learning. The course has utilised a range of software tools combined with a diversity of hardware devices which have been used to promote access to learning resources within an open and flexible learning environment. Furthermore the course content has been structured around the pedagogically orientated themes of My Learning, Collaborative Learning, Mobile Learning and Multimodal Learning which has each formed one module at Advanced (Masters) level and rated for credit under the European Credit Transfer System (ECTS). This course development has been led by Umeå University.
The framework for conducting action research has been designed in two phases, with the first phase (November 2008 to March 2009) consisting of action research planning and the second phase (March to May 2009) involving participants in carrying out their own action research projects. The first phase has been designed as a module on Action Research Planning and the second as a module in the form of an Action Research Project.

The Action Research Planning module has been structured around the process of action research planning. This involves the identification of the key developmental goals and research questions, research methodology and methods, issues related to research ethics, review of relevant literature and an activity plan. The course of study has been structured around a number of moments through which participants share their ideas and provide peer feedback to others. Each participant has had the support of an Action Research study supervisor in order to provide one to one tuition and support. The approach to the design of the course is based on a didactical design framework (Hudson, 2008a) which extends the traditional instructional and learning design models by addressing the complexity of the teaching-studying-learning process. Teaching is conceptualised broadly as the activity that teachers engage in whether as course designers, facilitators, coaches, mentors etc., whilst studying is seen as what students actually do and learning is seen as the outcome of these complex processes. In particular the aim is to focus attention on the design of teaching situations, pedagogical activities and learning environments. This approach is framed within a cyclical process of didactical design which involves analysis, design, development, interaction and evaluation.

The Action Research Project 2.0 focuses on putting ideas in action through conducting an action research project that involves the application of resources and tools which utilise Web 2.0 and social media applications by integrating them into the design and development of teaching situations, pedagogical activities and learning environments. Educational action research is seen as providing a framework for thinking systematically about what happens in teaching situations and learning environments, implementing action for change and monitoring and evaluating the effects of the action with a view to continuing the development for improvement. The submission of work for final examination will be through an Action Research Report and best papers will be selected for further refinement and publication in the e-Jump 2.0 Compendium of Research during autumn 2009.

**Theoretical Framework**

We are especially interested in the affordances and constraints (Greeno, 1994) of social media and Web 2.0 applications and also the success factors and obstacles associated with engaging teachers in active online learning communities. Affordances are seen as preconditions for activity and also as conditions for constraints. In thinking about the term activity, we take a starting point from the perspective of Vygotsky (1962) who wrote about activity in general terms to describe the personal and voluntary engagement of people in context - the ways in which they subjectively perceive their needs and the possibilities of a situation and choose actions to reach personally meaningful goals. In this context a social media application may be seen as seen as a technical artefact which
mediates human activity and interaction (Wertsch, 1994) and also as a medium for communication that provides affordances as a precondition for such activity.

In addition we are especially interested in better understanding the new learning environments that are made available through the use of ICT, social media and e-Learning 2.0. In particular we are interested in designing for social presence (Garrison and Anderson, 2003) and teacher presence (Hudson, 2008a) through the use of social networking applications. We are also interested in developing the “pro-active role of educational researchers and practitioners in designing and developing of these new tools in order to gain the better balance between technological and pedagogical dimensions of e-learning” (Hudson et al., 2005, p7) and also in the dialectical relationship between the development of the social and technical infrastructure (Hudson and Laanpere, 2009).

With regard to social networking, boyd and Ellison (2007) define social network sites as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. Unlike boyd and Ellison (2007) we do employ the term "Networking" which we see as relationship initiation within a specific community of practice and as a process for which it is possible to design in terms of affordances for the development of social and teacher presence and also for the development of online community (Hudson, 2005; Buchberger et al., 2005; Hudson 2006a & 2006b).

Furthermore we find the principles of ‘connectivism’ as articulated by Siemens (2004) as a potentially fruitful way of conceptualising the nature of the human activity that takes place, and the cultures which develop, within such digital environments. In relation to such, Brown (2002) has suggested a wider interpretation of a distributed learning environment, which he describes as a "learning ecology" that is defined as “an open, complex, adaptive system comprising elements that are dynamic and interdependent”. Furthermore, Siemens (2005) has described the main characteristics of such a learning ecology in that it is informal, tool-rich, consistently evolving, trustworthy, simple, decentralised and highly tolerant towards experimentation and failure. The action research that has been carried out within E-jump 2.0 project has had the aim of creating such a learning ecology that facilitates learning by facilitating the making of connections: connections between knowledge artefacts, people and tools.

**Research Questions**

Accordingly a number of questions will be addressed which will focus on success factors and obstacles and associated affordances and constraints in relation to the use of social media and e-Learning 2.0. The first paper focuses on teacher professional development for technology enhanced learning and the extent to which the use of social media and e-Learning 2.0 has provided affordances for teacher engagement in action research. The second paper will focuses on the reciprocal relationship between the technical and social infrastructure in the design and development process. Finally the third paper focuses on a case study of development for improving the student learning experience in a Sri Lankan context.
Methodology
The approach to the research is based on a Design Research framework as outlined in Hudson (2008b and 2008c). The role of research is seen as a process of critical inquiry that operates at a number of levels from the macro level of the wider system, such as the course or curriculum level, to the micro level of the teacher as a researcher. In this sense design research can be seen as giving direction for curriculum development and action research for teacher professional development and the improvement of classroom practice.

Data will be collected from a range of sources including questionnaires, interviews with participants, analysis of online communication and also of the documentation by participants of their own action research projects. At the time of writing this process is at an early stage but initial results from data analysis will be available at the time of the symposium together with the early outcomes from the action research projects conducted by participants, details of which are summarised in Appendix 1.

Conclusions, Expected Outcomes and Findings
We expect that this symposium will illuminate some success factors and obstacles in implementing the use of social media and e-Learning 2.0 in teaching situations and learning environments across a range of educational and cultural contexts. In particular we expect to highlight success factors and obstacles in relation to teacher professional development for technology enhanced learning. Furthermore we expect that a focus on the reciprocal relationship between the technical and social infrastructure in the design and development process will illuminate the affordances related to social and teacher presence and also the associated constraints. Finally we expect that a focus on a specific case study of development for improving the student learning will help to identify success factors and obstacles at the level of the daily practice of teachers and associated learning experiences of students in a context of the urgent need for improvement in the student learning experience.

Key words
Educational design, open learning environments, social media, e-Learning 2.0
Symposium to be held at ECER 2009 – The European Conference on Educational Research, University of Vienna, 28-30 September 2009.

References


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Symposium Organisation

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Hakim Usoof and Gihan Wikramanayake,
University of Colombo, Sri Lanka
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Yngve Nordvikelle,
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Paper Abstracts

Educational design for professional development: an inquiry led approach using the affordances of social media and e-Learning 2.0

Brian Hudson

This paper will outline an inquiry led approach to educational and professional development which aims to support research based practice by teachers in using the affordances of social media and e-Learning 2.0 in their own practices. The educational development as a whole is framed with a design research framework (Hudson, 2008b and 2008c). This includes a framework of action research which has been developed to support associated professional development and the sharing of practice amongst the participants through the documentation of small scale action research projects. Educational action research is seen as providing a framework for thinking systematically about what happens in teaching situations and learning environments, implementing action for change and monitoring and evaluating the effects of the action with a view to continuing the development for improvement. This paper will address the question firstly of the ways in which the use of social media and e-Learning 2.0 have provided affordances for teacher engagement in action research and secondly will focus on the nature of the associated constraints. In doing so, it will draw on data from a range of sources including questionnaires, interviews, analysis of online communication and also of the documentation by participants of their own action research projects.
Educational design for online social and teacher presence: the reciprocal relationship between social and technical infrastructure using social media and e-Learning 2.0
Mart Laanpere and Brian Hudson

In this paper we will outline our approach to the design of the New Technologies of e-Learning 2.0 course, which has involved four modules each with a pedagogical focus on ‘My Learning’, ‘Collaborative Learning’, ‘Mobile Learning’, and ‘Multimodal Learning’ respectively. We will also discuss how we have worked to establish the social infrastructure of the course and in particular the role and functioning of the social networking community environment that we have adapted to suit the needs of the course participants. In particular we will focus on the reciprocal relationship in the design and development process between the technical infrastructure and our aims for the social infrastructure. In relation to the latter, we have been especially interested in designing for social and teacher presence (Hudson, 2008a). This paper will address the question of the ways in which the design process has resulted in developing the intended affordances related to social and teacher presence and it will also address the nature of the associated constraints. In doing so, it will draw on data from a range of sources including questionnaires, interviews, analysis of online communication and also of the documentation by participants of their own action research projects.

Improving student learning through assessment for learning using social media and e-Learning 2.0 on a distance education degree programme in Sri Lanka
Hakim Usoof and Gihan Wikramanayake

This study is part of a larger study into assessment practices on a large distance education BSc programme in Information Technology (BIT) based at the University of Colombo, School of Computing (UCSC). The overall development in which it is set is co-ordinated by the national E-learning Centre of Sri Lanka based at UCSC. This project is supported through the Swedish Program for ICT in Developing Regions (SPIDER) involving a longer term study into summative assessment for the promotion of higher order thinking on the part of students working on the BIT programme. This programme involves annual enrolment of around 1500 students who work at a distance with variable levels of support from local study centres. The background context is one in which only 14% of qualified school leavers, approximately 120,000 students per annum, can secure a university place. The BIT degree lies outside the main state funded system, so that students do not receive financial support for their studies. Against this background there has been a continual process in place for improving failure and drop out rates through the use of technology enhanced learning. This has gone through three phases which has involved the introduction of a Learning Management System in the second phase and which most recently has involved the use of social media and e-learning 2.0 in the third phase i.e. the eBIT phase from 2006-07 onwards. This paper will address the question of the ways in which the design process has resulted in improving the student learning experience and in doing so will draw on data from students and teachers involved in the course.
### Appendix 1 Action Research Projects 2009

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<th>Country</th>
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