
Promoting collaboration in an international online learning community

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Abstract

This paper describes the background context of the International MSc in E-Learning Multimedia and Consultancy. The programme aims to develop the profile of "problem solver"/team co-ordinator at the interface of pedagogical, technological and organisational/cultural dimensions of development and these aims are reflected in the programme content. The origins of this development in a European Commission-funded project are outlined. An overview of the programme design is provided that emphasises peer and formative assessment practices and also of the pedagogical approach that aims to foster group collaboration in international teams. The features and benefits of the programme are described and supported by feedback and commentary from participating students. Finally some reflections are offered on potential future developments and suggestions are made for further reading.

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Context

The background context for this paper is the International Master's programme in E-Learning Multimedia and Consultancy that has involved an active partnership between the Arnhem-Nijmegen University of Professional Education (HAN) in The Netherlands, the University of Oulu in Finland and Sheffield Hallam University in the UK during the period of its development.

Designed for teachers, lecturers, trainers and people directly involved in the field of information and communications technology (ICT) and multimedia design and production, the programme is founded on a social perspective of teaching-learning that emphasises communication, interaction and collaboration. UK participants are able to work with participants from other countries in a unique online learning community. Three student groups, from the UK and The Netherlands, have embarked on this innovative programme since it was initiated in September 2000. There are currently over 40 students enrolled on the programme. They include primary and secondary school teachers, university lecturers in a range of subjects, IT and e-learning consultants, multimedia programme developers, police officers involved in training developments, a marketing manager, technical writer and computer engineer.

The need identified

The need for this programme was identified in 1997 through the market research of a group of European institutions closely associated with the Thematic Network for Teacher Education in Europe (TNTEE). This preliminary research was carried out in response to what was then being described as the "information society" phenomenon related to the rapid development of high technology use in all sectors of society. The particular contexts in which needs were identified were public and private sector education and training institutions and also small and medium-sized enterprises (SMEs).

In particular this market research identified the need for an advanced level programme that would seek to develop the profile of "problem solver"/team co-ordinator at the interface of pedagogical, technological and



organisational/cultural dimensions of development (see Figure 1).

Origins of the programme

In the light of this identified need, a group of ten institutions co-operated in developing a proposal to the European Commission for an advanced curriculum development (CDA) project that was submitted in Autumn 1997. Subsequently the project proposal Triple M – Master's in Multimedia Education and Consulting was approved by the Commission for three years from 1998 to 2001 and began in Autumn 1998. The project was co-ordinated by Pädagogische Akademie des Bundes in Ober-Österreich (PADB) in Linz, Austria and involved partner institutions in the UK, Finland, the Netherlands, Sweden, the Czech Republic and Spain.

The project funding enabled the network to meet on three occasions each year in order to share existing practice including content, approaches and structures. It also enabled the planning of a new curriculum that addressed the central aim. In particular the group agreed that the programme needed to support the development of individuals who are able to:

- demonstrate and communicate knowledge and critical understanding of pedagogical issues as applied to the use of multimedia in new learning environments;
- critically understand the social, organisational and cross-cultural phenomena related to new learning environments in a trans-national and cross-cultural context;
- appreciate and be responsive to the social and cultural impact of the information society in relation to values and working practices;

- act as effective mediators at the interface between the needs of users and providers;
- co-ordinate the efforts of multi-disciplinary teams in terms of problem analysis, design and implementation issues;
- be aware of the staff development needs of new users and an appreciation of the support structures and strategies for continuing development; and
- demonstrate a critical understanding of educational research and its role in relation to the provisionality of knowledge in a context of rapid change.

Content

The programme is structured around six modules that together make up 90 European Credits (ECTS) that are equivalent to 180 UK M-level credits. The structure is summarised in Figure 2.

The module on open and flexible learning environments aims to frame the overall programme by critically examining the elements and pedagogical principles of open learning environments, the relation between learning and technology in different learning environments and the role of technology in the construction of open learning environments. In recent years, new perspectives have emerged in relation to the application of technology to teaching and to the construction of learning environments. Distance teaching, which started in the form of correspondence courses, has developed new forms as a result of the development of information and communication technologies (ICT). This development has recently come to be labelled under the by now commonly accepted term e-learning. In addition to individual study, networks of groups of students engaged in learning communities at a distance have emerged. The utilisation of new technology as such has often been considered a pedagogical reform, but the real changes lie in the ideas of learning and pedagogical activity of teachers and education and training organisations. This module explores open and flexible learning environments in general as an important foundation for lifelong learning. When we examine, side by side, social development, the recent changes in the ideas of teaching and learning, in educational goals and ideas of

Figure 1 Interface of dimensions of development

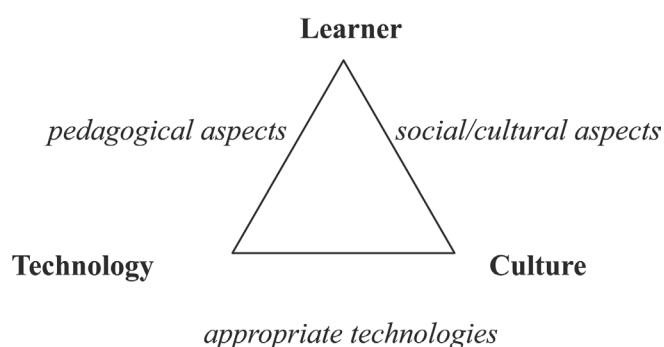


Figure 2 Programme structure

Open and Flexible Learning Environments (10 ECTS)	Digital Applications (10 ECTS)	Media	Communication Consultancy and Change (10 ECTS)
Research Methodologies (15 ECTS)		Project Studies (15 ECTS)	
(traditional) Dissertation or (research-based) Curriculum Development Project (30 ECTS)			

knowledge, and the rapid development in technology, together they create both the need and the opportunity for the development of new open and flexible learning environments. The module aims to provide a foundation in the pedagogical aspects of open learning environments/e-learning as a building-block for the project studies module subsequently.

Developments in systems and areas of application with regard to digital media applications are occurring daily and any study of the subject needs to have built into it an awareness of this situation of constant change and also a mechanism to monitor and reflect upon these developments. Against this background it is necessary to be responsive to constant and rapid changes to development and delivery systems and applications. However, those development and delivery systems and applications currently in widespread use will form the basis for this unit. The module on digital media applications (DMA) is designed to enable students to develop an overview and a critical appreciation of the development process and the potential and limitations of digital media applications. It focuses on developing up to date understanding and knowledge in the area of DMA. The study includes relevant developments in hardware and software, the design, development and evaluation of DMA products plus an appreciation of the application areas in which DMA products are used. The unit allows the students to gain a critical appreciation of the development process and also a better understanding of the potential and limitations of digital media applications through the development of

practical skills and critical analysis and evaluation. It aims to provide a foundation in DMA as a building-block for the project studies module.

With regard to the module on communication, consultancy and change, this aims at enabling students to analyse, develop and apply those communication and consultancy skills which are required to implement e-learning and digital multimedia initiatives in the education and training sector. It draws on communication theory, group dynamics, organisational analysis and strategic planning to help students develop an integrated approach to organisational change incorporating new learning technology. This module aims to bridge the gap between the technological and the human interface and stresses the "people skills" which underpin effective organisational development. It provides fundamental concepts and approaches in consultancy, communication and organisational change as a building-block for the project studies module.

The module on research methodologies aims to promote a critical understanding of various paradigms and methodologies in the conduct of educational research, in preparation for undertaking independent research for the dissertation module. It draws on traditions that give emphasis to research on processes of teaching and learning and to critical-communicative approaches to research on teaching and learning. It also aims to lay the foundation in research methods of particular relevance to pedagogical processes as preparation for the dissertation/curriculum development module.

Project studies aims to provide an opportunity for students to integrate their knowledge and skills in open and flexible learning environments, digital media applications and communication and consultancy practice through their practical application in a workplace setting. It aims to be an integrating module that combines the content of the three basic pillars of the programme, i.e. open and flexible learning environments/e-learning environments; digital media applications; and communication, consultancy and change. This is achieved through a developmental project that involves the practical application of the knowledge and skills gained, combined with a critical evaluation of the process and product. The project may be undertaken by individuals working individually or collectively, e.g. a group or team of people in the workplace focusing on a workplace development or on resolving a workplace issue or problem. The outcome of the module is a case study focusing on the workplace development, issue or problem involving DMA and/or OFLE development.

The final module offers the opportunity to undertake a traditional dissertation or a collaborative research-based curriculum development project. The former involves a systematic research project and the presentation of findings in a rigorous and critical manner. This module may build on the context of the project studies module. Students choose a suitable research focus, select appropriate research methods, undertake the research project and interpret the findings against a background of previous research in the field. Alternatively students may opt for a collaborative research-based development project, providing an experience of educational action research and development which reflects a more practice-oriented research environment than the traditional dissertation. This option is therefore more suitable for those who wish to engage in a larger study than could be provided through individual working.

Methods and approach

In designing and planning the programme considerable emphasis has been placed on enabling collaborative activity in multinational teams. In relation to this aspect

we make a distinction between co-operation and collaboration. Co-operative work is seen to be accomplished by the division of labour among participants, whereas collaboration involves the mutual engagement of participants in a co-ordinated effort to solve the problem together. Furthermore we see a key role of the technology as potentially affording new opportunities for collaborative learning and for supporting it in the development of knowledge-building learning communities. However, in our experience the keys to unlocking this potential are just as dependent on a range of other factors as on the particular technology. Amongst the characteristics that we are seeking to achieve is the purposeful engagement of autonomous and independent learners combined with well-orchestrated interdependence. By this we mean collaboration based upon genuine interdependence involving a shared sense of purpose, a division of labour and joint activity that is open to examination, elaboration and change by all within the peer group. Furthermore we see the achievement of this as involving the whole curriculum design, the selection of appropriate tasks and activities, pedagogical approaches and especially approaches to assessment.

A project- and team-based approach towards learning underpins the programme design which involves a gradually shifting balance from more supported and directed to more independent learning through the course of each unit. This is based on phases of working when engaged in project-based work, i.e. orientation and planning, working and reflecting and finally evaluation (Figure 3).

An international team-based project is a defining element of the programme. Produced through online collaboration in the digital media applications (DMA) unit, multinational teams design, develop and evaluate a digital media application to prototype stage.

The programme as a whole is framed within a virtual learning environment (VLE). At this

Figure 3 Project-based work process



time two VLEs are being used – first, Learning Community Profiler developed at the University of Oulu in Finland, and second, the more widely known Blackboard. The programme design aims to integrate three aspects of the study process as follows:

- (1) *Online learning* (the e-learning component). Project- and team-based online learning; online materials and discussion (available through the VLE); whole group activities and discussion; use of video and audio conferencing.
- (2) *Local studies* (the face-to-face component). Local group activities and discussion through seminars, workshops and tutorials etc.
- (3) *Independent study* (the individual knowledge acquisition component). Individual research, reading, writing and reflection etc.

These options (e.g. workshops, tutor-led input, mentoring, student support groups, including Internet-supported activities and other support through e-mail, face-to-face tutorials and computer/video conferencing) are offered in various combinations as appropriate to students' circumstances and preferences as well as in response to the availability of resources. The exact mix of activities for each student group is decided through tutor negotiation and collaboration across the different study centres.

Features and benefits

Increasingly we see one of the most significant aspects and the key to the successful promotion of collaboration to be in the particular approaches to assessment that underpin the programme. Special emphasis is placed on the importance of ongoing peer and formative assessment through the programme design and, in emphasising the promotion of collaboration, stress is placed on the notion of assessment for learning in contrast with simply the assessment of learning.

This is a central corner-stone of the approach of the programme team which might be captured by the distinction between the role of tutor as coach compared with that of simply being the assessor. Assessment practices are consistent with the characteristics of constructive learning and learner-centred support. Students are

encouraged to take responsibility for their own learning, including formative evaluation of both processes and outcomes.

Participating students attest to the seminal nature of the experience, as the comments below show:

A very valuable aspect of the learning process for project team members was the experience of achieving objectives through online collaboration. As an international group, the team was forced to develop strategies and skills to overcome the constraints inherent in working online.

Learning to work collaboratively meant more than just learning. It helped to build trust, develop communication and taught the group the value of reflection.

The three-way international creative collaboration was an unusual and exhilarating experience that resulted in some very off-the-wall ideas. As a team, we refined the art of brainstorming via Internet chat to perfection.

After three months studying in this international course my "hunger" to learn more about these subjects has only become bigger. One of the main reasons is the fact that studying in an open and flexible learning environment enables students to learn from one another and to profit from the experience and knowledge of each participant.

The programme has helped me to work with others to produce effective learning solutions as a collaborator and as a consultant. An understanding of change management is crucial in a field where both learning and technology refuse to stand still. The benefits of undertaking the programme have already fed back into my work and have contributed to my growing confidence.

Examples of work produced in international team-based projects

Some examples of international team-based project work produced through online collaboration in the digital media applications unit can be found at www.shu.ac.uk/msce-learning/project

Some of the accompanying descriptions from participating students are included below:

Myths and legends

Our project team collaborated to make Urban Myths; a Web application developed using Macromedia Flash. The main purpose of the tool was as an environment to help school-children draw out ideas from their own experience of the world for creative writing.

Starchild

The aim of this project was to create a virtual learning environment (VLE) for young children. This was an exciting opportunity for us to learn

and develop an understanding of VLEs, to design, experiment and learn about the way young children like to engage in educational activities, based on our own adult experiences of VLEs.

It was felt that a series of bright, humorous and colourful Web pages featuring short interactive activities would draw young learners into the environment. A software application called Dreamweaver was perfect for this.

Intuitive learning environment using multimedia

This project evolved from a collaboration between a group of four English and Dutch students. The initial idea focused on the needs of a real-life client (a Dutch catering company) to develop online training of sufficient flexibility to be responsive to the individual learning needs of its junior employees. On the English side was an interest in learning styles and how different styles might be accommodated online.

The project team decided to explore these issues by offering learners a diagnostic that would lead to a choice of online material about food hygiene in four styles: practical, logical, enthusiastic, and imaginative. As an example of practical learning online, a prototype virtual kitchen was developed as the basis for a hazard-spotting exercise.

Quizzes were used to promote formative learning and test participants' knowledge and understanding.

The face-to-face element is also seen to be a crucial aspect for providing student support and also for stimulating interaction between the learners. The greater the level of virtual communication, the greater the need has become for more face-to-face communication through an increased level of use of video-conferencing, for example.

The way ahead

Recruitment to the programme shows a steady increase over the three years that it has been running. At this time there are no students involved from Finland, though negotiations are under way to establish a firm and sustainable partnership with our partners at the University of Oulu. Another phenomenon is that we are attracting students at an international level who have substantial experience in the field of e-learning and also the necessary experience and academic background to claim advanced standing into the programme. Currently we have a student in Nijmegen in this category and have recently received applications from two very experienced candidates currently employed by the European School Net (EUN) in Brussels. The potential of this model for the addition of further local study centres is considerable and in the future we are interested in exploring the possibilities of working with more high quality partners at a national and international level.

If you are interested in a fuller account of the recent research undertaken while in the process of developing the programme, then you might like to read a paper by Hudson *et al.* entitled "Orchestrating interdependence in a multinational virtual learning community", which was presented at the European Conference on Educational Research, University of Lisbon, 11-14 September 2002 (visit <http://brs.leeds.ac.uk/%7Ebeiwww/BEIA/ecer2002.htm>).