



2003

An Online Dilemma: The Pull of Individuality Pitched Against Peer Collaboration In An Online Problem-Based Learning Group

Roisin Donnelly

Technological University Dublin, roisin.donnelly@dit.ie

Follow this and additional works at: <https://arrow.dit.ie/ltccon>

 Part of the [Educational Methods Commons](#), [Higher Education Commons](#), and the [Online and Distance Education Commons](#)

Recommended Citation

Donnelly, R. (2003) An Online Dilemma: The pull of individuality pitched against peer collaboration in an online problem-based learning group. *ED-MEDIA World Conference on Educational Multimedia, Hypermedia and Telecommunications, Hawaii, USA, June 23-28, 2003.*

This Conference Paper is brought to you for free and open access by the Learning, Teaching & Technology Centre at ARROW@TU Dublin. It has been accepted for inclusion in Conference papers by an authorized administrator of ARROW@TU Dublin. For more information, please contact yvonne.desmond@dit.ie, arrow.admin@dit.ie, brian.widdis@dit.ie.



An Online Dilemma: The pull of individuality pitched against peer collaboration in an online problem-based learning group

Roisin Donnelly

Learning and Teaching Centre
Dublin Institute of Technology
14 Upper Mount Street
Dublin 2
Ireland

Tel 00 3531 402 7886

Fax 00 3531 6767243

E.Mail roisin.donnelly@dit.ie

Abstract

In early 2001, a new Postgraduate Diploma in Third Level Learning and Teaching was launched for lecturers from a range of higher education institutions in the Republic of Ireland. This paper describes ongoing research undertaken for the re-design of one module out of the eight offered on the Postgraduate Diploma: the Online Learning (OL) Module delivered using the pedagogical strategy of Problem-based Learning (PBL).

This Postgraduate Diploma is entirely voluntary and only lecturers who are keen to implement novel pedagogical approaches in their own subject disciplines apply for a place on the modules. The aim of the OL/PBL module is to enable the participants to become aware of the practicalities of designing, delivering, supporting and evaluating an online module in their own subject discipline; over the two years of the module's existence, there have been a wide variety of subject disciplines represented. The key to any participant's success had been envisaged occurring through using the principles of PBL to share valuable information and collaborate with colleagues from a variety of other disciplines. However, two years further on it became clear to the designer/tutor that a conflict existed between the individual's right to learn online in their own time and at their own pace, and the obvious benefits of interacting with peers in a problem-based learning group.

Introduction

This paper presents a report of research undertaken for the re-design and continued development of a combined online and problem-based learning module on a postgraduate teacher education diploma in Ireland. The essence of the redesign centres on the collaborative learning aspect of the module being somewhat in conflict with individual differences of the various participants. Based on individual differences, adult learning emphasizes learner-centred instruction. But social constructivism contends that knowledge is constructed by social interaction and collaborative learning (McDonald and Gibson, 1998). That is, experienced individuals can help inexperienced learners by collaborative learning. In contrast, adult learners are characterised by taking control on their learning process and objective. As a result, when the teamwork of PBL collaborative learning was required on this module, the tutors experienced difficulty in taking into account individual learning objectives, preferences and capabilities.

Background and Rationale for Module Re-Design

The online delivery and support of the module was in WebCT, using a problem-based learning (PBL) approach; following two years running in this mode, a module review revealed that there were aspects to this that were not working. In more detail, the online delivery took the form of using a range of electronic resources and online asynchronous and synchronous discussion, to solve a problem-based learning scenario. There were a small number of face to face sessions strategically placed at the start and middle of the module to facilitate cohesiveness, good dialogue, quality tutorial input and individualised support. Jonassen *et al* (1999) believe that what computers can do best is liberate the student to explore, discover and create personal meaning from diverse sets of material in a proactive manner. They argue that technology should be used as an engager of thinking and knowledge construction rather than merely a transmitter of information.

Other research has shown that individual online learners have been seen to use the WWW for e-informing rather than e-learning. Many individuals undertaking a module with an online

component find these modules supporting processes such as rote learning or information retrieval, rather than engage in any collaborative group learning (Mioduser and Nachmias, 2001).

There are developments investigating whether an online tutorial can be used as a tool for learning, in addition to being a tool for delivery of information. Specifically whether online tutorials can be used to encourage participants to undertake prescribed readings, distinguish the evidence and arguments of these and relate the ideas to everyday experience through peer discussion online (Curtin, 2002). One suggestion is that participants who use online materials individually may be then searching for more opportunities to interact with their peers.

A very important aspect of the module re-design centred on the role of the facilitator. Hughes and Daykin (2002) have suggested that a move to online delivery needs a greater attention to design and development of facilitator skills than has been previously recognised.

The Module Evaluation Process

The re-design occurred as a result of a module evaluation of the first two years of its delivery. Both quantitative (online questionnaire) and qualitative (focus group) methods were used in order to explore the participants' experiences of this type of PBL/Online delivery. The evaluations addressed their perceptions about online methods as well as the educational implications of their patterns of usage of the online PBL resources. Despite being aware of the PBL nature of the module, a number of the module participants stated that they wished for the use of such learning technology to support the individual learner, by enabling them to learn in their own time and at their own pace. In addition, they wanted more organisation and tutor input than was present from PBL tutor facilitation. However, the review of the evaluations suggest that ultimately the participants were willing to overcome their initial reservations about working in a PBL group online as opposed to individually, provided that a radical re-design of the module could take place.

Every individual needs to be given the opportunity to improve until the learning experiences come to an end and reasonable accommodations for the participants' needs and desires are made. The tutor solicited feedback from the individual participants and listened throughout the entire evaluation process and was concerned about the participants' success.

The module re-design took all of the research outlined in this paper into account and now consists of a blended format using a combination of online and face-to-face delivery. Online participation is negotiated with the participants in their PBL group.

The Tutor's Role in a Blended Format

Some issues to be considered by the tutor included providing an effective induction, encouraging participation online, knowing when and how to make the resources available, how to make the PBL online group process visible both to the tutor and to the external examiner, and juggling the e-tutoring role with that of a face to face PBL facilitator. For this latter point PBL typically requires intensive contact between tutor and students, and this proved to be more difficult to implement online, particularly when problems of group dynamics arose. A major challenge for the tutor was to help ensure that each individual participant learns while also gaining the experience of working collaboratively.

With regards to the PBL group, the tutor kept participants aware of where they stand with respect to the module assessment process on a regular basis. The tutor gave the participant timely and quality feedback on their contributions to discussion, as part of the group process, along with their contribution towards the end product.

Conclusion

The principles of constructivism and engagement are used to create collaborative and authentic learning for individual participants on this module. The self-directed learning focus of PBL turns out learners who are motivated, know what they want to learn, set their objectives, find resources and evaluate their learning progress to meet their goals. Although the participants feel that there was an increased workload with the PBL format, they did appreciate that the pursuit of the learning goals was their own domain with the group performance being evaluated by peers. They also acknowledge that the self-directed learning trails that they found themselves on in the PBL group did lead to a greater awareness of interdisciplinary thinking.

The future focus of this module will be to concentrate on its design in order to scaffold the collaboration; the design will more adequately prepare individuals for collaborative work online, followed with collaborative activities conducive to reflective guidance of group interaction. Completing an individual reflective journal provides participants space in which to record, revise, and synthesise their thinking, producing artifacts that can be evaluated by the tutor, who gives formative, individualised feedback. After individuals can gain experience with the flow of activities in PBL and are thinking deeply about the problem, their collaborative work begins. The group meets online using the asynchronous feature of WebCT, that is designed to scaffold students as they organise their task, then synthesise, post and critique the results of their deliberations.

Many technologies can meet varied individual needs and each technology has its own particular instructional strengths. The re-design of this module needed appropriate selection and choice of a blend of delivery methods to meet the learners' needs. Thus the role of technology in this instance is the same as the tutor's: to be a facilitator in online learning (Huang, 2002).

References

- Curtin, J. (2002) WebCT and Online Tutorials: New Possibilities for Participant Interaction, *Australian Journal of Educational Technology*, 18(1), pp110-126.
- Huang, H. (2002) Toward Constructivism for Adult Learners in Online Learning Environments, *British Journal of Educational Technology*, 33(1), pp27-37.
- Hughes, M. and Daykin, N. (2002) Towards Constructivism: Investigating Students' Perceptions and Learning as a Result of Using an Online Environment, *Innovations in Education and Teaching International*, 39(3), pp217-224.
- Jonassen, D., Peck, K. and Wilson, R. (1999) *Learning with Technology: A Constructivist Perspective*. Columbus, OH: Merrill Prentice Hall.
- McDonald, J. and Gibson, C. (1998) Interpersonal Dynamics and Group Development in Computer Conferencing, *The American Journal of Distance Education*, 12(1), pp6-24.

Mioduser, D. and Nachmias, R. (2001) WWW in Education. In H. Adelsberger, B. Collis & J. Pawlowski (Eds.) *Handbook of Information technology for Education and Training*. Berlin: Springer Verlag.