

GOING ONLINE, CURRENT CHALLENGES AND POSSIBLE SOLUTIONS

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Abstract

This paper discusses the experiences of lecturers from the field of Science, Engineering and Technology in their move towards online teaching. The lecturers are all experienced distance educators, and acknowledged “innovators” for new ways of distance learning in their departments. The claim we make in this paper is that the move towards online delivery of modules has involved a significant qualitative change in the role of the subject matter expert. The team approach for the development of online delivery is promulgated throughout the literature and in the policies and procedures of the institution where the lecturers work. The reality is however quite different; the experience of the lecturers in this study is that very little concrete assistance has been forthcoming for online development. We explore possible reasons for this, and recommendations to improve team work.

Key terms: Online teaching, faculty workload, distance education; team based approach

Proposal

Much research has been done on the changes that the move towards online learning means to the faculty, in particular on barriers to adoption and faculty resistance. The increase in work load and time demands for faculty in online learning is well reported (see eg Lim, 2001). While most of the literature discusses the shift from face to face to online or blended learning, we discuss here rather the shift from lower generation to higher generation of distance learning. Further, the focus in this paper is with the time that it takes to develop online learning materials; we do not discuss here the time taken to participate in the subsequent facilitation of learning.

As the lecturers in this study already work in the distance education setting, they are used to working with a team involving instructional designers, and issues of autonomy

and the like, often reported as hindering the team approach, do not apply here. Likewise, in this case there is no resistance from the subject matter experts to using online learning or learner-centred pedagogies (in comparison to the issues reported for instance in Stevens, 2012 or Armellini and Jones, 2008.) Regardless, these lecturers found the move towards genuine online tuition very problematic, in ways that will be discussed.

In the previous generations of distance education, the role of the lecturer (subject matter expert) was that of creating content (whether instructional material, videotapes, or for multimedia) with the support from a team consisting of instructional designers, technical experts such as programmers, graphical artists etc as needed. Quite often module development was based on existing “templates” of acceptable courses, which further helped to clarify the roles.

In the new generation online tuition, designing for online delivery poses two main changes: Firstly, one needs to use a wider range of sophisticated delivery tools, which in turn necessitate new formats for content. Secondly, online learning involves a whole new learning pedagogy with emphasis on interaction, collaborative learning, and constructivist learning. This often means that the whole course needs to be re-conceptualised in its entirety (see Kang, 2001). Much more effort needs to go into preplanning of the course to ensure that course activities and the learner support offered do lead to mastering of the learning outcomes (see Mandernach et al, 2007; DeVries and Lim, 2003). The effect of these two changes is that instructional course design now also needs to consider instructional techniques, the delivery medium, methods of communication, and course management techniques. The “study material” that used to be the subject matter expert’s only concern is now often just background material, used only as a starting point of the true learning which is likely to be through asynchronous and synchronous interaction on the internet (see Passerini and Granger, 2000).

In principle, the team approach should still be able to work in this new setting, with subject matter experts receiving help from instructional VLE designers in the design of the course, and receiving help from technical experts for the creation of the environments. However, in our experience, backed up by interviews, this team approach does not seem to work well any more, and instead the subject matter expert is suddenly carrying a much larger responsibility for the entire course development.

This paper explores the reasons to why this could be, and what lessons could be learnt to improve the situation. Some reasons that may well have a bearing on this are the following:

1. Online module development seems to be much more subject-specific, in that the appropriate choices depend very much on the topic at hand. Thus, although good practices still exist, “templates” of good online modules are much more difficult to adopt across different disciplines – in particular when it comes to science, engineering and technology subjects. This places the burden of making the

correct choices largely on the subject matter expert, who is often the only person in the development team who knows the topic well enough to be able to decide what approaches would be the best choices.

2. The technologies used in online module delivery have changed drastically, in that the threshold of learning and using them is now much lower. Thus while in the past subject matter experts could remain ignorant of programming or multimedia and get experts to do the technical jobs, with the advent of web 2.0 applications and easy interfaces where anyone can be a knowledge producer the subject matter expert can often no longer credibly ask for technical assistance. Thus now the subject matter experts are obliged to produce blogs, create podcasts, digitise content into various formats (Passerini et al, 2000).
3. Linked to the previous point, there are no longer standard formats of content but rather a multitude of possibilities. Somehow in our cases it has fallen mostly on the subject matter expert to experiment with these formats. This has been in particular so in the areas discussed in this paper (computing, mathematics etc) where the peculiarities of the topics mean that the institution-provided solutions do not fit, and the subject matter experts have had to spend a lot of time in finding technical solutions.
4. With constructivist and learner-centred learning, the role of the subject matter expert is often that of sourcing material. Again this can only be done by someone knowledgeable with the contents of the module, with the conclusion that the job of doing the OER archive and internet searches fall on the subject matter expert; even if one can get someone else to do the searches, the subject matter expert still needs to evaluate them for appropriateness.

The net effect of these changes has been that the subject matter experts suddenly seem to be doing the vast majority of the work in online module development, with very limited assistance from the rest of the development team.

These problems might have arisen because the institute in question is not completely ready for the move to the online environment (which would mean that the difficulties arise simply because the lecturers in this study happen to be pioneers or “early adopters”), or they might reflect a genuine lasting change in the roles of lecturers, in particular in subjects which do not fall within the mainstream.

The paper will present systematic recommendations on how the authors believe the team work approach could be improved to enable a smoother ride to online learning development. The recommendations are based on the observed problems, the experiences of the lecturers in overcoming them, as well as a literature survey on existing frameworks for training and team work approaches and interventions.

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