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Authentic eDESIGN: An online professional development course for higher education practitioners

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In the field of education we have known for a long time, that people learn better when they are actively involved in the learning process.

However, many online university courses are still primarily information dumping grounds that foster student isolation and boredom.

A key challenge for university professionals is to identify how to construct more interactive, engaging and student-centred environments that promote 21st century skills and encourage self-directed learning.
I am using a design-based research approach to explore how to improve the quality of online university courses. At last year's WAIER Forum (2011) I presented an overview of the design-based research approach I am using for this study.

**Four phases of design-based research**

A qualitative design-based research approach was employed to explore possible solutions for designing and implementing effective online higher education courses based on a social constructivist model of learning (cf. Parker, 2011). Design based research, like action research, is accomplished at the coal face, however, it involves an ongoing iterative process to monitor the effectiveness of a specifically designed artifact (Kelly, 2006).

Phase 1 – Analyse of problem. Literature review and consultations with practitioners to identify possible solutions.

Phase 2 – Design & develop practical solutions

Phase 3 – Implement & conduct effectiveness evaluation to refine the proposed solution

Phase 4 – Reflect & produce design principles that can be shared with others

You can find out more about this on my research website:
Discussions with my peers revealed many lecturers would like to make their courses more interactive and engaging but felt they lacked the knowledge, skills, time and encouragement to do so.
Phase 1 – Existing research

The use of real-life tasks, supported by new technologies and open access to the vast array of educational resources on the Internet has the potential to improve the quality of online learning.

**Existing research** suggests the use of real-life tasks supported new technologies and open access to the vast array of educational resources on the Internet has the potential to improve the quality of online learning.

**The aim of my research** is to test the effectiveness of this learning approach and to develop and publish guidelines that will assist other educators to use this real-life approach.
Develop an authentic online professional development course for university lecturers where they can:

- Experience online learning from a student’s perspective
- Use the guidelines to create their own real-life learning courses
- Explore how new technologies can support student learning
- And network with their peers
Herrington et al.’s authentic learning design framework (2010, p. 128) was extended to include learning objectives and identify components of the course that need to be situated within a protected environment (for reasons of confidentiality). This extended framework provided overall guidance for the design and implementation of the course (see Figure 1) and was also used as a support resource to assist participants to design their own online course. Herrington et al.’s elements of authentic learning (2010, p. 18) and elements of authentic tasks (2010, pp. 46-48) were used to ensure the course and task design adhered to authentic learning principles.
The course was implemented using a Moodle LMS and an open companion website created on Google Sites.

The LMS acted as the central hub for course announcements and provided a protected environment for the confidential components of the course. The companion website was the primary learning environment and contained detailed task instructions, course content, task and support resources.

- Orange arrow, once students have access the LMS they can bookmark the companion website and go directly to this site if they desire.
1st iteration: Design

Context
Imagine your university has asked you to convert an existing online or classroom course in your area of teaching to an online course based on authentic learning principles where students use new technologies as powerful cognitive tools to learn and demonstrate their achievement of the learning objectives.

Task
Plan an authentic online course for your area of teaching in higher education, create a detailed course outline and present an overview of the course to your colleagues.
Because of the nature of the course tasks, you will work largely to your own schedule. However, the schedule below is a good indication of the weeks you might devote to the course activities, in order to complete the course tasks by the due dates.
Fourteen people (2 males and 12 females) from three universities commenced the course. Seven people (1 male and 6 females) did not complete the week 1 and withdrew citing lack of time due to high workloads as the reason.

Six participants (1 male and 5 female) from two universities completed the course.
Companion website – Jan 2012

https://sites.google.com/site/authenticedesign/home
Evaluation methods

A full analysis of the data collected from the first iteration of the course had not been completed at the time of writing; however, data analysis of the anonymous online course evaluation conducted at the end of the course and facilitator reflections has been completed to identify potential improvements for the second iteration of the course. Five participants completed the online course evaluation questionnaire which included thirty-five closed questions (using a four point scale) and two open short answer questions. All participants responded positively to twenty-eight of the closed questions and only one person disagreed with the remaining seven closed questions.
In response to the question: What did you think were the strongest aspects of the course?

One person responded “I was able to redevelop my unit plan and activities in my online unit as part of the course...ready for semester one”. Another commented on the flexibility of being able to control the pace of their learning “the online aspect of the unit allowed me to complete the tasks at my convenience”.

Access to new technologies was another positive aspect identified by a couple of participants “the opportunity to develop my units with more consideration of how technology can support learning” and “appropriate technology choices”.
Responses to the question: What areas do you think could be improved? identified a few areas for improvement. One person stated “the blogging was difficult as I struggled a bit with the purpose” and another advised “3 hours a week was nowhere near enough time to allocate”. Participant workloads were also an issue “because I was so busy, I would have liked the course to have one less element to complete – I didn’t complete the video (which I feel guilty about)”. A constructive suggestion about the use of the Diigo, Skype and Google Docs technologies was offered by another participant “I wonder if these could have been introduced with a brief, specific activity that both familiarize us with the technology and demonstrated its usefulness to our learning”.

Participant responses and facilitator reflections from the initial course were mapped against the elements of authentic learning and recommendations were identified (see Table 1) for improving future iterations of the course. No issues were identified for the following elements: authentic context, expert performances, multiple roles and perspectives, articulation, coaching and scaffolding or authentic assessment.
Conclusion

A major challenge for instructional designers and practitioners for implementing authentic online learning is aligning the critical components of authentic tasks with effective learning principles (Herrington, et al., 2010).

Immersing practitioners in the theoretical environment they are learning about has the potential to change existing online teaching practices (Maor, 2003) using a bottom up approach (Oliver, 2005).

This online course provided practitioners with the opportunity to learn and use an authentic learning framework to assist them to address this challenge.

The preliminary data analysis appears to support Maor and Oliver’s conclusions as most participants agreed the authentic learning approach was an engaging and effective method of learning that provided them with new skills and ideas that they are keen to explore in their own courses.

However, lack of time due to high workloads and little recognition for improving teaching practices is still a major barrier for practitioners being able to take advantage of these professional development opportunities. If universities wish to improve the quality of existing online courses, this barrier needs to be addressed at an administrative level.