

How Do We Design Inspiring Online Vocational Courses?

Anouk Janssens-Bevernage, The Open Polytechnic of New Zealand
anouk.janssens-bevernage@openpolytechnic.ac.nz

Sue Dark, The Open Polytechnic of New Zealand
sue.dark@openpolytechnic.ac.nz

INTRODUCTION

There are many in the education and training sector who continue to be pessimistic about the effectiveness of e-learning for vocational education and training, and it is with good reason. Packaged course content and hyperlinked text, all masquerading as “learning experiences”, go some way toward explaining the continuing frustrations. So what are the reasons for this ongoing “poor perception” of the effectiveness of e-learning and why don’t we seem to be learning from the issues raised?

Research on adult distance learning and the factors that make for successful learning design is abundantly available (Mayes & de Freitas, 2007). However, we don’t see these theories being employed significantly by instructional designers in e-learning courseware. In this paper we explore some of the key reasons why we think e-learning often isn’t working for vocational adult education. These reasons include: the focus on content rather than on authentic contextualised activities, which support the development of practical “real-life” skills; the failure to design good online facilitation to support collaborative online team work; uninspiring learning experiences; and a lack of good scaffolding to support and orient learners in their learning journey.

We suggest that a continuing gap in online adult education is the lack of good instructional design guidelines that focus on the pedagogy and are meaningful to an educational or training practitioner. We invite the reader to consider six simple design principles based on our synthesis of good practice in the available literature and on the authors’ experiences in designing and facilitating e-learning for adult learners.

DESIGN PRINCIPLE 1: CREATE AUTHENTIC LEARNING CONTEXTS

Whenever possible, we recommend that activities should be developed in contexts that refer to the intended purpose of the learning. Oliver (2000, p. 4) proposes choosing meaningful contexts for the learning so that “the information becomes purposeful”.

An early childhood course design project at The Open Polytechnic of New Zealand illustrates this point well. For this course it did not make sense to simply present content on science, technology and maths. Instead, we asked how the teachers could learn the subject in a way that enabled them to assist children in their application of science, technology and maths in everyday activities; in the sandpit or on an outdoor walk. The early childhood teacher needs more than the facts – they need to know how to conceptualise those facts in ways that children will understand. If there is a separation between learning and the real world, the adult learner quickly disengages and becomes a passive learner. The solution was to develop a “day in the life of” context that would support an authentic learning experience.

The course page (in the Moodle Learning Management System) is titled “A day in the life of . . .” and uses as an example an early childhood teacher named Jane. The children in her early childhood setting keep asking questions along the lines of “Why is the moon out during the day?” These questions form “learning incidents”, which are the basis for the design of the activities in the course. They are starting points for the students to find out about particular scientific topics (just-in-time information) and to (collaboratively) come up with possible answers. This facilitates more than simply learning the “theory” – they simulate the practical ways in which early childhood teachers have to translate complex explanations into descriptions at the right level for each child. A context helps these learners to “apply” their knowledge in a safe environment.

There are many other ways in which we can develop contexts for learning. However, from our experience these contexts are central to the design process and the design of authentic learning activities and so must not be developed as an afterthought.

DESIGN PRINCIPLE 2: THINK “ACTIVITIES” BEFORE CONTENT

It's all too easy, especially if you are a subject-matter expert, to initially focus on the “content”, rather than the learning activities that might underpin the learning objectives. The next step is all too often to copy and paste into some html pages, with some “Next” and “Back” arrows and maybe some nice graphics or media alongside. This is the content trap, as Johnson (2005, p. 3) notes:

Alas, the large majority of the world's SMEs [subject-matter experts] continue to define content in terms of all the topics that learners might ever need to know, with the result being courses that focus on the inhalation and regurgitation of work-related facts and concepts.

This kind of approach perpetuates pessimistic views of e-learning. As Oliver (2000, p. 1) explains:

A significant proportion of online material is not very good. While the materials give a favourable appearance and often use the full extent of the capabilities of modern technologies, when judged from a teaching and learning perspective, they fail badly.

Knowing the subject-matter is necessary, but it doesn't mean that's where we start the instructional design process. Going back to some of the basic premises of adult learning, it should be learner-focused, practical and based on relevant authentic activities (Chickering & Gamson, 1991).

When embarking on learning design, we suggest educators think first about what the learner has to be able to do. They should then devise some authentic activities and tasks to support the learning process. Finally, they should think about what content resources learners may need access to in order for them to accomplish those tasks.

A focus on tasks helps in designing inspiring e-learning, but just any task won't do. Authentic tasks lead to different ways to get to a solution and may have many acceptable outcomes. Oliver (2006, p. 5) suggests that tasks should be open-ended and ill-structured. Many case studies, problems and scenarios are developed with good intentions, but are still very uninspiring. We recommend thinking about adding fun, drama or controversy to get your adult learners hooked.

Using authentic activity-based approaches, content is broken down and delivered at the point when the learner needs it. The positioning of content is crucial to make the learning experience engaging. “Deliver training just in time or when the learner has just failed and really needs help,” writes Roger Schank (2002, p. 75).

It is far more important in today's society and workplace to have the skills to learn, adapt and transform learning to new situations than to just be able to regurgitate facts. Content is available to many learners and is just a click away, especially with the increase in open educational resources such as the Wikieducator project (www.wikieducator.org) and the New Zealand Open Educational Resources project (<http://oer.repository.ac.nz>). In our view, it's becoming increasingly unacceptable, from the perspective of adding value to sound learning experiences, for any course today to aim at simply covering “content”.

DESIGN PRINCIPLE 3: COLLABORATIVE ACTIVITIES NEED TO BE DESIGNED FOR TEAMWORK; THEY ARE MORE THAN JUST DISCUSSIONS

Not every course requires collaborative work or a social constructivist approach. The plumber and gasfitter fixing our pipes would normally go through systematic instruction and we hope they have not constructed knowledge without thorough assessment according to predefined

standards (Janssens-Bevernage, Sevelj, & Dark, 2006, p. 10). There is not much added value in trying to make this a collaborative learning process.

Yet we posit that online collaborative work can support many skills often needed in today's workplaces. Whether your learners will need to sell products or services online, negotiate a project proposal with people on the other side of the world, or design the latest car with a geographically distributed team, they will need online communication and collaboration skills to make their work successful.

In our view, there are many courses in which teamwork would improve the learning outcomes. That is, if the teamwork is well designed and facilitated. We do not advocate including a discussion forum as an afterthought to content development. Typically this results in a mere sharing of opinions, rather than a team task.

"Including collaborative activity in an online course is probably the best way to tap into all learning styles present in the group" (Palloff & Pratt, 2003, p. 36). Learners complement one another and check out their assumptions and preconceived ideas. This is important for the development of the critical thinking skills so important to adult learners. In groups they can also co-create knowledge and meaning. There is typically more reflection when learners work in groups, which leads to deeper learning.

Interesting online discussions don't just happen and collaboration does not automatically lead to learning. Online collaboration needs to be carefully designed to reflect the active learning that is often promoted by e-learning literature.

We use the following design principles to create engaging online group work:

1. Design well-structured meaningful tasks.
2. Clearly describe the expected deliverable (and, where appropriate, how marks will be applied and weighted).
3. Give a deadline.
4. Give students clear directions.
5. Develop clear strategies for group composition (including team roles).
6. Explain your rationale to the learners (why is group work important for them?).
7. Explain how the group task supports the learning objectives of the course.
8. Grade the activity (we recommend asking learners to make reference to contributions in group work in their individual assessments rather than assessing the group as a whole).
9. Design a feedback strategy that is motivational for all learners involved.
10. Drama and controversy make learning more exciting and it should always be fun (Janssens-Bevernage, 2006).

To enhance learning we recommend that the focus should be on work, not discussion. This is true for any course, and even more so for vocational training. The use of the technical name "discussion forum" may be the cause of this major misunderstanding, but discussion is a means to an end. Very often online course designers fail to define this end. Good face-to-face facilitators who get learners to work in small groups in their classrooms do not do this so that they will simply "discuss" an issue, but rather for them to create something tangible. Why do we so often forget this principle of good classroom facilitation when we are teaching online?

Managing collaboration on an authentic task among online learners requires a clear design and facilitation strategy so that adult learners can take over, while the teacher moves to a position of facilitator and can focus on meaningful feedback.

DESIGN PRINCIPLE 4: INSPIRE YOUR LEARNERS; MAKE VOCATIONAL LEARNING STIMULATING AND FUN!

"You remember best what you feel the most," writes Roger Schank (2002, p. 73). "That's why dry, lifeless manuals and lectures are instantly forgettable. It takes the emotional intensity of experience – or a simulation of that experience – for stories to stick."

In (good) face-to-face training the facilitator uses emotions so that learners get “hooked” into the learning activities, engage with what needs to be learned (the content), and become motivated to take ownership of the process. In our experience, e-learning developers tend to overlook the emotional component, resulting in the design of uninspiring courses that disengage learners. Quinn (2006, p. 3) writes: “Instructional design today is essentially completely focused on the cognitive . . . We do not systematically engage motivation, address anxiety, or really inspire learning”.

Inspiration does not come about through adding media or using technology. We posit that there is a lot of misunderstanding about the real meaning of interactivity. It does not mean a click of the mouse to change a colourful screen. It means getting students involved with their learning. “Materials that are interactive change when a learner touches them. They’re even more effective when they require learners to employ higher thinking skills to get the result they expect out of the interaction” (Neidorf, 2006, p. 108).

“Open your e-learning course with a Bang,” adds Roger Schank (2002, p. 82), who states that “the best way to break through resistance and apathy is with an opening that’s immediately involving and fun. This is not a natural training instinct. Most courses begin with a long and boring introduction about why you’ll learn what you’ll learn”.

As educators, we are competing in a world in which individualised entertainment possibilities through digital games, television, the Internet and mobile phones are ubiquitous. We suggest that educators consider how much emotional stimuli can be used to enhance engagement with learning, just as it does everyday life experiences.

DESIGN PRINCIPLE 5: USE SCAFFOLDING AND APPROPRIATE LANGUAGE TO SUPPORT AND GUIDE YOUR LEARNERS THROUGHOUT THEIR LEARNING EXPERIENCE

We should never assume that the learner knows what to do, when to do it and why. If the designer presents a list of content links, how does the learner know where to click, or in what order or, what is expected?

The advantage of dynamic classroom dialogue – in which we can quickly intervene when a learner is unsure, or vary our tone, level and style of language – is missing in an e-learning environment. However, with a limited ability to provide support “on the fly”, we suggest it’s even more important to think hard about the way we guide learners from one activity to another, as well as to the supporting resources. The “voice” of the person supporting and guiding the learner still needs to be there – just as it is in the classroom, so remember to build this “dialogue” into your e-learning design script.

Support for learners in terms of how to complete a task is important. From our observations, learners can quickly feel unable to complete tasks if their mental models from previous learning experiences are different to the approach required. This often happens when problem-based learning approaches are introduced. This issue can arise at any level.

The importance of scaffolding in problem-solving tasks is commented upon by Bricknell and Herrington (2006, p. 539) in their study of what needs to be provided to support this type of activity. They state that:

For learners to be successful when developing solutions to complex, ill-structured problems they must engage in strategic thinking which includes use of procedural steps, having strategies for identifying and meeting sub-goals, and using metacognitive strategies for directing, monitoring and evaluating individual learning. Several studies have demonstrated that learners need to be supported in acquiring these skills.

In an online environment, our advice is that essential information that guides learners’ participation should be moved up front, where the learner can see it from the start of their engagement with the course, not simply when they reach a task. This is one of the advantages of a learning management system like Moodle, which allows you to provide part of the scaffolding in the form of structured text-based support (labels) directly on the course

home page. We also suggest repeating essential information – don't take it for granted learners read all the instructions. If you have something important to say, then say it often in different places.

"Although adults fare better in situations where there is more ambiguity, it should not be assumed that structure is unnecessary. When working online, not providing structure and leaving things to chance can mean the demise of the course" (Palloff, & Pratt, 2003, p. 35). Where did we come from, where are we going, what are we doing now and how does that fit in the overall picture? The aim of sharing this information with learners is to reduce anxiety while retaining motivation.

We cannot overestimate the importance of the way we write. Writing should not just be instructional, but also motivational. Long sentences are difficult to follow, especially on screen. Shorten your sentences to subject, verb and predicate. We suggest working towards a written style that sounds like a speaking voice and use the conversational style (I and you).

DESIGN PRINCIPLE 6: CRAFT INSPIRING, MEANINGFUL LEARNING OBJECTIVES IN LANGUAGE RELEVANT TO YOUR AUDIENCE

Too often learning objectives are written for institutions, not learners. We would argue that in an open or distance learning context learning objectives have to be meaningful, relevant, and above all "inspiring". This is so that the learner really understands and "buys into" the learning experience. There is no one else around to embellish these ideas and energise the learner, so we instructional designers have to!

Quinn (2006, p. 4) says that writing learning objectives is more about marketing than about education. He proposes, "don't just *demonstrate*, rather, *exaggerate* the consequences of not having the knowledge", to get the learners interested. Learning objectives that sell the rest of the learning activities should hook in your learners. You may even want to extend the "objectives" section with some kind of initial "hook" event. Quinn has used cartoons to exaggerate consequences humorously. Allen (2003) used a disaster movie and humour to get flight attendants hooked into their procedure training.

For the Open Educational Resources New Zealand project, The Open Polytechnic e-learning instructional designers rewrote the official objectives provided by the standards authorities to create some "hooks". They were rewritten to appeal to the adult learner using short inspiring statements emphasising "real-life" benefits and reasons to learn (Open Educational Resources, 2006).

CONCLUSION

We have stopped at six design principles in this paper. However, there are many more "essential ingredients" we could add, to create a recipe that helps practitioners use e-learning to greater effect.

The major concern we have raised in this paper is that too much e-learning today focuses on content and not the pedagogy. The ease with which technology enables anyone to put content online is resulting in a digital form of the "instructor-centred" teaching and learning paradigm. The only engagement for the learner seems to be the "Next" and "Back" navigational controls.

Vocational learning – like any learning – is about more than providing content. It is about empowering the adult learner with skills and knowledge that can be transferred to the new problems and challenges they encounter every day.

To meet the needs of learners we urge instructional designers to be guided by the kinds of design principles we have suggested in this paper – the employment of authentic, contextualised activity-based learning strategies that are supported, meaningful, relevant and above all inspiring.

Instructional designers have a key role to play in building far more than content, as Quinn (2006, p. 6) notes:

At core, you want to design experiences, not just learning. You can't make learners learn, you can only create environments that are conducive to learning, and to increase the likelihood of success, you'll want to engage learners emotionally as well as cognitively.

Designing e-learning courses requires an upfront investment of effort to make them work for our learners. We hope that these design principles offer some practical tips for educators to support that effort.

REFERENCES

- Allen, M 2003, *Michael Allen's Guide to e-Learning: Building Interactive, Fun, and Effective Learning Programs for any Company*. Wiley, New York.
- Bricknell, G & Herrington, J 2006, 'Scaffolding learners in authentic, problem based e-learning environments: The geography challenge'. *Australasian Journal of Educational Technology*, vol. 22, no. 3.
- Chickering, A & Gamson, Z 1991, Fall. 'Applying the seven principles for good practice in undergraduate education'. *New Directions for Teaching and Learning*, p. 47.
- Janssens-Bevernage, A 2006. *Designing engaging online group work*. Available from: <<http://eduforge.org/blog/blog.php?/archives/254-Designing-engaging-online-group-work.html>> [25 April 2007].
- Janssens-Bevernage, A, Sevelj, M & Dark, S 2006, July. 'All e-learning in the same basket? Challenging a social constructivist fit for all'. Paper presented at the DEANZ 2006 Conference, *Enabling e-learning Approaches in C21*, Auckland University of Technology, Auckland, New Zealand.
- Johnson, T 2005, May. 'The nine too-often-neglected principles of e-learning design'. *The E-learning Developers' Journal*. Available from: <<http://www.elearningguild.com/showfile.cfm?id=1114>> [3 July 2005].
- Mayes, M & de Freitas, S 2007. 'Learning and e-learning: The role of theory', In *Rethinking Pedagogy for a Digital Age: Designing and Delivering E-learning*, eds H Beetham & R Sharpe, Taylor and Francis, Abingdon, England.
- Neidorf, R 2006. 'Teach beyond your reach – An instructor's guide to developing and running successful distance learning classes, workshops, training sessions and more'. Medford, N.J. CyberAge Books, 2006.
- Oliver, R 2000. 'When teaching meets learning: Design principles and strategies for web-based learning environments that support knowledge construction'. In *Learning to Choose: Choosing to Learn*, Proceedings of the 17th Annual ASCILITE Conference, eds R Sims, M O'Reilly, & S Sawkins, Southern Cross University, Lismore, Australia, pp. 17-28.
- Open Educational Resources. 2006. Available from <<http://oer.eduforge.org>> [27 April 2007].
- Palloff, R, & Pratt, K 2003. *The Virtual Student – A Profile and Guide to Working with Online Learners*, Jossey-Bass, San Francisco.
- Quinn, C 2006, April 3. 'Making it matter to the learner: E-motional e-learning'. *The eLearning Guild's Learning Solutions e-Magazine*. Available from: <<http://www.quinnovation.com/eMotional-eLearning.pdf>> [27 March 2008].
- Schank, R 2002. *Designing World-class e-Learning: How IBM, GE, Harvard Business School, and Columbia University are Succeeding at e-Learning*, McGraw-Hill, New York.