

# Inspiring online courses: some practical design approaches

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***Abstract:** There are many in the education sector who continue to be pessimistic about the effectiveness of e-learning, and it is with good reason. Packaged course content, hyperlinked text, and countless monotonous html pages, all masquerading as 'learning experiences' go some way to explain the continued frustrations around e-learning. So what are the reasons for this continued 'poor perception' of the effectiveness of e-learning and why don't we seem to be learning from the issues raised?*

*There is in fact a plethora of literature about e-learning theory and good practice, and yet we don't see this significantly affecting the practical approaches by educators. This paper briefly explores some of the key reasons why we think e-learning isn't working. These reasons range from an insistence on content-driven approaches, to a lack of 'emotion' in e-learning. In response we offer some key design principles or recommendations, which, while most often simple, can help an educator to adjust their thinking and approach, enabling them to design learner-centred, engaging and inspiring courses. These principles have been formulated from the literature available, from the authors' experiences over many years, and from a consolidation of thoughts during the recent 'Open Educational Resources NZ project'.*

## **Introduction**

Many people in the educational and training sector continue to be pessimistic about the effectiveness of e-learning. And it is with good reason! We continue to see lots of content and information resources delivered online, many of which do not add any more value to the learning process than if the learner were to go onto the Internet and simply find the information for themselves. There is a big difference between learning and reading content. Learning is an experience and e-learning can only be effective if we create experiences instead of content.

In recent years there has been a rising tide against what we would describe as 'hyperlinked instruction'; lists of links to html pages with lots of text, maybe even some flash to enable click and reveal text boxes, possibly a graphic or two, and links to further information. In other words, content with hyperlinks, masquerading as

‘interactive, effective online learning’. For many educators, but even more importantly, for learners, this is exasperating. So why is it continuing to happen?

To answer this question, the authors draw on the experiences of many others in the literature, and their own experiences; in particular a recent project in New Zealand: the Open Educational Resources project. We suggest that one of the key reasons is the lack of good instructional design guidelines that are practical and meaningful to an educational or training practitioner. In this paper we wish to explore the reasons why e-learning instructional design isn’t meeting our learners’ needs today, and from our experience propose simple design principles to guide the educator’s online learning design.

### **Reason 1: Content- and technology-driven learning design**

It’s easy, especially if you are a subject matter expert, to fall into the trap of starting the design process by listing out the ‘content’, just like the chapters of a book. Pleased that everything is covered, the next step is all too often, ‘a 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 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. (Johnson, 2005, p. 3)

This kind of approach perpetuates pessimistic views of e-learning. As Oliver notes:

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. (Oliver, 2000, p. 1)

### **Design principle 1: Think ‘activities’ first**

Knowing the subject matter is necessary, but it doesn’t mean that’s where we start when thinking about our learners and how they will learn. 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 starting a learning design, we suggest educators think first about what the learner has to be able to do. Once that is clear, then devise some authentic activities and tasks to support the learning process, and finally think about what content or knowledge the learners may need access to in order for them to accomplish those tasks.

In the Open Educational Resources project NZ the Open Polytechnic of New Zealand project team used ‘concept maps’ at the start of the design process. In these maps activities were mapped out first, after defining what the learner should be able to do after the learning experience. The maps reflected inter-linking and relationships, and provided a ‘big-picture’ view to all project team members about what content and

media would need to be developed to support the required activities. The concept maps helped to support an activity- rather than a content-driven approach.

A focus on tasks is essential to 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) indicates that tasks should be open-ended and ill-structured. Many case studies, problems and scenarios are developed with good intentions but are still very boring. We also recommend thinking about adding fun, drama or controversy to get your learner hooked.

The process of how a learner came up with a certain solution is more important than the solution itself. This is called the metacognitive skill of learning. It is far more important in today's society and workplace to have good metacognitive skills than just to be able to regurgitate facts. Content is widely available to our learners and is just a click away. The extent to which knowledge is multiplied every day is mind-boggling. In our view, it's becoming increasingly unacceptable, from the perspective of adding value, that any course today would aim at simply covering 'content'.

Our models of learning need to change to encourage this reflective, practical approach to learning. This idea is taken one step further by George Siemens (2004, n.d.) in his 'Connectivism' theory:

Connectivism is driven by the understanding that decisions are based on rapidly altering foundations. New information is continually being acquired. The ability to draw distinctions between important and unimportant information is vital. The ability to recognize when new information alters the landscape based on decisions made yesterday is also critical.

When content needs to be delivered, the timing 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).

## **Reason 2: Learning experiences are not tied to authentic real-life experiences**

Why would early childhood teachers have to learn science by going through a list of science topics that happens to be the curriculum? Will learning a list of science topics actually assist them in how they need to engage with children and the application of science in everyday activities, for example, discussions in the sandpit or when looking at a rainbow? How does reading about science help them to develop any skills to apply this knowledge in the context of their future workplace? Because of this clear separation between learning and the real world – and don't be mistaken, the learner picks this up immediately – the learner disengages and becomes a passive learner. The early childhood teacher needs more than the facts; they need to know how to re-conceptualise those facts in ways that children will understand; to apply these facts in a real-world context. We suggest that without this, courses lack relevancy, become boring and the learning experience dreadful.

This is only one of the many examples of courses where learning experiences are not tied to authentic real-life experiences.

## **Design principle 2: Create meaningful learning contexts**

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

For example, this is how we designed the science course for early childhood teachers mentioned earlier:

The course page (Moodle) is titled “A day in the life of...” an early childhood teacher called 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’; 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’, but simulates 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. The “day in the life of...” model is easily presented in a Learning Management System (LMS) like Moodle, with the course page structured as an overview of the day.

There are many other ways in which we can develop contexts for learning. However from our experience these contexts must not be developed as an afterthought in the design process. They are central to any design effort in good practice online course development.

## **Reason 3: Collaborative online activities are not designed for real world teamwork and lack purpose for the learners to engage**

Not every course needs to include collaborative work. If the course aims at the development of specific practical skills only (learning how to use software for example), there is not much added value in trying to make this a collaborative learning process.

Although often promoted in e-learning literature, social-constructivism should not be the foundation learning theory for every course with e-learning components. The plumber and gasfitter fixing our pipes should have gone through systematic instruction and we hope they have not constructed knowledge without thorough assessment according to pre-defined standards (Janssens-Bevernage, Sevelj, & Dark, 2006, p. 10).

Yet we posit that online collaborative work should develop the communication skills needed in many of today’s workplaces. Whether your learners will need to sell products or services online to clients they will never meet, whether they will have to negotiate a project proposal with people on the other side of the world, or whether they will 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 where teamwork would improve the learning outcomes. That is, if the teamwork is well designed and facilitated.

Often online courses seem to have included a discussion forum as an afterthought. Typically the task is a mere sharing of opinions, rather than a team task. With the requirement to post at least once in the forum, this is a recipe for a very uninspiring task, without any sound discussion among learners and hence no deep learning.

**Design principle 3: Collaborative activities require good collaboration management and are purposeful, with a recognisable output for the team of learners**

“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 pre-conceived ideas. This is important for the development of critical thinking skills. In groups they can also co-create knowledge and meaning, which is key to a constructivist process. There is typically more reflection about a problem or task and the supporting resources 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. We suggest that meaningful learning through collaboration online needs to be carefully designed to reflect the active learning that is promoted by the 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 (why is group work important for this course?)
7. Explain how the group task supports the learning objectives of the course
8. Grade the activity (portfolio assessment can capture group work while grading the individual learner and not the group as a whole)
9. Design a feedback strategy that is motivational for all learners involved

Drama and controversy make learning more exciting and it should always be fun (Janssens-Bevernage, 2006).

We recommend that the focus should be on *work*, not discussion. The use of the name 'discussion forum' in LMSs 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 use small group work in their classrooms will not put their learners in groups to simply 'discuss' an issue. The discussion will always lead to something tangible to develop. Why do we so often forget this principle of good classroom facilitation when we are teaching online?

We have observed that software developers call a discussion forum a 'collaboration management tool', which creates a further mix-up between the technology and what it

really takes to make collaboration between learners happen. Managing collaboration between online learners requires a clear design and facilitation strategy that includes learners' roles, and clear descriptions of goals and expectations. It means that the task is designed in such a way that teams can take over, while the facilitator can focus on meaningful feedback.

#### **Reason 4: Most online courses are simply boring!**

In (good) face-to-face training the facilitator adds emotions to content so that learners get 'hooked' into the learning session, engage with what needs to be learned, 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 tend to 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".

#### **Design principle 4: Inspire your learners, entertain them, and make learning 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".

Inspiration does not come about from adding bells and whistles. 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

"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".

Michael Allen (2003) provides some advice on how to address the emotional component in e-learning. He discusses his 'Magic Keys' to motivating design, in which, for example, he talks about adding some 'risk' elements for the learner, to create a sense of challenge and even 'adventure'. As educators, we are competing in a world in which individualised entertainment possibilities through television, the Internet and mobile phones are ubiquitous. 'Edutainment' is an often-coined phrase (the origins of which are unclear), however, such tactics are working to help 'integrate' learning opportunities into societies more easily. We suggest that educators consider how much emotional stimuli can enhance engagement with learning, just as it does with these other life experiences.

### **Reason 5: E-learning courses lack the ongoing 'learner-tutor' dialogue that comforts, and provides confidence and signposts to learners where needed**

We should never assume that the learner knows what to do, when and why. We have seen far too many course pages that are simply a shopping list of tasks and resources. How does the learner know where to click? Why would a learner simply go through one resource after another? How does the learner know what is expected?

### **Design principle 5: Use scaffolding and appropriate language to support and guide your learners throughout their learning experience**

The dynamic advantage of classroom dialogue, in which we can vary our tone, level and style immediately to match our conversations, is missing in an e-learning environment, however that doesn't mean we ignore its importance. In fact, with a limited ability to change style 'on the fly', we suggest that it's even more important to think hard about the way we 'talk' to our learners through the language we adopt in our course pages. Most of our dialogue will already be 'pre-formed' on the page for when our learners enter into the online course at their leisure. Consider the impact of your style of language on your audience. The 'voice' of the person supporting and guiding the learner still needs to be there; online, just as it is in the classroom, so remember to build this 'dialogue' into your design.

An example is when learners come to the online environment with different experiences and ways of approaching problem-solving. From our observations, they have built mental models from previous experience and if the environment or task presented requires approaches different from existing models, learners can quickly feel ill-equipped to complete the task. This can happen 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 positioning essential information, which guides learners' participation, inside forum messages and web pages is not enough. This information should be moved upfront, 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 an LMS like Moodle, which allows you to provide part of the scaffolding in the form of structured support on the course home page.

We suggest that it is also good practice to repeat 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? What will be difficult (but still worthwhile doing), what will be easy, what will be fun? 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 be just 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).

### **Reason 6: Learning objectives are written for educators and standards-setting authorities, not for learners**

Learning objectives aren't exclusive to e-learning. However, in a distance learning situation, or at least where the learner is learning independently, those learning objectives should play a different role. They have to be meaningful, relevant, and we would argue, 'inspiring', so that the learner really understands and 'buys into' why they are going through the learning experience. There is no one else around to embellish these ideas and energise the learner, so we instructional designers have to!

The standard model from experience and research seems to be a page of objectives that are placed after the course title, and most often copied from 'official documents'. For learners these are often hard to understand and certainly don't do the job of convincing the learner that they are going to learn something really useful.

### **Design principle 6: Craft inspiring, meaningful objectives in language relevant to your audience**

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.

Less powerful, but still valuable, are the ways in which the Open Educational Resources NZ project team re-wrote the objectives originally issued by the standards authority to create some 'hooks'. Sentences such as “as a graduate of this course you will be desirable for your (future) employers because...” started off the descriptions about what the learners would be achieving. Moreover, the objectives were written as short, crisp and inspiring statements related to 'real' work objectives, for example:



- Describing New Zealand employment relations will be useful when managing staff. It can help you decide on your career path because you will know what interests you.
- Explaining issues affecting New Zealand employment relations will sharpen your analytical skills. You will be well-placed for a position in human resources or as an employment advisor. You will also be better able to manage your own workplace issues. (Open Educational Resources, 2006)

## Conclusion

We have stopped at six design principles in this paper, however we are sure that there are many more ‘essential ingredients’ we could add, to create a recipe that helps practitioners produce more effective online courses. The proposals are not greatly different from what we would consider to be good practice in any educational setting, however they are borne out of the frustration of seeing a lot of courseware that somehow seems to ignore this good practice.

Perhaps for many practitioners, it’s a matter of reflecting on the automatic ‘human’ responses we put into real life engagement with our learners, considering the impact of these and explicitly re-formulating them to work in the online environment? We suggest that the added secret ingredient, however, is to turn this around so that at the same time we empower the learner. Palloff and Pratt (2003, p. 125) say, “we need to be much more deliberate in paying attention to who our students are and what they need because we are not physically seeing or interacting with them on a daily basis”.

That’s not the total picture, of course. We have also commented on the requirement for ‘management’ of the process, which may need additional ‘scaffolding’ in an online environment.

Quinn (2006, p. 6) summarises the need for more emotion in online learning:

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.

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