
CHAPTER 3 • THE ODL KITCHEN

Koen DePryck [Belgium]
CVO Antwerpen-Zuid

1. INTRODUCTION

Open and distance learning (ODL) can take many different forms and formats, from web-based courses or television broadcasts to courses involving CD's or based on correspondence. It may include virtual worlds, simulations, role-playing, storytelling, learning by doing, or learning by teaching. ODL may or may not involve an instructor. It may require 'life' interaction (synchronous courses) but can also be completely independent from time and/or place (asynchronous courses). To make things worse, ODL can be any combination of the above. It may even be 'blended': part distance, part contact.

Form and content are never totally independent. Content can therefore help to choose the right form for an ODL course. Teaching people a critical skill will best be done involving an instructor, especially if the course leads to certification. Correspondence - snail mail - is obviously a poor vehicle for a course on contemporary music. But even the obvious may not always be true. Increasingly powerful simulations can go a long way in teaching people how to use a lifesaving tool like a defibrillator. Given easily accessible resources like CD's, libraries, and so on a correspondence school could very well carry a course on contemporary music. This means that content is only partially a criterion to help decide on the right form and format of ODL.

The traditional modernist adage has it that form should follow function. In the context of ODL, this can mean only one thing: Form should follow learning experience and learning outcome. And since the learning outcome is largely a function of the learning experience, the most important questions to answer when deciding on the form of ODL are related to the (learning) experience of the learner. From a management perspective this means that we need to address the process that will take the project team involved in introducing ODL from thinking about the learning experience of the students to the actual implementation of a course. From a course designer's perspective it means that he or she must take a look at the elements that contribute to the learning experience - the so-called learning objects and their relationships and interaction.

2. FORM FOLLOWS EXPERIENCE

Here is a rule of thumb: First think about the learning experience, then look for the technology that will help you create that experience for the learner. Do not start with the technology, however appealing it may look or however persuasive vendors may be. The technology-centred approach to ODL is not completely without merit but should be limited to situations where the goal is for the learner to acquire isolated bits of information. In more complex contexts, most people learn by focusing on meaning and on integrating new and older knowledge. Using an elec-

tronic page-turner simply does not constitute a meaningful learning experience. Clicking your way through (web)pages - whether they contain only text or also include images, sound, or video etc. will seldom, if ever, lead to deep and persistent insights even though clicking away through a few pages may turn out to be an easy-to-implement - and -use element in the tools available to students.

When one is responsible - at any level - for the implementation of ODL, it is useful to know from one's own experience what it means to participate in an ODL course. A search on the internet offers a huge selection of free ODL, so finding a few that actually appeal is usually not a problem. An additional advantage is that this search will make you aware of the scope of forms that are available in the ODL market.

3. THE ODL EXPERIENCE

An online experience is not a face-to-face (F2F) classroom experience, even though all learning is ultimately about motivation, engagement and (hopefully) fun and joy. Real classrooms are definitely much better at dealing with the highs and lows of learning and they provide a kind of immediate social and intellectual feedback that is hard to replicate in an online situation. But the point is that ODL, especially the blended type, is capable of providing learners with an experience that moves beyond what can be accomplished in a traditional setting.

The experience of the ODL learner typically breaks down into three parts, each with its own focus.

- Before the course begins
 - Advisory
 - Enrolment
 - Learning 'How to be a successful ODL student'
- During the course, including
 - Interaction with
 - Peers
 - Instructors
 - Experts
 - Support, including
 - Technical support
 - Moral support
 - Informal learning enhancing the ODL experience
 - Evaluation and assessment
- After the completion of the course
 - Useful integration with pre-existing knowledge

Not all of these elements will be essential in every type of ODL, but this list provides a fairly comprehensive set of elements for providers to consider.

The challenge is to find the right form for each of these moments in the learning process while trying to improve on the learning experience that would be induced by more traditional forms of learning. Why is this so important? The high dropout rates of ODL courses tell you why. You need to keep your students motivated. Selecting interesting content simply is not enough to accomplish that goal. Much more than in F2F education, the form (including the process) of the course is an essential factor.

4. WHAT TO LOOK FOR IN A GOOD LEARNING EXPERIENCE

This is not yet the place to indulge in a discourse about 'learning' but, in general, a good learning experience will be based on the following elements:

- Sensory richness
- Adaptation to personal preferences and needs
- Relevancy
- Multiple layers of information
- Non-linear personal exploration
- Rewards and surprises

These aspects provide a good frame of reference when making decisions about the form of an ODL course. Of course, other elements such as cost, staff, and expertise will also need to be taken into consideration—we address those in the context of the analysing tool introduced in chapter 9, but they should definitely not be the first concern.

Sensory richness

Regardless of what many course developers for adults appear to think, an ODL course for adults must be fun. Course developers for children tend to focus (sometimes excessively) on creating a fun experience for their audience. Developers for adults tend to overlook this element, apparently assuming that adult learners are very serious and intrinsically motivated beings who would consider anything fun to be inappropriate to (adult) learning.

What makes taking a course fun? There obviously is no single formula, but it is safe to claim that it must at the very least, contain unexpected elements. Sensory richness is one way of accomplishing this. Sensory richness is not about a baroque overload of visual information and hidden functionalities but about avoiding boredom, about asymmetry, about the possibility and induced need to explore the information that is presented. Learning is an active process, and the form of the material must invite the learner to participate in that process.

Adaptation to personal preferences and needs

ODL tries to provide learning solutions adapted to the needs of individuals. This is one of the areas where ODL potentially has an advantage over F2F learning. Adaptations include, among other things,

- adapted learning trajectories (what do I need to learn)
- adapted user interfaces (especially in the context of learning disabilities and impairments)
- adapted temporal and spatial contexts (where and when do I learn)

Adaptation to personal preferences and needs has mainly to do with creating a learning environment that feels comfortable to the student. Learning environments have several dimensions. They are:

- Social
- Psychological and cognitive
- Physical

The *social* dimension largely depends on the amount and type of interaction with peers, instructors and experts. Having (fast) access to the instructor(s) and to experts adds to the sense of being looked after. Interaction with fellow students creates the sense of belonging to a learning community, which in turn supports the individual's learning process. One caveat, though: while students typically like to interact, most of them resist actual collaboration because they do not want to depend on others for the outcome of 'their' course.

The *psychological* and *cognitive* dimensions involve learning disabilities and impairments. As far as the latter are concerned, solid guidelines and standards are gradually emerging. Learning dis-

abilities, on the other hand, are not yet fully recognized as important hurdles. In general, taking into account the psychological and cognitive dimension of learners requires sophisticated diagnostic tools and a thorough advisory phase.

This is perhaps the appropriate place to point out how important the physical learning context of the student is. Will he or she be working from their home? Are we looking at just-in-time learning on the work floor, perhaps using a PDA while learning how to operate a sophisticated piece of equipment? Are we thinking about students who would like to work on assignments while traveling, perhaps in an airplane or on a train?

Here is the rule of thumb when thinking about adaptation: Know your learners - their demographics, gender, age, resources, abilities and perhaps also disabilities, and cultural background, and look for forms and formats that are either very flexible or as open to custom tailoring as possible.

Relevancy

Learning is most powerful when it is perceived as relevant. This is a process that starts with good information before the actual start of the course. Advising, enrolment and learning how to become an ODL student are not marginal to the learning outcome; they are essential ingredients that require the same amount of professional care as the course itself.

But it does not stop there. Compare the relevancy of a video showing some professor lecturing about the impact of the growth of the EU on inflation vs. the relevancy a clip of an interview of that professor by a journalist or perhaps vs. that of a video of a conversation of that professor with the chairman of the European Central Bank. All three videos treat the same subject. But while relevancy is perhaps most influenced by content, form and format also influence the perception of relevancy, which is why it also belongs in this chapter.

Relevancy is also about engaging students in learning what they are ready to learn. This too requires that you know your learners or that you think about how to prepare students for what you really want to teach them.

Multiple layers of information

Students function best when the information they are presented with is organised in multiple layers of information. Hyperlinks, embedded dictionaries, and other elements allow students to dig into the content as a function of prior knowledge, available time, etc. Multiple layers of information add to the perception of relevancy as well as to the sensory richness of the course.

Non-linear personal exploration

Even when the content warrants a fairly sequential walk through the material, the option to explore the material in a personal, non-linear way (including, for example, backtracking or repeating exercises even when completed successfully) contributes to the learning experience.

Rewards and surprises

The target group for ODL consists of human learners, not robots. Humans are easily bored and require a sufficient amount of variation and even surprise. Also, intrinsic motivation for learning may entice someone into enrolling on a course, but this hardly ever suffices to make someone sit through each of the sessions. Course developers must make sure to include rewards for work well done.

5. THE MANAGEMENT PERSPECTIVE: 5+1 C'S

It is a good idea to look at good practices and to learn from them, but simply copying what works in a specific context, for a specific target group, is by no means a guarantee of success.

Initiating and finally implementing ODL is therefore not an easy task. Decisions about the form and format of the final product are the outcome of a fairly complex managerial process involving the 5 C's:

- Creation/creativity
- Communication
- Coordination
- Collaboration
- Control

This is not the place to elaborate on the management issues surrounding ODL. Suffice it to say that the C's do not necessarily follow each other in a strict sequence. They are non-linearly intertwined. Juggling them around does require skill, typically arrived at by practice.

Then, of course, there is a sixth C:

- Cost

It is wrong to think that ODL requires large budgets but is also wrong to think that ODL is the easiest way to cut down on operational costs. Cost is typically proportionate to size and complexity which in turn translate into a number of factors.

- How many students are involved?
- How much time is available to get the system up and running?
- How much time is available to train everyone involved in offering the course? How much training is required? Is an instructor needed?
- Is the course supposed to have a long or a short shelf life?
- How much learning takes place in the course?

Answers to all of these questions should contribute to a Return On Investment (ROI) analysis. But in the case of education an ROI analysis should not always be exclusively about money. The return on investment may also be improved quality or the ability to do things one could not do before.

6. THE ODL KITCHEN

As mentioned before, we also need to take a look at the ingredients and recipes that can be used in an ODL course or, more generally, in an ODL learning experience—the so-called learning objects and their constituents. I refer to them as ingredients because, just as in a real kitchen, the same list of ingredients can be used in very different recipes to prepare related but nevertheless very different meals. Recipes, furthermore, are inherently fuzzy objects, nevertheless able to guide experienced as well as less experienced cooks. To take the metaphor one step forward: we must not only look at the ingredients but also at their relationships. We can stir-fry shrimp with garlic in butter, or we can grill them and pour some garlic butter over them. Very different tastes, but in both cases my shopping list reads “shrimp, garlic, butter.” The possible relationships among the ingredients are usually referred to as their ontology and include, among others,

- “Embedded in”
- “Linked to”
- “Forwarded to”
- “Content-identical to”

A picture can be embedded in text or a picture can be linked to a text; an exam can be embedded in a learning session and the results can be forwarded to an instructor and/or included in the student's record. The possible objects and their relationships are virtually endless. I like to think about this as being about writing an ODL scenario or composing an ODL recipe.

In principle, the smaller the building blocks - learning objects - the easier it becomes to put together a course that is just right as a function of the available technology, the desired learning outcomes and the individual needs of students. This implies that ODL providers need to focus on aspects such as compatibility of learning objects, interfaces, repositories, etc. "How to put the pieces together" becomes the central question.

Unlike in a real kitchen, ingredients can be used over and over again. This reusability depends on several factors:

- A breakdown of content into reusable units
- An inventory of available content units
- A policy imposing the reuse of content

Smaller chunks are more easily reused than larger ones. And while it is true that very few courses are composed entirely from pre-existing pieces, it is also true that reusing content chunks makes it easier to maintain coherence among courses and avoid common mistakes.

Reusability makes it easier to produce specialised versions of a course built around the core content.

- A management course and a course on accounting can share content chunks.
- An advanced course can incorporate content chunks developed in the context of an introductory course.
- Especially if students with different prior knowledge or expertise are allowed to take a course together, the incorporation of 'additional material' can help to straighten out their differences.

One relatively easy way of promoting reuse of content through the selection of the right form is the use of a Learning Management System (LMS). In fact, the introduction and use of an LMS is often a convenient way of introducing ODL.

An LMS can have different functions, centred around the concept of providing an integrated learning environment. Possible functions include:

- Distribution of files
- Assignments
- Calendar
- Repositories of learning objects
- Communication channels

Learning Management Systems all have their advantages and their disadvantages, so careful evaluation is a must. But you should also remember that these tools constantly evolve and functions lacking today may be included in the next version. Look around based on your functional as well as technical analysis - do not be taken in by the sales pitch.

As an example (and as a warning), we take a quick look at two of the more common LMS's, Blackboard and WebCT.

Blackboard has a clear and easy user interface, a powerful "virtual classroom" and extendable functionality. Users and system administrators benefit from this flexible functionality but authors are somewhat left out - in the current versions at least. Blackboard supports neither IMS Content Packaging nor SCORM and offers neither navigation through content nor the use of the browser's bookmarks. Blackboard has announced SCORM and IMS support in one of their next releases.

In general, Blackboard lacks a comfortable resource administration. A web form is the only way to upload files. Even FTP is not supported. Blackboard cannot translate XML files into other common formats.

WebCT provides more functionality, especially with the release of version 3.8. Also, it is the only system so far supporting IMS package interchange files and WebDAV, promising seamless communication with other programs, even when this requires the use of a tool called WebCT IMS Content Migration Utility. It aids the import and export of packages and should support administrators. Generally, all files used in WebCT have to be readable on the web, which means that it is better to translate the XML documents into HTML prior to uploading but this, obviously, requires additional work.

A tough choice to make, especially if the technical terminology that I introduced on purpose in the previous paragraphs scares the hell out of you. This is especially true if one looks at the investment required to get either or both systems up and running in a school or training institute. Many valuable alternatives to Blackboard and WebCT are available, some of which are available as freeware or shareware, but even then a careful decision process based on as many factors as possible is imperative. (But remember that the learning experience of the participants on the course should be the overriding criterion!) Some tools are available as open source software, allowing you tailor it to your needs. While this is an attractive option as far as the cost related to purchasing the necessary licenses is concerned the cost involved in acquiring the expertise to actually make the tools fit your needs tends to be rather high. Flexibility and control come at a price!

7. THE FINAL CHOICE

Perhaps the most important aspect of deciding on the form (and content) of an ODL course is that everything needs to be carefully planned and worked out before the start of the course. This applies at all levels of implementation - from the upper management, who need a vision for ODL (preferably translated, at least, into a mission statement), to the teacher who will no longer be able to prepare for class with just a few keywords scribbled on a napkin. Once decisions are made you must stick to them and sit out the whole ride. You can look back later and decide to do things differently the next time but you should never try to do so during a course. The final choice really is a series of small final choices.

Remember that the success of your ODL course is measured in terms of learning, not (as is the case for a corporation) in terms of business. Your students and their learning experiences and learning outcomes should be the ultimate decision makers about the form and format ODL.

Also keep in mind that expertise in offering ODL is 'out there'. Just as you do not have to cook but can order Chinese take-away or home delivered pizza, you can just order the ODL form you need, including help with finding out what it is you need. This allows you to focus on your core business: teaching and training.

These are the essential steps in implementing your ODL:

- Think about why you need ODL
- Think about the learning experience of your prospective ODL students
- Decide on content and form and invest whatever it takes to build and to combine appropriate learning objects (or have someone do that for you)
- Inform your students and run the course on a small scale
- Evaluate the course
- Learn from your evaluation before you offer the course on a larger scale

The ODL analysing tool introduced in chapter 9 is designed to help you think about the many different elements that need consideration. Implementing ODL is not easy but the effort is usually worth your while if - and only if - you are prepared to be really professional about it and if you have access to the resources (people, expertise, money) to back up your plans.