

# THE 10 FUNDAMENTALS OF TEACHING ONLINE FOR FACULTY AND INSTRUCTORS

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# The 10 Fundamentals of Teaching Online for Faculty and Instructors



Last year I published an open, online textbook for instructors and faculty called '[Teaching in a Digital Age](#)'. This has proved to be a great success, with over 40,000 downloads, and translations in seven languages.

However, 40,000 is just the tip of the iceberg. Worldwide, there are hundreds of thousands of faculty and instructors about to embark on or considering the use of online learning for the first time. [Teaching in a Digital Age](#) is over 500 pages long and appeals mainly to instructors who have already committed to teaching at least partly online.

I'm a great believer in the value of online learning, but only if it is done well. So I didn't want to do a 'selling' job, but rather to give faculty and instructors a realistic appraisal of what they are getting into. So I wrote these guides, initially as a series of blog posts, because I couldn't find a short and succinct introduction for faculty and instructors thinking about whether or not to do online teaching in the first place.

What these guides aim to do is to address some common myths and misconceptions about online learning and online teaching, and in particular to help you make decisions about whether or not to do online learning in the first place, and if so, what you need to know to do it well. Indeed, in some places, I suggest certain conditions where you are better off not doing it.

The guides draw on my 40 years of teaching online or at a distance, but more importantly they also draw on best practices for online learning based on research, and evaluation by experienced online instructors themselves. Keep in mind the guides are just an introduction – for more thorough training in online teaching, you need to take an online program or course (with recommendations in the guides) and/or read [Teaching in a Digital Age](#).

In the meantime, though, I hope you find these guides helpful in deciding on whether or how to approach teaching online, and I am grateful to Contact North | Contact Nord for pulling the guides together in this booklet and making them more widely available.

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# Guide 1. What is online learning?

## Getting started in online learning?

Every day, someone new either thinks about doing an online course, or is pressured into doing one. You may have quite a lot of prior knowledge about online learning (or think you do), or may have no knowledge at all. The most important thing to know though is that you probably don't know enough about online learning, especially if you are just starting out (which defines you as wise, according to Socrates).

I have been teaching and researching online learning for nearly 30 years (yes, online learning started that long ago). Over that time, a great deal of research and evaluation of online learning has been done. Although much more could be done, and not all the work has been of high quality, nevertheless there is a great deal now known about what works and what doesn't in online learning. Learning by experience is often a good way to learn, but it can also lead to frustration and, more importantly, students may suffer from the instructors' lack of experience or ignorance. Thus at least knowing the basics before you start can save you not only a lot of time, but also will help you develop better courses from scratch.

I wrote a 500-page, free online open textbook on [Teaching in a Digital Age](#), which draws extensively on the latest research into online learning, and is meant as a guide for practitioners. Unfortunately, though, there are very few *short* guides to online learning, to help you make the decision about whether you should make the effort to do it properly.

This is the first in a series of ten how-to guides aimed at those new to online learning, particularly but not exclusively for those in the post-secondary education sector. I am hoping these guides not only provide some of the basic knowledge you need before starting, but also lead you to go further by digging into the parts of [Teaching in a Digital Age](#) relevant to you at any particular time.

## Online learning: a definition

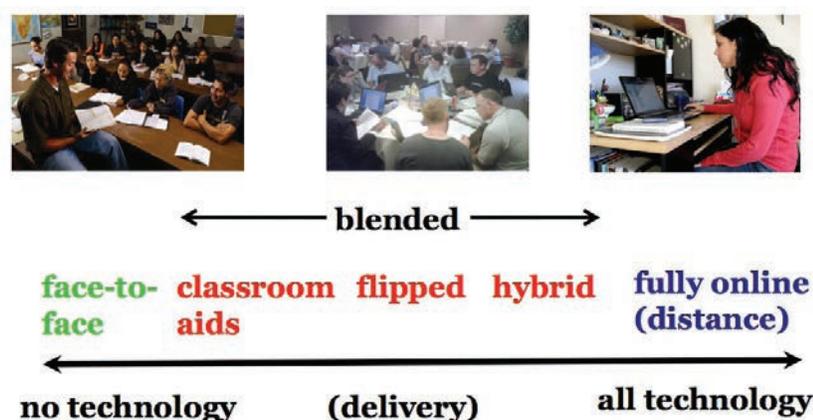
There is no Académie Française or Academy of Science or Technology that provides an 'official' definition of online learning. It is what people say it is, so I can only give you my personal definition, which is as follows:

Online learning is any form of learning conducted partly or wholly over the Internet.

## The continuum of online learning

I deliberately chose a very broad definition of online learning, because it comes in many different varieties (there is another guide on the different varieties of online learning). My definition means learners use a computer, tablet or some other device for their learning, and it also means that at some point in their studying, they have to go online – through the Internet – to access information or communicate with an instructor or other learners.

I therefore see teaching as a continuum:



From Chapter 9.1.2, Teaching in a Digital Age

- At one end, there is teaching with no use of technology, which therefore is NOT online learning, but ‘pure’ *face-to-face teaching*. However, teaching without any technology is very rare these days, at least in formal education.
- Then there is the use of technology as *a classroom aid*, which may or may not be online learning. For instance, an instructor using a projector and PowerPoint slides is not using online learning, but students directed to use a device such as a laptop, tablet or mobile phone to look at a website during a classroom lesson is a form of online learning, but the classroom remains the main means of delivery. However, this could be considered a sub-branch of online learning, called *blended learning*.
- So, as with most continua, we get to a point where definitions become a little less precise, and this is *blended learning*, which again can mean a number of things, but in general, means a combination of face-to-face teaching and a significant use of online learning, especially outside the classroom. This can take a number of forms:
  - A *flipped classroom* is one where students do preparation online before a classroom session (for instance watching a pre-recorded video lecture, and/or online reading); and
  - *Hybrid learning* is one where the whole classroom experience has been re-designed to focus on what the instructor thinks is best done online and what is best done face-to-face; in hybrid learning students may spend 50 per cent or more of their time learning on line.
- Lastly, *fully online learning*, where students do not come to campus at all, but study entirely online, which is one form of distance education.

Note though that online learning can include learning with or without an instructor physically present, and that a computer lab where everything is already pre-loaded on the computer would not be online learning. This form of learning is still found in some countries with poor or no Internet access.

The important thing to remember is online learning is primarily *a mode of delivery*, a way of delivering education to learners, NOT a particular method of teaching. Online learning can support a wide range of teaching methods. For instance, lectures can be delivered in class (face-to-face) or over the Internet, as can experiential learning, constructivist approaches and many other teaching methods. This is a topic of later guides.

We shall also see that online learning, like face-to-face teaching, can be done well or it can be done badly, but that too is a topic for another guide.

## Implications

With the increased use of online learning, every instructor now has to ask themselves two important questions:

1. Where on the continuum of teaching should my course be, and on what basis should I make that decision?
2. How do I decide, in any form of blended learning, what is best done online, and what is best done face-to-face?

**Teaching in a Digital Age** attempts to help you answer such questions, but in order to answer those questions well, you need to read a lot of the book.

## Follow-up

So in the meantime, if you want to know more about what online learning is, here is some suggested further reading (no more than an hour). Just click on the link:

1. **[From the periphery to the centre: how technology is changing the way we teach](#)**, Chapter 1.7, Teaching in a Digital Age.
2. **[The continuum of technology-based learning](#)**, Chapter 9.1, Teaching in a Digital Age.

## Guide 2. Isn't online learning worse than face-to-face teaching?

The short answer to this question is: no, online learning is neither *inherently* worse – nor better – than face-to-face teaching; it all depends on the circumstances.

### The research evidence

There have been thousands of studies comparing face-to-face teaching to teaching with a wide range of different technologies, such as televised lectures, computer-based learning, and online learning, or comparing face-to-face teaching with distance education.

With regard to online learning, there are several meta-studies. A meta-study combines the results of many 'well-conducted scientific' studies, usually studies that use the matched comparisons or quasi-experimental method (Means et al., 2011; Barnard et al., 2014). Nearly all such 'well-conducted' meta-studies find no or little significant difference in the modes of delivery, in terms of the effect on student learning or performance. For instance, Means et al. (2011), in a major meta-analysis of research on blended and online learning for the U.S. Department of Education, reported:

*In recent experimental and quasi-experimental studies contrasting blends of online and face-to-face instruction with conventional face-to-face classes, blended instruction has been more effective, providing a rationale for the effort required to design and implement blended approaches. When used by itself, online learning appears to be as effective as conventional classroom instruction, but not more so.*

However, the 'no significant difference' finding is often misinterpreted. If there is no difference, then why do online learning? I'm comfortable teaching face-to-face, so why should I change?

This is a misinterpretation of the findings, because there may indeed, within any particular study, be large differences between conditions (face-to-face vs. online), but they cancel each other out over a wide range of studies, or because with matched comparisons you are looking at only very specific, strictly comparable conditions, that never exist in a real teaching context.

For instance, the 'base' variable chosen is nearly always the traditional classroom. In order to make a 'scientific' comparison, the same learning objectives and same treatment (teaching) is applied to the comparative condition (online learning). This means using exactly the same kind of students, for instance, in both conditions. But what if (as is the case) online learning better suits non-traditional students, or achieves better learning outcomes if the teaching is designed differently to suit the context of online learning?

### Asking the right questions

Indeed, it is the *variables* or *conditions for success* we should be examining, not just the technological delivery. In other words, we should be asking a question first posed by

Wilbur Schramm as long ago as 1977:

*What kinds of learning can different media best facilitate, and under what conditions?*

In terms of making decisions then about mode of delivery, we should be asking, not which is the best method overall, but:

*What are the most appropriate conditions for using face-to-face, blended or fully online learning respectively?*

So what are the conditions that best suit online learning?

There are a number of possible answers:

- Learners:
  - Fully online learning best suits more mature, adult, lifelong learners who already have good independent learning skills and for work and family reasons don't want to come on campus;

- Blended learning, or a mix of classroom and fully online courses, best suits full-time undergraduate students who are also working part-time to keep their debt down, and need the flexibility to do part of their studies online; and
- ‘Dependent’ learners who lack self-discipline or who don’t know how to manage their own learning probably do better with face-to-face teaching; however, independent learning is a skill that can be taught, so blended learning is a safe way to gradually introduce such students to more independent study methods.
- Learning outcomes:
  - Embedding technology within the teaching may better enable the development of certain ‘21st century skills’, such as independent learning, confidence in using information technologies within a specific subject domain, and knowledge management;
  - Online learning may provide more time on task to enable more practice of skills, such as problem-solving in math; and
  - Re-design of very large lecture classes, so lectures are recorded and students come to class for discussion and questions, making the classes more interactive and hence improving learning outcomes.

Even this is really putting the question round the wrong way. A better question is:

What are the challenges I am facing as an instructor (or my learners are facing as students) that could be better addressed through online learning? And what form of online learning will work best for my students?

## Quality

However, the most important condition influencing the effectiveness of both face-to-face and online teaching is how well it is done. A badly designed and delivered face-to-face class has worse learning outcomes than a well-designed online course – and vice versa. Ensuring quality in online learning is the topic of future guides.

## Implications

1. Don’t worry about the effectiveness of online learning. Under the right conditions, it works well.
2. Start with the challenges you face. Keep an open mind when thinking about whether online learning might be a better solution than continuing in the same old way.
3. If you think it might be a solution for some of your problems, start thinking about the necessary conditions for success. The next guides should help you with this.

## Follow-up

Here is some suggested further reading on the effectiveness of online learning:

- More on the research into online learning: Chapter 9.2: [\*\*Comparing Delivery Methods\*\*](#), in Teaching in a Digital Age.
- More on what kind of students benefit most from online learning: Chapter 9.3: [\*\*Which mode? Student needs\*\*](#), in Teaching in a Digital Age.
- More on the relationship between 21st century skills and online learning: Chapter 1.2: [\*\*The skills needed in a digital age\*\*](#), and Chapter 9.4: [\*\*Choosing between face-to-face and online teaching on campus\*\*](#), in Teaching in a Digital Age.

## Guide 3. 'Aren't MOOCs online learning?'

### What are MOOCs?

Just in case you don't know what MOOCs are (massive open online courses), they are usually courses that use video recordings of lectures from top professors from elite universities, such as Stanford, MIT and Harvard, and computer-marked assessments, sometimes combined with unmonitored online student discussions and peer review. MOOCs are made freely available to anyone who wants to sign up. The main platforms for MOOCs are [Coursera](#), [edX](#), [Udacity](#) and [FutureLearn](#). There are also quite different kinds of MOOCs called [connectivists MOOCs](#) that are more like online communities of practice.

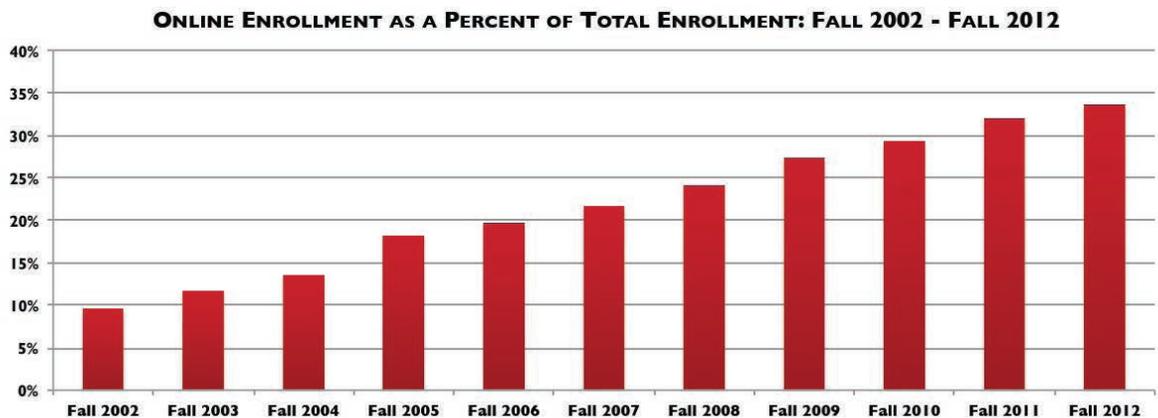
The first MOOCs attracted over 200,000 enrolments per course, although numbers in recent years are more in the 2,500 range. Nevertheless, it is estimated there are more than 34 million participants worldwide registering in MOOCs each year.

Since the first ones launched in 2008, MOOCs have been rapidly evolving.

### MOOCs vs. online credit courses

Given all the publicity and hype over MOOCs, you could be forgiven for thinking MOOCs are all you need to know about online learning. However, you would be sadly mistaken.

Online learning existed as a serious part of education at least 15 years *before* MOOCs arrived on the scene. The following graph shows the increase in online courses *for credit* up to 2012 in the post-secondary education system in the United States, *before* the first MOOCs were launched:



Allen and Seaman, 2013

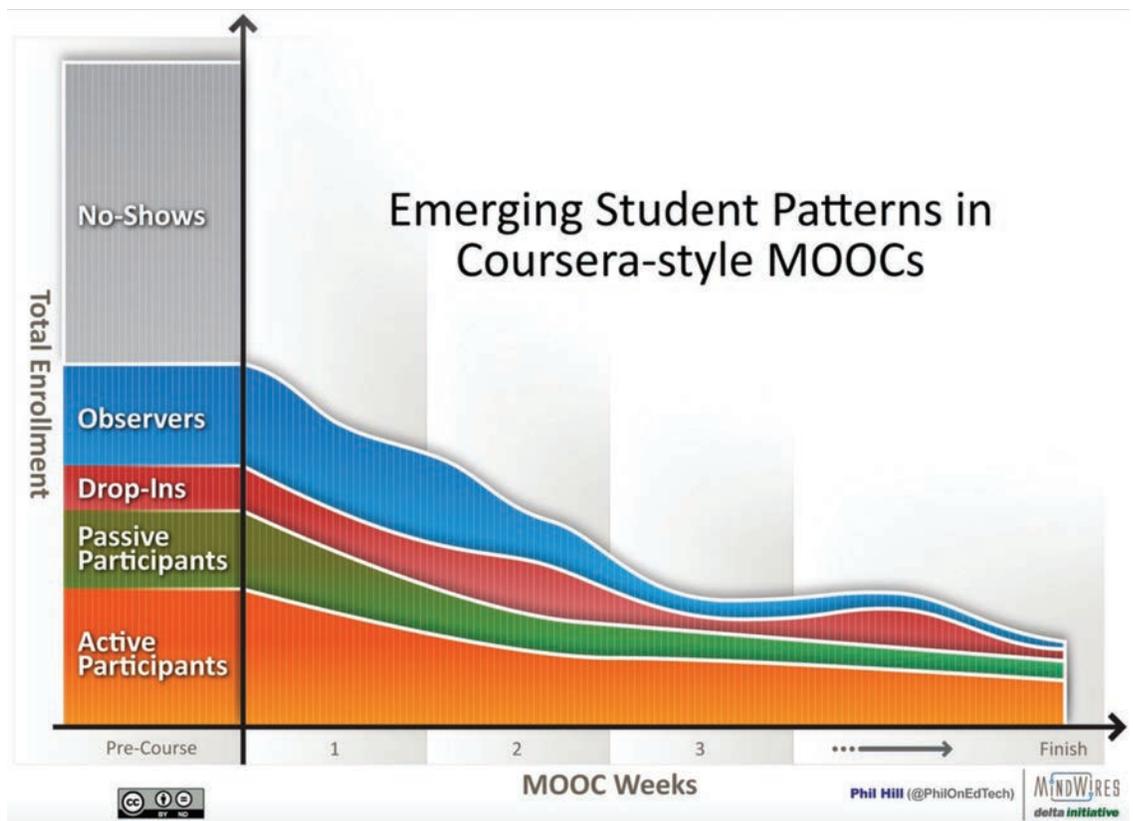
By 2013, at least one in three students in post-secondary education was taking at least one online course *as part of a degree program*. At the moment, according to the U.S. Department of Education, somewhere between 8-15% of all university degree course enrolments are in fully online courses. Online course enrolments continue to grow at rate (10-20% per annum) much faster than enrolments for on-campus courses (2-3% per annum) (Allen and Seaman, 2016).

### So what's the difference?

- MOOCs have much higher numbers of initial participants generally than online credit courses; MOOCs can have anywhere between 2,000 to 200,000 participants who sign up, whereas online courses for credit can have anywhere between 20 to 2,000 registered enrolments. Fully online courses for credit usually though have 100 enrolments per course or less;

- MOOCs, with very few exceptions, do not provide credits towards degrees, although a certificate may be issued (for a price) for those that complete computer-based assessments. However, even the institutions offering MOOCs do not accept successful completion of their courses towards credit in their own institution;
- MOOCs have very low completion rates (less than 10%, usually closer to 5%) whereas fully online courses for credit often have completion rates as high or just below those for equivalent face-to-face courses. For instance, in Ontario in 2011, completion rates for all fully online courses for credit in the Ontario public post-secondary system were within 5% of completion rates for face-to-face classes in universities, and within 10% for two year colleges; in other words, roughly 80% or more of students in fully online courses for credit successfully complete;
- MOOCs provide almost no personal learning support for learners from qualified instructors, whereas most successful fully online courses for credit have a strong instructor online presence; and
- MOOCs generally charge no fee to participate (although a fee may be charged for a certificate of completion); fully online courses for credit normally charge the same fee as, or slightly higher than, those for campus-based programs or courses.

In other words, MOOCs are just one, more recent, form of online learning. They are more like continuing education programs, except they are free. Think of them as a modern form of educational television.



MOOC participation rates Image: Phil Hill, 2013

## The hype

Much has been made about MOOCs disrupting the higher education system (Christensen, 2010), being a solution to educational problems in developing countries (Friedman, 2013), and being a threat to the existence of universities. Leslie Wilson of the European University Association commented that MOOCs forced vice chancellors to focus on teaching and learning (which I find a somewhat sad comment: why weren't they focusing on that before MOOCs came along)?

However, after all the initial publicity, MOOCs settled down into an important but relatively small niche in post-secondary education, a form of continuing education that still struggles to find a successful business model that works for the universities that supply MOOCs.

## Why then all the fuss?

Good question! There is a combination of factors that resulted in the publicity and hype.

One of the most important is the development of MOOCs was largely driven by faculty (and mainly computer-science faculty) from highly prestigious, elite universities such as Stanford, MIT and Harvard. This resulted in a bandwagon effect of follow my leader from other universities. Whatever the faults or weaknesses of MOOCs, these elite universities made online learning highly visible, whereas before, although online courses for credit were slowly gaining ground, online learning was still seen as peripheral and slightly disreputable.

MOOCs also coincided with a time when states in the United States were making big cuts in higher education budgets due to the 2008-2009 recession, leading to lack of tax revenues; many saw MOOCs as an alternative to high cost, campus-based universities. Over time, this argument has become less convincing, partly due to the lack of recognition for credit of successful MOOC completion, and partly due to the difficulties of developing the high level of skills needed outside the purely quantitative subject areas with so little learner support.

## Implications

- Most faculty need, at least in the short-term, to focus on online courses, blended or fully online, *for credit*, not MOOCs. These *for credit* online courses need different approaches in terms of course design and learner support from MOOCs, if high completion rates are to be achieved and high level learning skills are to be developed in students;
- For some 'star' faculty in subject areas where the university is particularly or uniquely strong, MOOCs still are an attractive proposition, boosting both the star faculty member's reach and reputation, and the brand of the university;
- MOOC design will evolve, probably converging towards the designs used for successful for-credit online courses, but this will likely increase costs; at the same time, the design of for-credit courses may also benefit from some of the lessons in 'scaling' from successful MOOCs; and
- There are many other forms of online learning besides MOOCs, and within online courses for credit, there are many different approaches; it is important to be aware of the strengths and weaknesses of each of these variations in online learning, so the appropriate choices can be made. This is the topic of the next guide.

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## Follow-up

If you want to know more about MOOCs, and their strengths and weaknesses, here is some suggested further homework (if you read/watch it all, possibly 2 hours of reading/watching):

- Downes, S. (2012) Massively Open Online Courses are here to stay, [Stephen's Web](#), July 20.
- [TED Talks: Daphne Koller: What we're learning from online education.](#)
- From Teaching in a Digital Age:
  - [5.1 Brief history](#)
  - [5.2 What is a MOOC?](#)
  - [5.3 Variations in MOOC designs](#)
  - [5.4 Strengths and weaknesses of MOOCs](#)
  - [5.5 Political, social and economic drivers of MOOCs](#)
  - [5.6 Why MOOCs are only part of the answer](#)
- Coughlan, S. (2106) [Top Universities to Offer Full Degrees Online in Five Years](#) BBC News, July 6.

## Guide 4. 'What kinds of online learning are there?'

In the third guide, I pointed out MOOCs were just one of the many different types of online learning. In this guide, I provide more detail about the various approaches to online learning, and also provide a personal evaluation of each approach in terms of quality. This guide is a little longer than normal, as there are not only many approaches to online learning, but the field is also rapidly changing and developing.

### Different approaches to online learning

In the first guide, 'What is online learning'? I pointed out there is a continuum of teaching, from no use of online learning through blended learning, to fully online (or distance) learning. However, even within these categories, there are different possible approaches:

#### 1. Online class notes

##### Approach

Students access PowerPoint slides and PDFs from a class website which may be a part of an institution's learning management system (see below) or it may be just a website created by the instructor or made available by the institution. Usually, the same slides or notes given to students taking an on-campus class are put up on the website for online students, often on a weekly basis. Online students access the relevant documents, and take the same assessments or exams as on-campus students, either remotely, in the form of computer-marked assignments, or on campus. If online students have questions, they can usually e-mail the instructor. Students usually work individually, although if a learning management system is available, there may be voluntary online discussion between students through the LMS's discussion forum or social media.

##### Evaluation

This method is often used by novice online instructors. It requires, on the surface, little extra work for the instructor, once the materials are loaded.

The main problem is such an approach is not adapted to the needs of online learners, who usually need more support than this model provides. The PowerPoint slides or PDFs do not allow for student interaction with the learning materials (unless they are rewritten to do this). If there is a problem with the materials, in terms of the content not being clear, every student is likely to have the same difficulty. Instructors in this model therefore often find they are overwhelmed with e-mail. If there are no activities (other than reading) scheduled for every week, students tend to get behind. Coming on-campus to do assignments or exams is also a problem for students who chose the online option because they have difficulty in getting to campus on a scheduled basis. Students in such courses often feel isolated and unsupported, and therefore such courses usually have much higher non-completion rates. And in the end, instructors find this approach ends up being a lot more work than they anticipated.

#### 2. Recorded lectures

##### Approach

The increased availability of technology such as lecture capture, which records classroom lectures on digital video and stores them for later downloading over the Internet, and desktop cameras, resulted in many instructors offering online courses built around recorded lectures. The lectures are usually the same as those for on-campus classes. Many MOOCs, as well as courses for credit, use recorded lectures as the main form of delivery.

##### Evaluation

This approach is again convenient for instructors, especially if they are giving a face-to-face lecture anyway, and have technical help in recording and storing the lectures. However, this approach suffers from many of the same problems as the class notes method above. There is additional problem if the recording is of a normal 50-minute lecture - students often suffer from what is known as **cognitive overload**. Although students viewing a recorded lecture have the opportunity

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to stop and re-play material, this can mean a 50-minute lecture may take up several hours for an online student. MOOC designers, and TED talk designers, realized this and often they limit a single video to 10-20 minutes in length. Nevertheless, this does not work so well in a full credit program with maybe 39 lectures over a 13-week semester. Providing transcripts of the lectures is not only time consuming and adds costs, but again increases the cognitive load for students. Lastly, there is considerable [research that questions the value of lectures](#) as a teaching method.

### **3. Webinars**

#### **Approach**

These are 'live' sessions usually consisting of a lecture delivered over the Internet, supported by PowerPoint slides with opportunities for live online chat for the participants. Webinars can be recorded and made available for online access at another time. Again, 'good' webinars tend to be broken up into smaller 5-10 segments of presentation followed by either online voice or more commonly (for group management reasons) text comments and questions contributed by participants to which the lecturer responds.

#### **Evaluation**

Webinars come closer to mirroring a live face-to-face class than either class notes or recorded lectures, and need relatively little adaptation or change for instructors. While webinars tend to be more interactive than recorded lectures, again it is difficult to cover a whole curriculum through webinars alone. Also participants need to be available at a set time, which restricts the flexibility or availability for online students, although the availability of the recording can offset that to some extent. Webinars using a lecture format also suffer from the same pedagogical limitations for online students as recorded lectures.

### **4. Instructionally-designed online courses based on a learning management system**

These are probably the most common form of online courses for credit and more importantly, they proved themselves with high completion rates and quality learning.

#### **Approach**

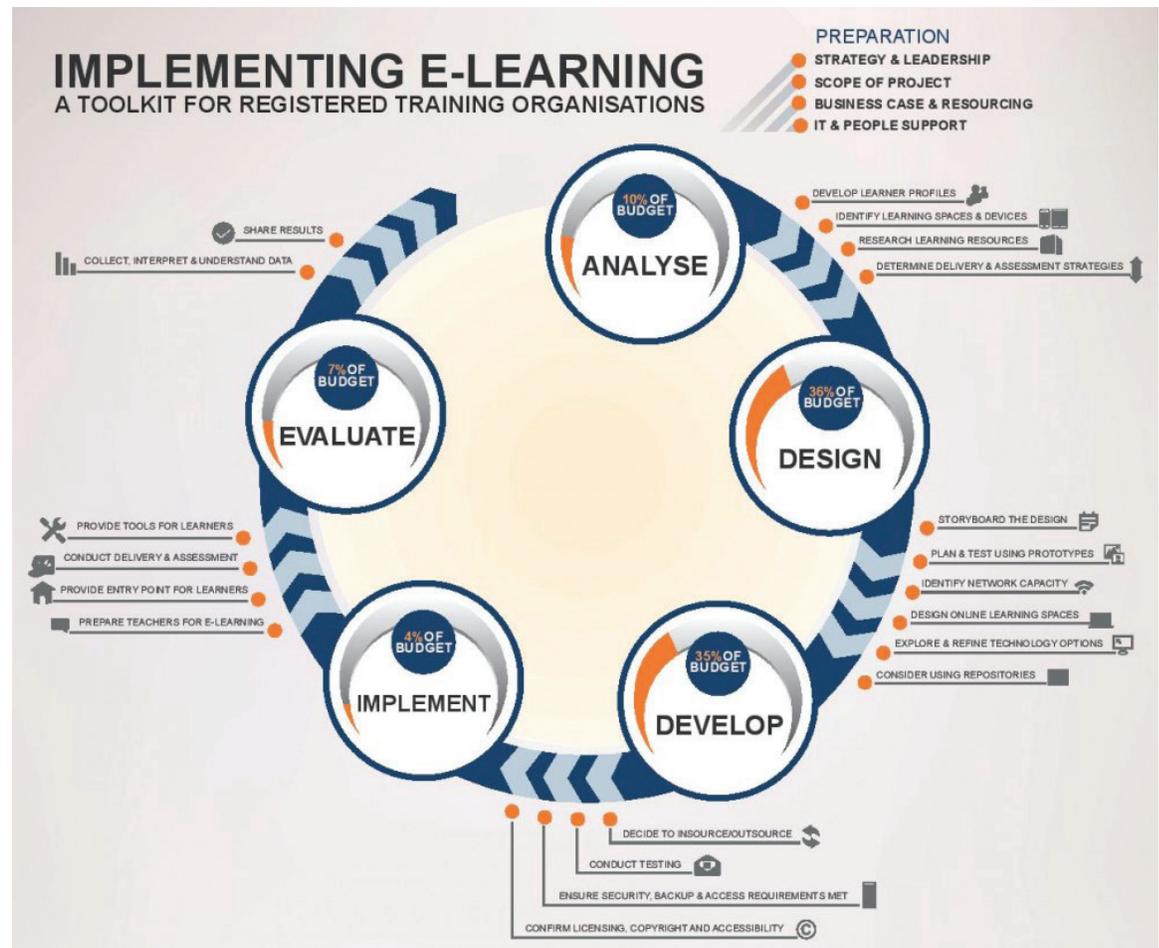
A whole science of instructional design has developed since the 1940s based on pedagogical theory, research on how students learn, the appropriate use of technology, and the evaluation of learning outcomes, and this approach has been applied systematically to the design of fully online and increasingly blended courses. Usually an instructor works with a professional instructional designer to re-design a classroom course or even a new course for use by online, distance learners. The instructor is asked to define desired learning objectives, or learning outcomes, the content is chosen to support the development of such objectives, and organized into 'blocks' of study (weekly or more) so the whole curriculum can be covered over the semester. Assessment is linked to the desired learning objectives.

Sometimes objectives are determined through an analysis of the assessment requirements for equivalent face-to-face classes, if these are not already formally defined. Decisions are made about which media (text, audio, video, computing) to use in terms of their appropriateness for meeting the defined learning objectives. Particular attention is paid to providing regular student activities, and managing student and instructor workload. Online learning management systems are often used to provide a structure for the course, opportunities for instructor-monitored student discussion, and online assessment tools.

#### **Evaluation**

This approach is used very successfully with the design of fully online courses, usually leading to high completion rates and good quality learning outcomes. In some cases, it has also been successfully applied to blended courses. It is from this approach that many of the best practices in online learning were identified. It means working in a team, often consisting of a senior faculty member, and for large classes, sessional or contract instructors and/or teaching assistants, an instructional designer, and other technical support staff, such as web designers, that can

be called upon as necessary. However, this approach appears initially to be more costly for an institution, and more work for an instructor. It can take up to two years to design and develop a large, fully online course, although courses for small classes (less than 40) can be designed in a much shorter period. However, if the program or course attracts new students, tuition and other revenues can offset many of the additional costs, for instance, paying for release time for faculty to work on course design and development.



This is an interactive infographic. To see more detail on each of the five stages, click on the graphic. © Flexible Learning Australia, 2014

## 5. Designs based on open education and emerging technologies

### Approach

This is a bit of a ragbag category for a small but growing number of online course designs seeking to fully exploit specific characteristics of new media and open educational approaches. These might include:

- **'Connectivist moocs'** that focus on the contributions of all participants in an extended online network;
- Courses built around social media tools such as blogs, wikis, and e-portfolios;
- Approaches that exploit open educational resources, such as open textbooks and content freely available over the Internet; and
- Courses built around emerging technologies, such as virtual worlds, gaming, and augmented reality.

Common features of such courses are increased activity and choices for learners, more diversity in course designs, and 'agile' or quick design and development. In such courses, students are often encouraged to seek, analyze, evaluate and apply content to real world issues or contexts, rather than the instructor being primarily responsible for content choice and delivery.

### Evaluation

The main rationale for such courses is as follows:

- They are more appropriate for developing the skills and knowledge learners need in a digital age;
- They are more active and engaging for learners, resulting in deeper learning;
- They make better use of new technologies by exploiting their unique teaching potential;
- These approaches usually result in quicker and relatively low-cost course development and delivery compared with the instructional design approach; and
- They are transforming teaching into a more modern, relevant methodology that better suits today's learners.

However, such approaches require highly confident and effective instructors with experience in using new technology for teaching, combined with the team approach described earlier. Above all, instructors need to have a good grasp of both pedagogy and technology, as well as subject expertise. Direct instructional design and technology support is also essential. Most of these approaches are so new that there is relatively little research on their effectiveness. They are therefore a high-risk activity for an instructor, especially those with little experience of online teaching.

This is a very abbreviated description of fast-developing, constantly changing approaches to online learning. You are especially encouraged to do the follow-up reading below.

### Implications

1. It is generally a mistake to merely transport your classroom teaching to an online environment. Online students work in different contexts and have different needs to students in face-to-face classes. Online courses need to be redesigned to accommodate the unique requirements of online learners.
2. There is a strong body of knowledge about how to design online courses well. You ignore this at your peril. Consequences of ignoring best practices may include poor learning results, a much heavier workload than anticipated, and dissatisfied students and superiors.
3. It is best to work in a team. Instructional designers have knowledge about teaching online that most instructors lack. While you are always in control of content selection, assessment and overall teaching approach, instructional designers need to be listened to as equals.
4. New technologies have the promise of radically changing teaching, making it more relevant, more engaging for students, and more exciting and challenging for an instructor.

### Follow-up

This is a very simplified account of the different kinds of online learning. For a more extensive coverage, see:

- Chapter 4, [\*\*Methods of teaching using an online focus\*\*](#), in Teaching in a Digital Age.

For more on the effectiveness of lectures, see:

- Chapter 3.3, [\*\*Transmissive Lectures: Learning by Listening\*\*](#), in Teaching in a Digital Age.
- Chapter 3.4, [\*\*Interactive Lectures, Seminars and Tutorials: Learning by Talking\*\*](#), in Teaching in a Digital Age.

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For more on cognitive load and online learning design, see:

- Van Merriënboer, J. and Ayres, P. (2005) **Research on Cognitive Load Theory and Its Design Implications for E-Learning** *Educational Technology Research and Development*, Vol. 53, No.3.

For more on instructional design, see:

- Chapter 4.3, **The ADDIE model**, in 'Teaching in a Digital Age'.

For more on designs based on open education and emerging technologies see:

- **Scenario F** and **'Agile' design: flexible designs for learning** in Teaching in a Digital Age.
- **Chapter 10, Trends in Open Education**, in Teaching in a Digital Age.

For more on emerging technologies in online learning see:

- Veletsianos, G. (ed.) 2010 **Emerging Technologies in Distance Education** Edmonton AB: The Athabasca University Press.

## Guide 5. When should I use online learning?

This question ‘When should I use online learning?’ is difficult to answer in a short guide because there are many possible reasons, and as always in education, the answers are absolutely dependent on the specific context in which you are working, but the reasons can be classified under three main headings: academic, market, and policy/administrative.

### Academic reasons

These boil down to relevancy and the changing nature of knowledge in a digital age.

#### Curriculum requirements

Technology is affecting the content of curriculum in nearly all subject disciplines. It is increasingly difficult to think of an academic area not undergoing profound changes as a result of information and communications technologies (ICTs).

For instance, any business program now needs to look at the impact of social media and the Internet on marketing and on the delivery of goods. How are ICTs going to change financial investments and advising? In science and engineering, to what extent is animation, simulations or the use of virtual reality enabling a better understanding of three-dimensional phenomena, equations or formulae? In humanities and fine arts, to what extent are ICTs changing the way we express ourselves? How do we ensure our students are digitally literate and responsible? How do we prepare our students for a world controlled by massive technology companies who track our every movement and expression?

It is difficult to think how these issues can be addressed without students themselves going online to study such issues.

#### Skills development

Also, the skills our students need to develop in a digital age are often best achieved through the use of ICTs. In [Chapter 1.2 of Teaching in a Digital Age](#), I give more detailed examples of such skills. Many of these skills are not only best developed by, but may not even be possible without, students spending an extensive period studying online.

However, I want to focus on two ‘core’ 21st century skills: independent learning and knowledge management.

In a knowledge-based society, students need to go on learning throughout life and outside the formal academic curriculum. Jobs are constantly changing as the knowledge base changes, and even our social lives are increasingly dominated by technological change. Independent learning – or self-learning – is a skill that itself can be taught. Online learning in particular requires self-discipline and independent learning, because the instructor is often not physically ‘there’. Thus gradually introducing learners to online learning can help build their independent learning skills.

Perhaps the overarching ‘21st century skill’ though is knowledge management: how to find, analyse, evaluate, apply and communicate knowledge, especially when much of this knowledge is Internet-based or located, and constantly undergoing change. Students then need many opportunities to practice such skills, and online learning often provides a means by which this can be done in a cost-effective manner.

Whether we like it or not, an understanding and management of the use of ICTs is becoming critical in almost any subject area. Students need to go online to study such phenomena, and to practice core 21st century skills. To do this, students need to spend much more time than at present studying online. Again, though, we need to ensure the balance between online and face-to-face time is also properly managed.

## Market reasons

Not only is knowledge undergoing rapid change, so are demographics. In most economically advanced societies, the population is aging. Over time, this means fewer younger students coming straight from high school, and more lifelong learners, perhaps already with post-secondary qualifications, but wanting to upgrade or move to a new profession or job and hence needing new knowledge and skills.

Also, with mass education, our students are increasingly diverse, in culture, languages and prior knowledge. One size of teaching does not fit all. We need ways then to individualize our programs. In particular, there are many pedagogical problems with very large lecture classes. They do not meet the needs of an increasingly diverse student population. Online learning is one way to allow students to work at different speeds, and to individualize the learning with online options enabling some choice in topics or level of study.

The changing population base offers opportunities as well as challenges. For instance, your area of research may be too specialized to offer a whole program or course within your current catchment area, but by going online you can attract enough students nationally or globally to make the effort worthwhile. These are new students bringing in extra tuition revenues that can cover the full costs of an online masters degree, for instance. At the same time, online learning enables critically important areas of academic development to reach a wider audience, helping create new labour markets and expand new areas of research.

## Policy/Administrative

We all know the situation where a president or vice chancellor has gone to a conference and comes back 'converted'. Suddenly, the whole ship is expected to make an abrupt right turn and head off in a new direction. Unfortunately, online learning often leads to enthusiastic converts. MOOCs are a classic example of how a few elite universities suddenly got the attention of university and college leaders, who all charged off in the same direction.

Nevertheless, there can also be good policy reasons for institutional leadership wanting to move more to blended or flexible learning, for instance. One is to improve the quality of teaching and learning (breaking up large lecture classes is one example); another reason is to expand the reach of the university or college beyond its traditional base, for demographic and economic reasons; a third is to provide more flexibility for full-time students who are often working up to 15 hours a week to pay for their studies.

These policy shifts provide an excellent opportunity then to meet some of the academic rationales mentioned earlier. It is much easier to move into online learning if there is institutional support for this. This often includes extra money for release time for faculty to develop online courses, extra support in the way of instructional and media design, and even better chances of promotion or tenure.

## Implications

- 1.** It can be seen that while market and policy reasons may be forcing you towards online learning, there are also excellent and valid academic reasons for moving in this direction.
- 2.** However, the extent to which online learning is a solution depends very much on the particular context in which it is used. It is essential you carefully think through where it best fits within your own teaching context: blended learning for undergraduate students; masters programs for working professionals; skills development for applied learning; or all of these?
- 3.** Online learning is not going to go away. It will play a larger role in teaching in even the most campus-based institutions. Most of all, your students can benefit immensely from online learning, but only if it is done well.

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## Follow-up

**Chapter 1, Fundamental Change in Education**, of **Teaching in a Digital Age**, is basically a broader rationale for the use of online learning.

Chapters 3 and 4 look at ways to individualize learning; see in particular:

- 4.4 **Online collaborative learning**
- 4.5 **Competency-based learning**
- 4.7 **Agile design**

## Guide 6. How do I start?

### Warming up

By reading these 10 guides, you have already started. It shows you have an interest. However, you should see these 10 guides more as a warm-up than the real game. Warm-ups are valuable. They save you getting hurt when you start playing, but they are not the real thing. So here are at least two quite different strategies for getting started into the real ‘game’ of teaching online.

### 1. The professional strategy

I outlined these as a series of steps, but some of these can be taken concurrently; they are more in order of importance than in sequence.

#### **Step 1: Contact the professionals**

There should be a group of people in your institution who specialize in supporting online learning. There may be a unit in your faculty or department, or a central unit, with a title similar to ‘Centre for Teaching and Learning’ or ‘Centre for Learning Technologies.’ However, the people with the real expertise are often found in continuing studies or extension departments, under such names as the “Centre for Distance Learning” or the “Centre for Digital Learning”.

This is because historically, such units were responsible for the design, development or delivery of distance learning, but as a result they were often the first adopters of online learning. They often work with faculties in helping develop for-credit online courses as well as non-credit courses.

Be careful, though. Some faculty development offices are staffed entirely by people who are experts in face-to-face teaching, but have no experience or may even be hostile to online learning – so make sure they do have the expertise. If not, some other steps are suggested below.

Similarly, some IT support groups may have expertise in online learning, but others may do no more than provide training in the use of a learning management system or lecture capture system. You need more assistance than that, although learning how to use the technology is important.

The reasons for contacting the professionals are obvious but still worth stating. First, they may have access to money to provide release time for you to spend the necessary time to develop your first online course. Second, they should have instructional designers who can walk you through all the necessary steps to ensure a high quality online course. Third, these professional departments should also have technical support staff who can help with the use of specific online tools, such as a learning management system, video recording, wikis and blogs, and web design.

When you first approach them, tell them of your interest. The first meeting needs to be an open, exploratory discussion between you and someone from the support unit. Keep an open mind. Listen to what they suggest and what they can offer, and whether this fits with your interests and needs. Reading these 10 guides and dipping into [Teaching in a Digital Age](#) is very good preparation for this initial meeting.

#### **Step 2: Get your department onside**

Talk to your department head about what you are thinking of doing, and find out if there are colleagues in the department who are already doing online learning in some form or other. It is much easier for you to get help and encouragement if the academic department already has a strategy or plan for online or flexible learning. Indeed, academic departments should be thinking about online learning at a program level. How much online learning should there be at each level as students progress through a degree program? Where would your course fit in this plan?

Unfortunately, academic departments often don’t have such a plan or strategy. But once you start moving into online learning, you should have a voice in initiating or shaping such a plan. The earlier you make contact with your department head and colleagues and let them know of your intentions, the better.

### Step 3: Think about what kind of online course you are interested in

In the first and fourth guides, I describe a number of different types of online courses, from blended, to hybrid to fully online, using recorded lectures (not recommended) or an instructional design approach (highly recommended). Also think carefully about the needs of your students as well as the pedagogical reasons for going online. What type of online learning best suits your students? [Teaching in a Digital Age](#) is particularly useful in helping you make these kinds of decisions (see Follow-Up below).

However, in your context, whatever I may personally recommend, what makes the most sense to you in your context? For instance, if you are unfortunate enough to be in an institution where instructional design support is not available to you, then recorded lectures may be a better option.

Also, NOT doing online learning, because the support is just not there, should also be an option. Better not to do it than to do it badly. But make sure you have explored all the possibilities before coming to this decision, and let your head of department know why you are making this decision.

### Step 4: Develop a work plan

All teaching, face-to-face or online, needs careful thought and preparation, but moving into teaching online for the first time is particularly demanding. Depending on whether there is already a curriculum and learning materials in place or not, it can take up to nine months of preparation before an online course opens. If the course is to have a substantial amount of online work for students, then they need to know well in advance before enrolling. Students also need to be prepared for online learning (covered later guides).

This is where having instructional design support becomes particularly valuable. A good instructional designer will walk you through the process and guide you on what and when you need to prepare. But even if (or especially if) you don't have instructional design support, a flexible but detailed plan of what you need to do is essential. And give yourself plenty of time to get all the ducks in line.

## 2. The amateur strategy: just do it!

Your institution may not be able to provide you with any support or all this might seem too much or unnecessary or you just want to get on with it, in which case, just go ahead. However, this should be a fall-back position out of necessity, not a first choice.

If you do decide to go it alone, I do strongly recommend you read [Teaching in a Digital Age](#) before starting, so you have some idea about what the possibilities are and some of the dangers. In particular, read [Chapter 11, 'Ensuring quality teaching in a digital age'](#), which includes nine steps to quality teaching, and [Appendix 1, Building an Effective Learning Environment](#). This is not enough, of course, but better than doing nothing in the way of preparation.

### Implications

1. Teaching online is a professional activity with a strong knowledge base. It is not something to be done lightly or without proper preparation.
2. In most cases, there should be professional help available. Seek it out and listen to what they have to say. If there is none in your institution, perhaps it's better not to go down this route.
3. Your online teaching strategy should really be part of a wider strategy for teaching and learning within your academic department. Your first online course should fit within this strategy; if there is no strategy or plan for online learning, get involved in creating one.

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## Follow-up

Hard to know where to begin here, other than read through [Teaching in a Digital Age](#). In particular, read:

- All the guides in this 10 Fundamentals of Teaching Online for Faculty and Instructors;
- For deciding on what type of online course to offer, read [Chapter 4, Methods of teaching with an online focus](#) and [Chapter 9, Modes of Delivery](#);
- With respect to why you need to go to professionals for support, and for getting your academic department onside, read [Chapter 12, Supporting teachers and instructors in a digital age](#); and
- For ensuring quality in your online teaching, see [Chapter 11, 'Ensuring quality teaching in a digital age'](#) and [Appendix 1, Building an Effective Learning Environment](#).

## Guide 7. Why not just record my lectures?

I gave a short answer to ‘Why not just record my lectures?’ in the fourth guide, but it deserves a fuller answer. It is natural that faculty and instructors want to use an approach to teaching that is not only familiar and comfortable, but has been used for hundreds of years, so has passed the test of time. However, there are several reasons why recorded classroom lectures are not a good idea for online learning, at least not as the main form of delivering online courses.

### Start with the students

When designing online courses, you need to start by thinking about the context of the online learner. An online learner is usually studying in an isolated situation, without other students or the instructor physically present. There are many ways to overcome the isolation of the online learner (dealt with in later guides), but giving them recordings of 50-minute classroom presentations is not one of them.

In a classroom context, there are many interactive cues or contexts – such as the response of other students, the look on students’ faces – that result in slight but important adjustments on the instructor’s part, and which help maintain student concentration and interest. Even if a live class was present at the time of the recording, these cues are usually lacking when students are studying a recorded video at home, in the library, or on the bus.

There is also research evidence that suggests for every hour of presentation, online students need to spend between two to three hours of additional time going over the recording, stopping and starting, to ensure they fully understand. This is a good benefit of recording compared to even a live lecture, but it also increases the student workload, especially if there is other work to be done, such as readings, assignments, and practical work. Managing student workload is a key factor in ensuring high completion rates for online students.

Lastly, even when recorded lectures are strongly integrated with other activities, such as subsequent classroom discussions or assignments, students often skim on the video preparation, either skimming the video or not watching it at all. The more isolated the student, the more likely this is to happen.

### The changing nature of learning in a digital age

One of the main reasons for moving to online learning is to help develop the knowledge and skills needed in a knowledge-based society, and particularly in a digital age. These new forms of knowledge – such as Internet-based sources and rapidly changing content – and in particular the skills required to master these forms of knowledge, such as knowledge management, independent learning and use of digital media – are not handled well through lectures. In particular, the lecturer is doing the knowledge management, the modelling and the organization of content, not the students.

In other words, lectures require a more passive approach from the learner which is not suitable for isolated learners who need to be active and engaged in their learning, as much for motivational reasons as for developing the knowledge and skills needed. The same could also be true for classroom-based students, incidentally. Indeed, one of the principle reasons for moving to online teaching is to move away from the limitations of lecture-based classes, and to exploit the benefits of online study.

### Video as a teaching medium

Asking ‘Why can’t I move my lectures online?’ is really the wrong question. It assumes that what I’m doing in the classroom works equally well on video for online students. The right question though should be: ‘What is the best use of video for students studying online?’

In media terms, a recorded lecture is mainly a talking head, with, if students are lucky, textual illustration (e.g. PowerPoint slides). There has been a great deal of research on the best mix of

voice, images, and text in video for teaching (see, for instance Mayer, 2009). To incorporate the factors that make the use of video effective for learning, the type of lecture usually delivered in a classroom would need to be considerably re-designed to make it more effective for remote learners.

In addition, there are many other, more creative and relevant ways than lectures for using video for teaching, such as demonstrations of equipment, experiments or processes, animation, and examples drawn from the real world to illustrate abstract concepts.

## Successful uses of video for lectures

It could be argued that MOOCs, the Khan Academy, and TED talks are all examples of the successful use of lectures on video. However, they are not the typical classroom lecture delivered three times a week over a 13-week semester.

I have heard instructors say their MOOC lectures are much better than their classroom lectures, because they put more time into the presentation. MOOC developers learned to adapt the 50-minute lecture to better fit the online format, with shorter, 10-15-minute videos, and shorter courses. This is fine for non-credit programming but does not fit the Carnegie-based 13-week semester model for credit programs. Costs for producing successful MOOC lectures run over \$100,000 a lecture, production costs that are not sustainable for moving large numbers of classroom lectures online.

Sal Khan is an inspired lecturer who uses voice over combined with on-screen digital notes. His technique is not the same as recording a classroom lecture with whiteboard notes. For a start, the audio and screen quality is much higher, but it is also the technique of constructing teaching in appropriate chunks of recorded time that requires considerable thought and preparation. This is not to say classroom lecturers could not do this, but it would require once again redesigning the classroom lecture.

Lastly, TED talks require a great deal of preparation and rehearsal, and again are much shorter than the typical classroom lecture.

So, yes, recorded video can work online, but it needs to be designed specifically to suit the mode of delivery. There are also other ways to design online learning that do not necessarily require so much work, and other uses of video for teaching that are more appropriate.

## What are the alternatives?

Too many to list them all here, but one is to use an online learning management system, such as **Blackboard**, **Moodle** or **D2L**. These provide a weekly structure for 'lessons', organize content in the form of text or online readings, provide a forum for discussion on course topics, provide regular online activities and assignments, and could include links to short videos. Indeed, a short introductory video to a topic by the instructor is often a good idea, providing a personal link between you and your students.

I discuss other possible online learning environments in later guides.

## Implications

1. A talking head delivering 50-minute lectures is, in general, not a good way to teach online learners.
2. It is better in the long run to sit down with an instructional designer and build a course from scratch that is appropriate for an online learning environment, rather than try to force your classroom teaching online.
3. Video is a good medium to use for online learning, but only if it exploits its unique pedagogical benefits.

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4. Talking heads are therefore useful only in particular contexts, and not as a way to deliver a whole program or course online.
  5. Developing quality video for online learning requires a professional approach involving lecturer, instructional designer and a multimedia or video producer.

### Follow-up

For a critique of the limitations of classroom lectures based on research by Donald Bligh, see **[Chapter 3.3 Transmissive lectures: learning by listening](#)** in **[Teaching in a Digital Age](#)**.

For a good summary of best design principles for developing video/multimedia for learning, based on research on the learning effectiveness of video, see the University of British Columbia's **[Design Principles for Multimedia](#)**.

For a discussion of the pedagogical potential of video, see **[Chapter 7.4.2, Presentational features in Teaching in a Digital Age](#)**

If you want to follow up on the research and theory on which this guide is based see:

- Bligh, D. (2000) *What's the Use of Lectures?* San Francisco: Jossey-Bass.
- Mayer, R. E. (2009). *Multimedia Learning* (2nd ed). New York: Cambridge University Press.
- McKeachie, W. and Svinicki, M. (2006) *McKeachie's Teaching Tips: Strategies, Research and Theory for College and University Teachers* Boston/New York: Houghton Mifflin.

## Guide 8. **Won't online learning be more work?**

### More work?

The short answer is, yes, of course, at least in the short term. This is because online teaching is the same as any other skill. When you first start, you have to learn a lot, and do things you haven't done before. For instance, as I discussed in earlier guides, you have to think carefully about why you are using online learning, talk to colleagues and work with other professionals such as instructional and web designers, master the technology, such as video recording or a learning management system, and basically rethink and redesign your teaching. This takes time, and your first online course will undoubtedly be more work and more challenging than your most recent face-to-face course.

However, in the long run, there is no reason why online teaching should be more work than face-to-face teaching, all other things being equal which, of course, they never are in teaching. As always, there are important conditions to be met, if you don't want to be swamped with extra work. So let's look at what these conditions are.

### Redesign your teaching

In a previous guide, I warned against trying to move your face-to-face teaching online, by just recording lectures. Although this may seem to be a time saver when developing an online course, it can cause a lot more work down the line. There are always some students who don't understand parts of a lecture and if something isn't clear, all students may have the same problem. When this happens, watch the e-mails or phone calls or even Tweets roll in from students – or watch the course completion rate take a dive.

The answer is to use what is called 'learning design' or course design: setting clear learning outcomes or objectives for the course, breaking down the learning into manageable chunks of time for the students, providing appropriate learning activities for online learners, for instance, online discussion forums, and ensuring assessment and feedback is continuous throughout the course, all the time thinking of the context in which the online learner is working. The trick is to move much of the work of finding, analyzing and applying content, and development of skills such as independent thinking, critical thinking, and problem solving, from you to the students, but under your guidance.

For most instructors, this means spending a good deal of time preparing the course in advance of its actual delivery. This means having the weekly modules that students study ready well in advance of the opening of the course. Although there will always be the need for minor changes to content in subsequent years, the bulk of the design and development of the course is done in the first year of its offering.

Most instructors in fact find a time shift when they move to online teaching. The more time you put into the development of the course in the first year, the less time you find yourself spending on content during the delivery of the course, because it is already there. Multiply this over several offerings of the course and the time shift can lead to either significant time savings for you, or, more likely, spending your time better in working directly, if online, with students, such as monitoring and contributing to online discussion of the course content.

For this reason, many institutions now offer funding to enable you to 'buy yourself out' of a face-to-face class for one or two semesters in order to prepare your first online course. Once you have some experience in this more traditional form of online learning, you can move to more 'agile' designs later, but that is another matter altogether. The first time out, you and your students need a clear structure and framework for the course.

Also, it is at this stage of course development that working with other professionals such as an instructional designer and web designer is most valuable. They should be able to provide the necessary advice and above all a framework and timetable for your work in designing the course.

## Managing class size

I mentioned earlier that online teaching should not be more work, all things being equal. However, sometimes the aim is to use online learning in order to handle large classes or take extra students. These pressures may be coming from the administration rather than from you – or alternatively you may be concerned about the quality of the teaching of large face-to-face classes when many are delivered not by you but by teaching assistants who have barely more content knowledge than those they are teaching and who in particular may not have good lecturing skills.

The general rule for the most appropriate numbers for an individual instructor to teach online is pretty much the same as for face-to-face teaching. Once the instructor: student ratio goes over 1:30, it becomes harder to individualize the teaching and the instructor's work load increases, unless the course is focused mainly on quantitative or 'objective' outcomes that can be automatically assessed, through, for instance, computer marked assignments. It is generally the marking that leads to overload when classes get beyond 30 per instructor.

However, because with online learning the content is available at any time and any place for students, there is some scope for scaling up the teaching to handle larger numbers. In particular, if the teaching content on the course is well developed by a top quality professor or instructor, all students receive the same quality of content instruction. This means that learner support and student assessment (marking) can then be supported by contract sessional instructors as class size increases.

The availability of funding for hiring additional sessional instructors depends on the business model behind the online program. If you are merely moving students from an existing face-to-face course to an online course, then there is no extra money from tuition fees. However, if the online program is attracting new students paying additional tuition fees, then the extra funding can be used to hire more sessional instructors.

In many North American universities, the tuition fee once an online course is developed more than covers the cost of additional sessional instructors, even with 'steps' of 30 students (i.e. for every additional 30 students you hire another sessional). Much of this of course depends on faculty agreements, but from your point of view, redesign of a large face-to-face course by moving it online can not only improve the quality but also enable you to manage your own workload better.

What I would advise against is the use of graduate students as teaching assistants for online courses. The redesign of online courses requires instructors who can go beyond the 'recorded' content of an online course and can push students in online discussion groups, for instance, to challenge ideas and go deeper than just the formal online content. This requires sessional instructors with a good understanding of content and good inter-personal teaching skills to handle the extra students as class size increases.

In summary then, managing your workload as online class size increases requires several conditions:

- 'Core' content of high quality that does not need to be changed a lot from year to year;
- Learning/course design that provides a strong structure for students so it is clear what they need to do when studying;
- Professional instructional design and web/media design support; and
- Flexibility to hire additional, well-qualified sessional instructors as class size increases.

In the end, this may mean moving to a team approach to teaching large online classes. In some cases, the senior instructor's responsibility may not involve direct teaching at all, but being responsible for the curriculum/content, setting learning outcomes, designing assessments, and supervising the learning support and assignment marking provided by sessional instructors.

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## Shifting from content to skills development

What online learning can do is enable you, as an instructor or teacher, to move away from 'sage-on-the-stage', where you are responsible for choosing and delivering content, and assessing how well students comprehended this content, to 'guide-on-the-side', where students find, analyze and apply content, and develop higher level skills through practice, often working with other students online, through discussion or project work, but always under your guidance, or under the guidance of a team of sessional instructors you monitor.

## Implications

1. Such changes inevitably mean more work, and more challenges, initially, in moving to online learning, but the benefits in both the quality of what your students learn, and the quality of your own engagement with students, can be substantial.
2. There are also strategies for managing your workload when teaching online, so over time you can better balance your teaching, research and administrative responsibilities.
3. But online learning is not something to be undertaken lightly. You need to do it professionally, or it is both more work and very frustrating.

## Follow-up

For more on the design of online courses, see:

- [Chapter 4, Methods of Teaching Online](#), in [Teaching in a Digital Age](#).

### Defining quality in online learning

OK, now you've looked at most of the pros and cons of online learning, you're now ready to start. But you want to make sure if you are going to do online learning, you are going to do it well. What does that entail?

First, let me define what I mean by 'doing online learning well.' I define a high quality online course in the following way:

*Teaching methods that successfully help learners develop the knowledge and skills they will require in a digital age.*

Now of course that could equally define a high quality face-to-face or classroom course. Chickering and Gamson (1987), based on an analysis of 50 years of research into best practices in teaching, argue that good practice in undergraduate education:

1. Encourages contact between students and faculty.
2. Develops reciprocity and cooperation among students.
3. Encourages active learning.
4. Gives prompt feedback.
5. Emphasizes time on task.
6. Communicates high expectations.
7. Respects diverse talents and ways of learning.

These guidelines apply just as well to online learning as to face-to-face teaching. At the end of the day, the best guarantees of quality in teaching and learning fit for a digital age are:

- Well-qualified subject experts also well trained in both teaching methods and the use of technology for teaching;
- Highly qualified and professional learning technology support staff;
- Adequate resources, including appropriate teacher/student ratios;
- Appropriate methods of working (teamwork, project management); and
- Systematic evaluation leading to continuous improvement.

However, because online learning was new and hence open to concern about its quality, there were many guidelines, best practices and quality assurance criteria created and applied specifically to online programming. All these guidelines and procedures were derived from the experience of previously successful online programs, best practices in teaching and learning, and research and evaluation of online teaching and learning. A comprehensive list of online quality assurance standards, organizations and research on online learning can be found [here](#).

I'm not going to duplicate these. Instead, I'm going to suggest a series of practical steps towards implementing such standards. Chapter 11 of [Teaching in a Digital Age](#) sets out [nine steps to quality online learning](#). Ideally, you should read the whole of this chapter before starting out on your first online course, but in this guide I provide a brief summary of each step.

I am assuming all the standard institutional processes towards program approval for an online course were taken, although it might be worth thinking through my nine steps outlined below before finally submitting a proposal. This would be a good way to anticipate and address any questions and concerns your colleagues may have about online learning. My nine-step approach also works when considering the redesign of an existing course.

The nine steps are as follows:

1. **[Step 1: Decide how you want to teach](#)**
2. **[Step 2: Decide on mode of delivery](#)**
3. **[Step 3: Work in a Team](#)**
4. **[Step 4: Build on existing resources](#)**
5. **[Step 5: Master the technology](#)**
6. **[Step 6: Set appropriate learning goals](#)**
7. **[Step 7: Design course structure and learning activities](#)**
8. **[Step 8: Communicate, communicate, communicate](#)**
9. **[Step 9: Evaluate and innovate](#)**

I am providing below a very brief description of each step. Just click on the heading for each step to see the full section in Teaching in a Digital Age.

### **[1. Decide how you want to teach](#)**

Of all the nine steps, this is the most important, and, for most instructors, the most challenging, as it may mean changing long established patterns of behaviour.

This question asks you to consider your basic teaching philosophy. What is my role as an instructor? Do I take an objectivist view that knowledge is finite and defined, that I am an expert in the subject matter who knows more than the students, and thus my job is to ensure that I transfer as effectively as possible that information or knowledge to the student? Or do I see learning as individual development where my role is to help learners to acquire the ability to question, analyse and apply information or knowledge?

Do I see myself more as a guide or facilitator of learning for students? Or maybe you would like to teach in the latter way, but you are faced in classroom teaching with a class of 200 students which forces you to fall back on a more didactic form of teaching. Or maybe you would like to combine both approaches but can't because of the restrictions of timetables and curriculum.

Considering using new technologies or an alternative delivery method gives you an opportunity to re-think your teaching, perhaps to be able to tackle some of the limitations of classroom teaching, and to renew your approach to teaching. Using technology or moving part or all of your course online opens up a range of possibilities for teaching that may not be possible in the confines of a scheduled three credit weekly semester of lectures. It may mean not doing everything online, but focusing the campus experience on what can only be done on campus. Alternatively, it may enable you to totally rethink the curriculum, to exploit some of the benefits of online learning, such as getting students to find, analyse and apply information for themselves.

Thus if you are thinking about a new course, or redesigning one you are not too happy with, take the opportunity before you start teaching the program or course to think about how you'd really like to be teaching, and whether this can be accommodated in a different learning environment. The important point is to be open to doing things differently.



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But as well as open resources designated as ‘educational’, there is a great deal of ‘raw’ content on the Internet that can be invaluable for teaching. The main question is whether you, as the instructor, need to find such material, or whether it is better to get students to search, find, select, analyze, evaluate and apply information. After all, these are key skills for a digital age students need to have.

Most content is not unique or original. Most of the time, we are standing on the shoulders of giants, that is, organizing and managing knowledge already discovered. Only in the areas where you have unique, original research that is not yet published, or where you have your own ‘spin’ on content, is it really necessary to create ‘content’ from scratch.

**Chapter 10, Trends in Open Education**, in **Teaching in a Digital Age** is essential further reading on how to make full use of already existing resources.

### **5. Master the technology**

Taking the time to be properly trained in how to use standard learning technologies saves you a good deal of time in the long run and enables you to achieve a much wider range of educational goals than you would otherwise imagine. There are many different possible technologies, such as learning management systems or video recording. It is not necessary to use all or any of these tools, but if you do decide to use them, you need to know not only how to operate such technologies well, but also their pedagogical strengths and weaknesses.

There are really two distinct but strongly related components of using technology:

- How the technology works; and
- What it should be used for.

These are tools built to assist you, so you have to be clear as to what you are trying to achieve with the tools. This is an instructional or pedagogical issue. Thus if you want to find ways to engage students, or to give them practice in developing skills, such as solving quadratic equations, learn what the strengths or weaknesses are of the various technologies for doing this.

### **6. Set appropriate learning goals**

An instructor (particularly a contract instructor or adjunct) may ‘inherit’ a course where the goals are already set, either by a previous instructor or by the academic department. Nevertheless, there remain many contexts where teachers and instructors have a degree of control over the goals of a particular program or course. In particular, a new program or course – such as an online masters program aimed at working professionals – offers an opportunity to reconsider desired learning outcomes and goals. Especially where curriculum is framed mainly in terms of content to be covered rather than by skills to be developed, there may still be room for manoeuvre in setting learning goals that also include, for instance, intellectual skills development.

What this is likely to mean in terms of course design is using the Internet increasingly as a major resource for learning, giving students more responsibility for finding and evaluating information themselves, and instructors providing criteria and guidelines for finding, evaluating, analyzing and applying information within a specific knowledge domain. This requires a critical approach to online searches, online data, news or knowledge generation in specific knowledge domains – in other words, the development of critical thinking about the Internet and modern media – both their potential and limitations within a specific subject domain.

It is pointless to introduce new learning goals or outcomes and then not assess how well students achieved those goals. Assessment drives student behaviour. If they are not to be assessed on the skills outlined above, they won’t make the effort to develop them. The main challenge may not be in setting appropriate goals for online learning, but ensuring you have the tools and means to assess whether students achieved those goals.

And even more importantly, it is necessary to communicate very clearly to students these new learning goals and how they are assessed. This may come as a shock to many students who are used to being fed content and then tested on their memory of it.

## 7. Design course structure and learning activities

In a strong teaching structure, students know exactly what they need to learn, what they are supposed to do to learn this, and when and where they are supposed to do it. In a loose structure, student activity is more open and less controlled by the teacher. The choice of teaching structure of course has implications for the work of teachers and instructors as well as students.

‘Strong’ teaching structure is not inherently better than a ‘loose’ structure, nor inherently associated with either face-to-face or online teaching. The choice (as so often in teaching) depends on the specific circumstances. However, choosing the optimum or most appropriate teaching structure is critical for quality teaching and learning, and while the optimum structures for online teaching share many common features with face-to-face teaching, in other ways they differ considerably. [Chapter 11](#) of *Teaching in a Digital Age* looks at several specific areas where online learning requires a different approach to structure and learning activities from face-to-face teaching. It is probably in this step that the differences between face-to-face and online learning are greatest.

## 8. Communicate, communicate, communicate

There is substantial research evidence to suggest ongoing, continuing communication between teacher/instructor and students is essential in all online learning. At the same time, it needs to be carefully managed in order to control the teacher/instructor’s workload. Students need to know the instructor is following the online activities of students and the instructor is actively participating during the delivery of the course.

[Chapter 11 sets out a number of strategies](#) to ensure good communication with online students while managing instructor workload.

## 9. Evaluate and innovate

The last step emphasizes the importance of both evaluating how well the online program or course actually works, with a particular emphasis on formative or ongoing evaluation, and the importance of looking constantly for ways to improve or add value to the course over time.

Chapter 11 suggests ways to conduct both the summative and formative evaluation of online courses in ways that include evaluating specifically the online components.

## Building a strong foundation of course design

The nine steps are based on two foundations:

- Effective strategies resulting from learning theories tested in both classroom and online environments; and
- Experience of successfully teaching both in classrooms and online (best practices).

The approach I suggest is quite conservative, and some may wish to jump straight into what I call second-generation online learning, based on social media such as mobile learning, blogs and wikis, and so on. These do offer intriguing new possibilities and are worth exploring. Nevertheless, for learning leading to qualifications, it is important to remember most students need:

- Well-defined learning goals;
- A clear timetable of work, based on a well-structured organization of the curriculum;
- Manageable study workloads appropriate for their conditions of learning;
- Regular instructor communication and presence;
- A social environment that draws on, and contributes to, the knowledge and experience of other students;
- A skilled teacher or instructor; and

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- Other motivated learners to provide mutual support and encouragement.

There are many different ways these criteria can be met, with many different tools.

## Follow-up

Despite the length of this guide, it is still a brief summary. You are strongly recommended to read the following chapter in full:

- **Chapter 11, Ensuring quality teaching in a digital age.**

Indeed, you are now at the stage where you should be reading the whole book, and in particular the early chapters on epistemology and teaching methods.

### What you've learned

If you have read all previous nine guides in this series, you should now be aware of the following:

1. Online learning can be done well, or it can be done badly.
2. Online learning is a professional activity, with evidence-based best practices. You need to be aware of these best practices if you want to succeed in your online teaching.
3. There are certain conditions where online learning is likely to work, and others where it will be difficult to succeed.
4. You need then to choose the appropriate mix of online and face-to-face learning, dependent on the context in which you are working.
5. There are many different approaches and technologies that can be used in online learning. The best choices depend on your specific learning context but you need to be aware of the choices.
6. Moving to online learning opens the opportunity to re-think the design of your teaching; indeed, you need to change from a lecture-type approach to a more interactive learning approach if you are to succeed online.
7. It is important to work with professional instructional designers and media producers if you want a high quality online program or course.
8. The technology, and to a lesser extent, the pedagogy of online learning continues to evolve.
9. Thus although, at least in the beginning, it is important to follow best past practices, you also need to be aware of new developments and the potential for innovation in your online teaching.
10. Really, in the future, online learning will not be considered different or separate from 'teaching'. It will be an integrated, normal component of all teaching. So you might as well get to learn to use it well as soon as possible. Start now!

### Additional resources

Although I hope these 10 guides help you decide to teach online, there is always more to learn. Therefore, the following additional resources can contribute to your development as an online instructor.

1. Read [\*\*Teaching in a Digital Age\*\*](#). This free, online textbook is designed to help you develop the knowledge and skills your students need in a digital age. It could be read from cover to cover, but it's more likely to be useful as a resource to be dipped into as and when needed. The book covers:
  - The types of knowledge and the skills students need in a digital age;
  - How online learning can help develop these skills;
  - Different approaches to teaching online;
  - How to decide on the right mix of online and face-to-face teaching;
  - How to find and use open educational resources;
  - How to choose between different media;
  - Nine steps to quality online learning;
  - Organizational requirements for effective online learning; and
  - How to create an effective online learning environment.

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2. Take an online course on how to teach online. This not only provides you with the knowledge and techniques you need, but also gives you the experience of what it feels like to study online. Look for programs that allow you to take (and pay) for one course at a time, such as UBC's [\*\*Master in Educational Technology\*\*](#). For a list of online programs that provide you with a good foundation for teaching online, see: [\*\*Recommended graduate programs in e-learning\*\*](#).
  3. Follow regular online publications written in non-technical language aimed at those teaching online, such as:
    - [\*\*teachonline.ca\*\*](#) from Contact North | Contact Nord, Ontario, Canada ('Pockets of Innovation' is particularly useful)
    - [\*\*Flexible Learning\*\*](#), University of British Columbia, Canada (the case studies again are interesting)
    - [\*\*Frontiers\*\*](#) from WCET (the Western Co-operative for Educational Technology, USA)
    - [\*\*EDUCAUSE Review\*\*](#) (USA)
    - Jisc's [\*\*Online Learning Guides\*\*](#), U.K.
    - [\*\*Learning Design tool\*\*](#), from Australian Flexible Learning Network
    - My own blog: [\*\*Online Learning and Distance Education Resources\*\*](#) contains over 2,000 posts on different issues in and resources for online learning – use the search box to search for specific topics.
  4. For a list of the main journals on research and development in online teaching, see: [\*\*E-Learning Journals\*\*](#), and/or the American Association of Computers in Education's [\*\*LearnTechLib\*\*](#). I recommend particularly:
    - IRRODL ([\*\*International Review of Research on Open and Distance Learning\*\*](#)): an open, online journal
    - [\*\*British Journal of Educational Technology\*\*](#)
    - [\*\*Online Learning\*\*](#), the online journal of the Sloan-C Online Learning Consortium, USA
  5. At the risk of repeating myself, work with your local centre for teaching and learning, or centre for learning technologies, or centre for distance education, and attend any faculty development workshops on online learning. There is more to learn all the time.

## The end

So good luck with your new adventure in teaching at least partly online.

If you have found this series useful, please pass it on to colleagues who you think may also benefit from it.

I'd also be interested in hearing from you of your experiences as newcomers to online teaching.