Making the Transition to Online Teaching and Learning: A Guide for Instructors

Canadian Psychological Association

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Making the Transition to Online Teaching and Learning

Contents

Introduction

The unprecedented situation in which the world finds itself will inevitably change the way we live our lives, and the way we teach and learn. We live in a time of connectivity, where it is possible to communicate ideas over long distances to large audiences. E-learning, both formal and informal, has been evolving over a number of years for many reasons, including cost and convenience. The recent necessity of transferring the teaching of psychology at a postsecondary level into the virtual world in a relatively short span of time has given rise to a large amount of concern and confusion: how does an instructor who has taught psychology in-person for an entire career make the shift to online venues and still ensure the goals of quality teaching and effective learning of psychological concepts and methods are being met? This guide is intended to alleviate at least some of these concerns.

First, we need to recognize that a shift to online or virtual learning is not simply the uploading of PowerPoint slides to the Internet. Learners need to be engaged with the material and be provided the opportunity to interact in ways with which they (and you) may not be familiar. Fortunately, a significant body of research exists to support the efficacy of online instruction and to provide guideposts to follow along the way. Careful planning and open communication will be the mantra repeated throughout this guide – both are critical to the success of any shift to virtual delivery.

- Section 1 is a short discussion of adult learning: how it happens, why it happens, and how it succeeds or fails. This is to provide context to the steps that will follow.
- Section 2 will outline the process of curriculum planning (or re-planning) for e-learning using the ADDIE model, taking a step-by-step approach to adapting materials to online platforms. We will also provide you with templates to help in the planning process.
- Section 3 will provide links to additional valuable online resources. It is hoped that these can be updated regularly to ensure current and relevant information and methods.

E-learning is a complex process but can be just as effective as in-person instruction if done well. We must not lose sight of the ultimate goal of a psychology educator: to train the next generation of psychological professionals – scientists, academics, clinicians, and others. While some concepts we will be discussing will be somewhat generic – and therefore helpful to teachers of other subjects – the Canadian Psychological Association, in its role as a leader and champion of psychological education, practice, and science, has taken this opportunity to create this material to assist psychology instructors, and through them the next generation of psychologists. We hope that we can help you make the most of this opportunity to explore the evolution of teaching and learning in a rapidly changing world.

Section 1: A Brief Overview of Adult Learning

In order to place the information that follows in context, it is useful to provide a quick overview of a theory of adult learning created by Benjamin Bloom in 1956 but which has gained renewed support in the field of e-learning.
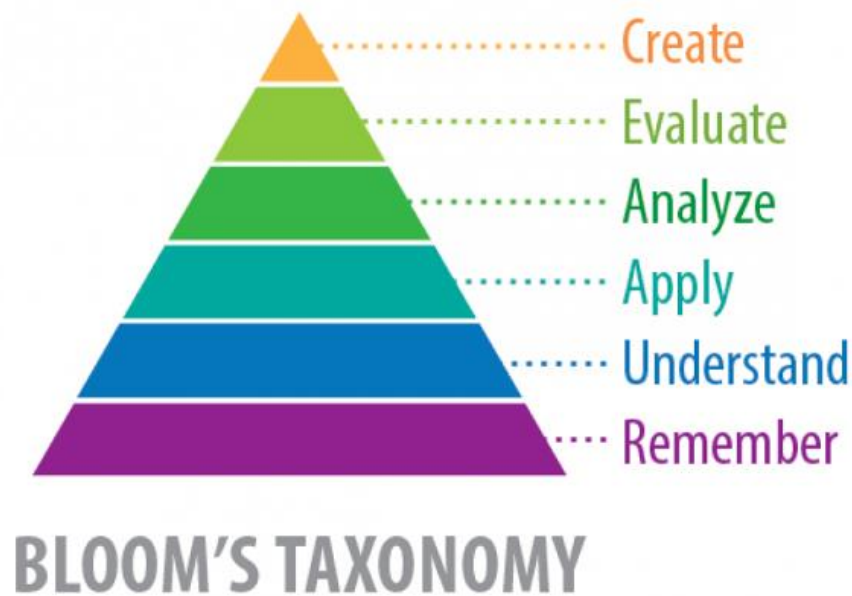
BLOOM'S TAXONOMY

Bloom, B. S. (ed.). Taxonomy of Educational Objectives. Vol. 1: Cognitive Domain. New York: McKay, 1956

In Bloom's Taxonomy, learners progress from the bottom of the pyramid to the top, with each level representing a new stage of comprehension and incorporation of theory and activity into practice. It works particularly well as a representation of a learner's progress toward a professional identity. Instructors can tailor an evolving system of assessments to reflect the transition of learners from one stage to the next (see Assessments, page XX).

The stages of the taxonomy are:

1. **Remembering:** Knowledge, facts, and information are provided to the learners.
2. **Understanding:** The learner comprehends the knowledge they have been given.
3. **Applying:** The learner puts the knowledge into practice.
4. **Analyzing:** Learners strengthen their knowledge of the subject matter and can solve problems independently based on scenarios.
5. **Evaluating:** Learners can operate independently and can mentor others – evaluation of prior steps in the taxonomy at this stage can help improve e-learning delivery.

6. **Creating:** Learners can collaborate to develop novel applications of the knowledge and skills they have gained.

Often, students will not reach Stage 6 while undertaking e-learning. They will move on to this level as they acquire sufficient levels of expertise and experience to develop novel approaches or adapt past practices in novel ways, furthering their field of study.

Teaching and Learning in a New Environment

One of the unique aspects of online teaching and learning is, of course, the means of communication between instructor and student. Many of the most common methods instructors use to gauge their own performance are absent – it is much harder to gather nonverbal feedback from small squares on a screen! Using the polling function that is available on most platforms can allow you to check in on whether the students are falling behind – are you going too fast, or too slow? Polls have the advantage of being anonymous, so students will not be as reticent to let you know they don't understand something. Let them give you feedback and improve the experience for both sender and receiver while maintaining engagement.

If you are an experienced instructor, you are most likely accustomed to a particular level of contact with students – emails or office visits. You can absolutely expect that the volume of emails is going to increase substantially, and you should be ready with clear guidelines about your responses (e.g. within 2 business days), or you will frustrate some students who will expect comprehensive answers to their questions at 11 pm on a Saturday.

Section 2: Online Curriculum Planning Using the ADDIE Model

The delivery of e-learning effectively, particularly at the level expected of a university course, requires careful planning and execution. Even though course materials may exist, it is important to ensure that these materials are presented in a way that is engaging and that will be retained by the learner over time. As we have discussed, the adult attention span is rather brief in an in-person setting, and even more so in an e-learning environment. The intent is not merely to present information in the same old way, but to give learners opportunities to engage with materials and concepts, to problem solve, and to put the knowledge gained into practice. Working our way through the following steps will help ensure that the knowledge you share will be structured and engaging. The steps presented here will help create a flexible structure upon which you will build your course.

The ADDIE model is a framework for instructional design that works its way through five stages: Analysis, Design, Development, Implementation, and Evaluation. It is the most linear, and therefore the most straightforward model for development.

a) Analysis

In this stage, the basics of the course are identified. This is the stage at which you must ask yourself: how does this material lend itself to online instruction? Does this method of delivery meet the need of educating future psychologists? What platform is your institution using, and how can you best leverage its capabilities to deliver e-learning? Establish the context for the course, beginning with the fundamentals:

- The name of the course
- Prerequisites (if any)
- Materials available

Synchronous/Asynchronous instruction

One of the most critical determinations as to what your course will look and feel like is whether the course will be synchronous – that is, presented live; or asynchronous ('on-demand'). Synchronous delivery scheduled at the same time every week can aid in engagement and participation as the expectation is that the students be ready and available at a set time, which helps them to focus on the specific activity. It also provides a temporal anchor point that helps establish routine; particularly during times of stress or isolation, having something to look forward to is helpful to student morale. Asynchronous presentation has some unique challenges in terms of engagement and results, but in either case it is absolutely necessary that you as the instructor are clear and specific regarding your expectations. For example, assignments must be clearly and concisely described, with special attention to what your expectations are regarding length, content, time of submission, and so on.

You are setting the stage for your performance – establishing your space and the things in it. In the next stage, we will create the sets, costumes, and scripts.

b) Design

This is where the work of creation and adaptation begins. The very first step in this stage is to create a set of specific and measurable learning objectives. Good learning objectives identify the activities a learner should be able to perform without guidance by the end of the course. For example:

- At the completion of this course, Students will be able to:
    - list the 5 distinct qualities of opioids
    - create detailed, legible, and useful case notes
    - design a treatment plan based on culturally sensitive and equitable values

Learning objectives use verbs as their key focus – they must be verbs that are measurable, like *create*, *design*, or *identify*, rather than less quantifiable verbs like *know* or *understand*. It is possible to establish if a learner can competently write case notes or design an experiment, but

not as easy to establish whether a student "knows about" case notes or experimental design. The desired end result is the learner's ability to perform particular tasks as well as understanding why they are doing so.

Choose four course objectives for your course:

1. _____

2. _____

3. _____

4 _____

Are these goals achievable? Are they measurable? Can you objectively establish whether students have met these goals?

Next, the information you will be presenting to assist learners in meeting these objectives must be laid out and made into modules that are self-contained and 'digestible'. Lay out your course according to discrete concepts and arrange these concepts to fit the number of weeks provided for the course. The contents of each module must be relevant to the ultimate course objectives – students will grow impatient with material they do not consider directly useful and will tune out.

Part of this process of creating modules with discrete and relevant concepts will be the design of activities that will allow the learners to actually do something with the concepts you have provided – give them a problem to solve, a scenario to consider, decisions to make based on the information, or give them the opportunity to create something that uses the relevant concepts. The activities should require critical thinking, which aids in comprehension and retention.

Demonstrations that illustrate the relevance of particular concepts can also be useful to reinforce these concepts and put them within the larger context. Demonstrations conducted by the learners are even better. As the saying goes, "show, don't tell".

Finally, learners need to be provided with opportunities to demonstrate mastery of training objectives through assessments. We will now look at assessments in more detail.

Assessments

As has been highlighted recently, student assessment can be one of the most challenging aspects of e-learning course design and presentation to manage effectively. If done correctly,

however, it is possible to design assessment tools that, when integrated into a course, become interactive and engaging parts of the online experience rather than a box to be checked by both you and your learners.

The three main types of assessment are **diagnostic**, **formative**, and **summative**.

- **Diagnostic** assessments are conducted at the very beginning of a course to determine the amount of knowledge students already have about a subject. It can also serve as a useful measure of students' assumptions and attitudes about the subject matter that the course is designed to cover; this can help guide the course as it is delivered. These can be as simple as a short questionnaire or an ungraded online quiz offered during the initial class or provided to students prior to the initial class.
- **Formative** assessments are conducted during learning and can identify gaps in understanding; formative assessments can often serve as both an assessment of student learning and an evaluation of the course in progress. They are often informal and not scored. It provides valuable feedback to learners that can help guide them to better understanding of the topics that are presented. The feedback should be presented positively, for example, "That's a great idea, but have you thought about it in this way…?", or "That's very good, now let's look at what the text says about it." Positive feedback will encourage exploration rather than discourage the effort.
- **Summative** assessments are conducted at the end of the learning process and serve to evaluate the level of student learning compared to your learning objectives. Have the students achieved the expected outcomes?

The intent of assessments, particularly qualitative **formative assessments**, is to encourage critical thinking about the material encountered – it acts as a type of practical problem-solving opportunity as well as a memory reinforcement. These types of assessments encourage problem solving and professional development within a discipline, as well as measuring the effectiveness of the course presentation. Some examples of qualitative formative assessment methods are:

Practical Demonstrations: Assuming you have provided learners with theoretical bases and context for the actions they will perform, having students engage in role play and other such real-time demonstrations of knowledge builds skills and reinforces the meaning and importance of the materials. Creating the knowledge-behaviour link is critical to understanding in a profession.

Deep Thinking Questions: presenting students with a scenario to react to is in essence a type of 'solo role play' wherein a student must present a solution to a problem or devise a series of steps toward a given goal. Students don't just state solutions, they must provide rationales for

their decisions. These must be situations that it is possible for them to encounter, which effectively links theory to future practice.

Case Studies: case studies can be a remarkably effective tool for learning. While deep thinking questions and demonstrations are theoretical, case studies have additional impact because they are *real* – they show real scenarios and situations that students may encounter, and the resolutions of these situations. It is common for these to be applied to groups, where real-life situations are described without the steps toward resolution; the group discusses and presents their ideas on how to solve the problem. This not only provides the opportunity for group interaction and discussion but can also clearly highlight any sections that may require additional review.

Teach Me: the traditional presentation we all remember has the dual advantage of stimulating peer discussion as well as improved internalization of material. Students take turns in the role of instructor for given topics, leading the group through lectures and discussions. Another useful version of this method is the creation of 'How To' guides by learners as a writing exercise.

Decision Trees: a decision tree in this context refers to the creation of a diagram that leads learners through critical decisions and outlines the potential consequences of each decision. This allows them to make decisions without risking real-world mistakes with potentially dangerous real-world effects.

There are also more quantitative methods of assessment that can be used to aid memory and retention; the conducting of short true-false and multiple choice quizzes at the end of each class or module can aid retention and understanding, but are a measure of memory by rote and not of comprehension and connection with the material. While better suited to measure the acquisition of knowledge compared to a set standard, they are not as effective in professional training and should be used sparingly.

It is useful to employ formative assessments to keep learners engaged with the material but using them in this way does not need to be overly formal. During synchronous sessions, it can be as simple as calling on individual students or using breakout groups challenged with reporting back on a question or topic can help improve engagement.

Summative assessments are intended to measure students' knowledge as compared to a verifiable standard, generally at the end of a course, although they can be used at numerous touch points to avoid creating 'test anxiety'. There are two main types of summative assessments: *performative assessments* and *testing assessments*. Performative assessments assess performance in situations, and testing assessments, as the name implies, involve traditional true/false, multiple choice, and essay responses. The best method to use is best determined by the objective of the course. If the course is procedural (determine, decide,

explain – knowing *how*) or declarative (facts, names, lists – knowing *what*). Being aware of and having the ability to recall a set of ethical standards or privacy regulations is important, and is part of the declarative knowledge base of any psychologist, but applying knowledge procedurally in a socially conscious, sensitive, and appropriate manner is also critical to becoming a member of the profession. Your learning outcomes determine the priorities of the course, and in turn dictate the most effective method of summative assessment.

Assessments, at their core, must be:

- Valid – they must be measuring what they purport to measure.
- Clear – they must be written in a manner that avoids confusion and ambiguity.

Multiple choice questions are a common example of summative testing. Care must be taken to design multiple-choice questions that measure learning appropriately. While primarily used to test recall, it is possible to test analytical skills to some degree, with students required to apply principles, judge relevance, and apply best solutions.

A multiple-choice question has two parts: a stem and multiple alternatives. The stem initiates the item with a question, incomplete statement, or situation. The alternatives are a list of possible answers or conclusions, which include the key, which is the correct answer, and distractors, which are inferior or incorrect answers. There is a link in Section 3 to useful test development resources.

c) Development

The development phase is where you begin to develop the specific materials in the order you have decided, and where you begin the creation or acquisition of content for modules that will help students achieve the learning objectives you have created.

Media

We are even more deeply embedded in a digital world than we were just a few months ago. Learners have access to all types and formats of media, with streaming video being the most prevalent. If you are including media in your course, it must be engaging and relevant and not mere 'filler' to tack minutes on to the clock. We all remember our teachers setting up the TV at the front of the class and taking things a little easier as we were focused on the screen. Those days are long past – learners of all ages are too media-savvy to maintain interest in irrelevant or poorly devised audio or video content. Content must be relevant to the topic at hand, and more importantly, relevant to the practice of psychology – show psychologists in real-world situations describing how they make decisions and act in the best interests of clients based on their knowledge and experience in the discipline.

The media you present should be only a part of the experience – it should provoke discussion and debate, conversations about why decisions were made and what alternatives might exist. It

is critically important to be mindful of how current the media is, and to present materials that promote the science of psychology and add to the students' cache of knowledge of current practice and context.

It cannot be stressed enough that Indigenous, Black, and People of Colour MUST be represented fairly and completely, with a great deal of sensitivity and awareness of psychology's need to move into a future that is free of the biases, prejudices, and structural inequities of the past. Ideally, representatives of BIPOC communities should speak their own truths in their own ways.

Instructors should be sure that the media they use will not result in copyright issues; particularly if a module is to be recorded for on-demand use, copyright approval should be sought for all media, particularly from commercial sources, or it should be confirmed that the materials are permitted for educational use in a non-profit setting.

Other Content

When deciding on content, avoid the obvious: e-learning is not simply putting a PowerPoint presentation online. Content must be engaging and inspire thought and discussion. Create the online course that you would want to take!

When considering content, familiarize yourself with what features and limitations are built into the e-learning platform your institution chooses to use. If polls are available as a feature, take the time to design and implement quick polls for learners, to encourage participation, gather feedback, and spark further engagement with the material.

d) Implementation

Once you have the materials and your deployment plan in place, now is the time to harness the capabilities of your e-learning platform to create the complete package.

A key consideration of this phase is accommodating the technical requirements of your learners; materials and media must be geared consciously towards the lowest technology and connectivity requirements possible. It is advisable that you run a pilot to determine the functionality of the Web platform before mass enrollment. That way you can deal with any functional issues that can arise and solicit the help of your institution's IT resources to solve particularly difficult hardware dilemmas if necessary.

e) Evaluation

When all is said and done, the main goal of creating the e-learning course is to provide students with the materials and knowledge they will need to become competent, ethical members of the profession of Psychology. To determine how well the course has accomplished that task, you must build an evaluation phase into the planning process. At minimum, you should be able to answer these questions:

- Was the course a positive experience?
- Have the learners achieved the learning objectives?
- Are the learners using the knowledge they have gained?

Once you have completed the evaluation phase, you can use the knowledge gained to improve the e-learning experience; it will be important to share any technology and e-learning platform issues experienced by learners with your administration to facilitate improvements to the infrastructure where possible.

Conclusion

Nature has decided that the structure of higher learning must change – technology, fortunately for us, is making it possible. Both instructors and learners are fortunate to have the support of peers and technical experts to help them arrive at their goals. The process of planning may be the same, but the content of the plans has become more thoughtful and complex. In the long term, this cannot be a negative thing.

This document provides the basics for creating an effective, engaging course that will serve the needs of students of psychology – at least in part. The element that is missing is the experiential aspect of psychological practice – while simulations and case studies can give the flavour of what a psychologist does in their role as a scientific and/or health professional, the conducting of actual laboratory experimentation or the practice of therapy in a realistic setting is challenging to provide online. We can provide the knowledge but are limited in our ability to provide opportunities to practice skills. The practicalities of locations and physical distancing restrictions will determine to what extent learners get to practice the performance of skills necessary to their chosen profession. That will be up to you and your institution to determine.

The Canadian Psychological Association, as part of its mandate to support members of the psychological profession from both a practice and a scientific perspective, continues to seek out and provide useful resources whenever possible. The resources listed here in Section 3 are current as of this writing, and more will be made available as we discover them. This will be a living document and will be kept as up to date as possible.

If you have additional resources to share, or feedback on this document, please contact the Education Directorate at education@cpa.ca.

Section 3: Additional Resources

Colleges & Institutes Canada: Free resources to help faculty affected by COVID-19
https://www.collegesinstitutes.ca/free-resources-to-help-faculty-affected-by-covid-19/

Working and learning online during a pandemic: Resources for Higher Education Faculty by
Pearson https://www.pearson.com/news-and-research/working-learning-online-during-pandemic.html

Course for Online Faculty Members: Lethbridge College
https://lethbridgecollege.ca/news/news-release/lethbridge-college-offers-course-online-faculty-members?utm_source=Academica+Top+Ten&utm_campaign=94faed1d45-EMAIL_CAMPAIGN_2020_04_17_07_21&utm_medium=email&utm_term=0_b4928536cf-94faed1d45-52001729

Transition to Online Teaching: Concordia University
https://www.concordia.ca/offices/ctl/moving-courses-online/transition.html

A Digital Survival Kit for Transitioning Courses Online: University Affairs
https://www.universityaffairs.ca/career-advice/career-advice-article/a-digital-survival-kit-for-transitioning-your-course-online/

Online Learning and Distance Education Resources: Tony Bates, Research Associate, Contact
North https://www.tonybates.ca/

Course Design for Rapidly Moving Your Course Online: Spring/Summer 2020: Western
University https://teaching.uwo.ca/elearning/index.html

Transitioning to online teaching: Proven methods and helpful tips: Royal Roads University
Webinar https://www.royalroads.ca/info-sessions/webinar-transitioning-online-teaching-proven-methods-and-helpful-tips-qa

Guide to online teaching and learning: Sheridan College
https://sheridancollege.libguides.com/c.php?g=715931&p=5105237

Queen's University Continuing and Distance Studies, Arts & Science Online: ASO Remote
Teaching Support, Practical Tips and Tricks -
https://rise.articulate.com/share/dRIYnP5iZ1itxSyVZAcOjEUKneNKpj3J#/

Resources Provided by the APA

Moving Online Now: How to Keep Teaching During Coronavirus (PDF, 3.5MB):
https://connect.chronicle.com/rs/931-EKA-218/images/CoronaVirus_ArticlesCollection.pdf

The Chronicle of Higher Education has assembled a collection of articles to help faculty and staff members make the adjustment to online teaching.

OnlineAskPsychSessions: http://bit.ly/PsychSessions

APA Div. 2 (Society for Teaching of Psychology) and PsychSessions have jointly created a free mini-series of brief podcasts, called OnlineAskPsychSessions, to help instructors transition their courses online.

Accessible Teaching in the Time Of COVID-19: https://www.mapping-access.com/blog-1/2020/3/10/accessible-teaching-in-the-time-of-covid-19

Many of the suggestions in this article come from the disability community, who has been using online spaces to teach, organize, and disseminate knowledge since the internet was created.

How to Quickly (and Safely) Move a Lab Course Online: https://www.chronicle.com/article/How-to-Quickly-and-Safely/248261?cid=cp275

By modifying learning objectives and finding the right resources, many lab courses can be taught online.

APA Online Psychology Laboratory: https://opl.apa.org/

Provides interactive resources for the teaching of psychological science and helps students understand the science of psychology.

Open Stats Lab: https://sites.trinity.edu/osl

Provides free student access to several statistics labs. Each lab consists of a published article, a data set, and an activity they can follow. Students can also download free introductory statistics books online (https://openstax.org/details/books/introductory-statistics).

Resources on Designing Effective Tests and Exams

University of Waterloo's Centre for Teaching and Learning: Preparing Tests and Exams - https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/developing-assignments/exams/exam-preparation

University of Manitoba, The Centre for the Advancement of Teaching and Learning: Creating Multiple Choice Questions - https://centre.cc.umanitoba.ca/development/resources/creating-multiple-choice-questions/

Appendix 1: Templates for Course and Lesson Planning

COURSE PLAN

COURSE NUMBER	
COURSE NAME:	
CREDIT HOURS:	
INSTRUCTOR:	
START DATE:	

LESSON #/DATE	TITLE	GOALS

LESSON PLAN

COURSE NUMBER	
COURSE NAME:	
LESSON #:	
LESSON DATE/TIME:	
INSTRUCTOR:	

LESSON TITLE

LEARNING GOALS

SUMMARY OF LESSON TASKS/ACTIONS

MATERIALS & RESOURCES REQUIRED

PLANNED ENGAGEMENT ACTIVITIES

EXTERNAL LEARNER TASKS

POST-LESSON NOTES