



Effective Online Courses

Quality of Online Can Equal Face-To-Face

Although online learning can be equally as effective as learning in a classroom, and more effective for some students, there are several things to keep in mind when designing an online course. Teaching and learning online is different from meeting weekly in a classroom. One thing to note is in a classroom questions can be asked on the spot if content, activities, or assessments are not clear. It is important to keep this in mind when you begin building out course content. But even before building the online course it is important to have a plan as online learning is very visible and available to many for review and assessment of the course.

How We Learn

In reviewing *Brain Centric Design*, by Rich Carr and Kieran O'Mahony, we saw that practice and repetition are key to effective transfer to long-term memory. The more we practice, the longer we remember and the better we get. That's no surprise when we think of learning to play a sport, draw, play an instrument, learn something we are passionate about, or even walk. We will find ourselves 'failing' but when we keep trying, practicing, we will get it. And if we keep using the new skill new neuro pathways are built information transfers to long term memory and we keep the skill! Seems obvious when it comes to the things mentioned above, so then it might be prudent to ask why we don't introduce the opportunity to practice before assessments in all courses? There is great benefit to including something fun or challenging to engage learners and keep them working at the new skill while the brain builds the neuro connectors needed for transfer to long-term memory. In her book *Design for How People Learn*, Julie Dirksen notes that as we experience things in different ways, we store information differently in our brains with each new experience. She calls this shelving and suggests that the more shelves something is on the better we will remember it. So, introducing content in various ways, then following the new information with an activity that allows for practice using the information, before assessments (big or small), is likely the best path to build those neuro paths to making the information stick for an extended period. And what if you have to draw upon it all semester? After all, what good does cramming do when you are training for a career?

Career Preparation

Employers today are looking for 21st century skills that include collaboration and innovation amongst other things. Showing students an innovative way of teaching/learning and including group work goes a long way towards helping build some of the soft skills employers are looking for.

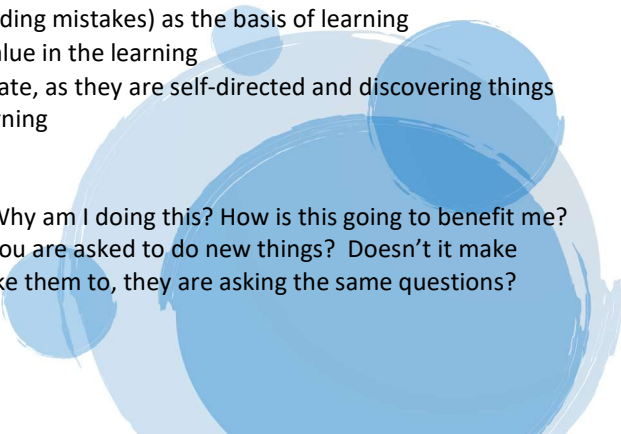
Andragogy & Teaching for Retention

If we are teaching for retention we should also remember that adults, even college age student/adults, learn differently than children. The principles of Andragogy point to the fact that those old enough to begin thinking for themselves need to

- be involved in planning and the evaluation of their instruction
- draw on experiences or experience things (including mistakes) as the basis of learning
- see immediate relevance to their lives to find value in the learning
- figure things out to engage, solve problems, create, as they are self-directed and discovering things for themselves is the most effective path to learning

Making The Learning Path Clear

Adults need to understand why. Why am I reading this? Why am I doing this? How is this going to benefit me? Think of yourself. Don't you ask those questions even as you are asked to do new things? Doesn't it make sense that if our students are thinking critically, as we'd like them to, they are asking the same questions?

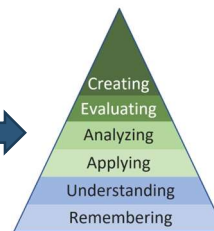


In addition, an adult's life alone has a good deal of cognitive load, setting a course up in a logical way where all information is where it will be used is one way to channel use of learning energy and time to the content itself vs time spent figuring out the course or where to locate things.

A course map is a good way to begin making the learning path clear both to students, and to ourselves, as we design courses, in classroom or online. Asking yourself questions and laying out a storyboard (course map) is an effective way to chart a course to designing for learning that flows. If collaborating on a course design it also ensure everyone is moving in the same direction! Initial considerations when creating a course map might look a bit like this...

- Asking yourself – what do I want the students to be able to do when they are done with the class. These are your course objectives.
- Chunking the learning by splitting into weeks or units and asking yourself – what smaller piece of these course objectives do I want them to learn this week? These are your module objectives; how do they support your learning objectives?
- Ensuring the video, article, research paper, lecture, textbook tie to one, or more, of my module objectives?
- Including ungraded activities can the students do for practice and which module objective is the activity supporting?
- Asking yourself can I get them to interact with each other to think critically about the new material, and which module objectives do the interactions (maybe a discussion board) support?
- Considering Bloom's cognitive levels as you ask yourself what you can have them do at the end of the module/week/unit that shows me that they learned this new skill. This is the graded piece. Be innovative, offer choice!

Blooms Taxonomy



Measurable Objectives

Now that you have some ideas of what you'd like the course to look like, it's time to write objectives. Course objectives are the backbone of the course map and module objectives the skeleton. Go back to bullet point #1 above, what do you want the students to tell others they learned in your class? Turn these things into measurable skills, then compare the activities and assessments to these skills. Do your major assignments showcase one or more of these skills?

Writing learning objectives can be daunting, but if we start with determining the skill that we want the student to showcase – then decide how we want them to show us they've accomplished something it's much easier. One way to do this is to compare the *Actions* in the chart below to the assignment (activity or assessment). The actions are Bloom's verbs, the best choices for course objectives are in Levels 4-6 where deeper thinking and engagement are required to showcase learning.

- **Create** a *presentation* that
- **Design** a *portfolio* to ...
- **Devise** a *plan* to

The words in bold are the Bloom's verbs, those in italics are the product, and together you have an assignment that results in something that is measurable. What you are measuring is the skill comes next in the sentence, that thing you want them to take with them and use anytime, anywhere in the future.

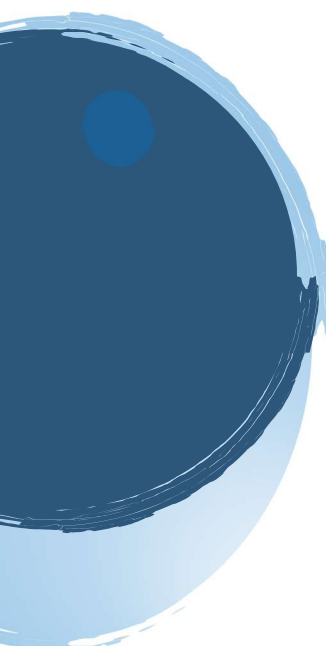
The "how", the activity? Those details get put into the assignment language itself. This is most often the one tripping point in an objective. Objectives are not activities. If your objective looks like an activity or a project, you have a great start but a revision to focus in the measurable verb and the skill would be beneficial.

This phrase helps when writing objectives.

*The student will be able to **Bloom's verb** – the product you want them to produce - skill you want to measure.*

Cognitive Levels of Learning

Looking at the chart below we see that the six levels within Bloom's list of verbs, listed in the *Activities* column, represent levels of increased understanding as you read from the bottom up to the top. Learning should start at the bottom and move to the top with increased understanding and ability.



For example *remembering* which is the very beginning of learning points to quizzes and exams. Learning is easily forgotten if not practiced as there is little engagement with the material other than memorizing. Lower-level verbs on the chart are appropriate for module objectives, or objectives for entry level courses.

The top four levels are where the deepest understanding is and use of projects that call for students to do something using these verbs should be the goal for end of course (Course Objectives) or for Program Objectives. Create, design, analyze, evaluate, require more preparation, and thought to showcase concepts learned.

Stumbling Blocks in Objectives

One item of note is that *understanding* is a **level** in the taxonomy, it's not a verb. We don't actually measure understanding; students do something to show that they understand.

Another common item that makes objectives hard to measure is when there are two measurable items in one objective. Review your objectives to ensure there is one measurable verb and one skill that is being measured.

Finally, it's very easy to write an objective that is actually an activity. Review your objectives to ensure you are not speaking the activity the students will be doing, but rather the skill that is needed to do "the thing" that they are submitting to you.

Starter Tool For Objective Writing

I consider the website below as a type of *plug and play* tool to get you started with an initial draft for your objectives. They are a bit clunky based on the opening language *The Student will/should*, however after written, the language can be adjusted to a style that lends itself to the student reading it.

<https://learning-objectives.easygenerator.com/>

Once you've written your course objectives, it's time to look at module objectives using the same process.

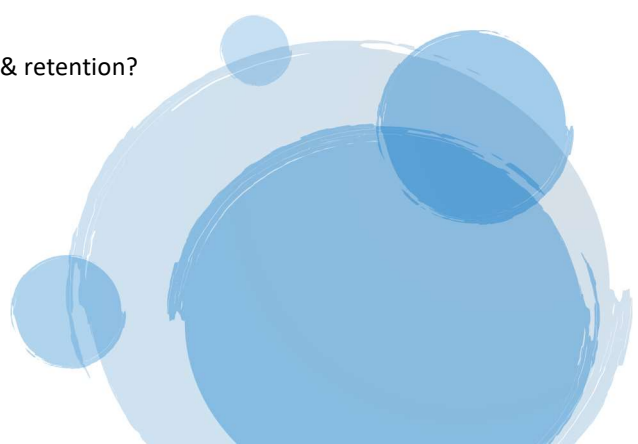
Finally, link course objectives, to module objectives and module objectives to learning material, activities and assessments to create your course map!

STUDENT CENTRIC COURSES

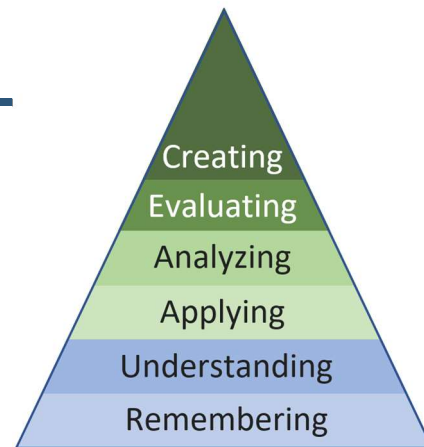
Student centered courses are designed to make the learning path easy. Students have the information they need readily available; they don't need to hunt around the course to find things. What they need is on the page as they work through the course, no need to back up to find something. If that is necessary, a link is provided to take them back to where they need to go.

Student centered learning also means talking to the student directly as if they were right there in front of you. The student will read what you write on the course pages as they work through the course, making them feel like you are speaking directly to them!

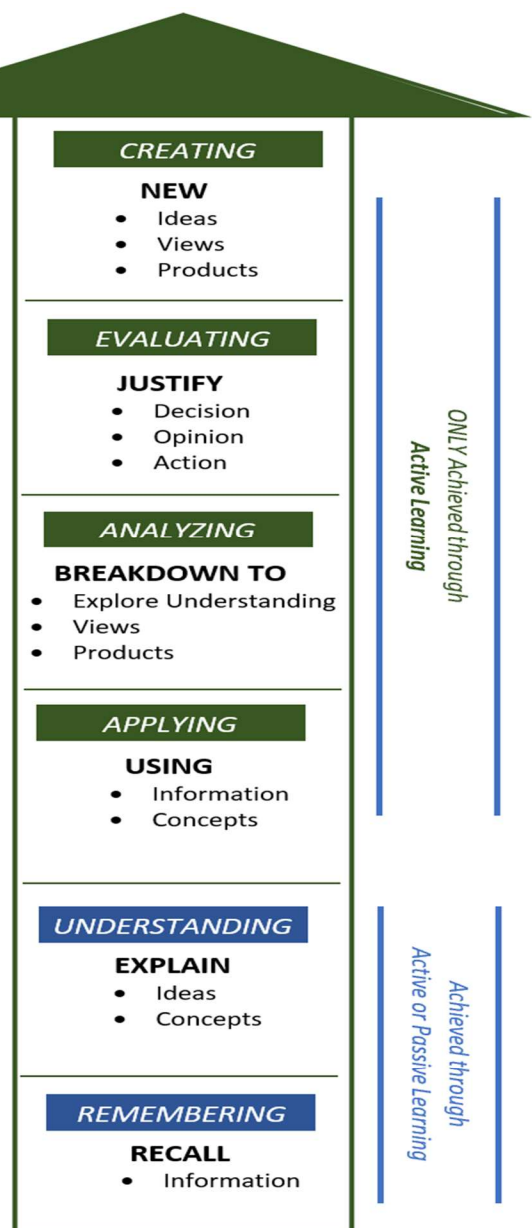
Highlights

- Are objectives measurable and aligned with learning, activities & assessments?
 - Are you speaking directly to the student?
 - Is the course easy to navigate with clear information so few questions need to be asked for them to work through the course?
 - Do you have activities for practice, engagement & retention?
- 

Blooms Taxonomy



Actions	Products	
Designing Inventing Constructing Planning Producing Devising Making	Plan Project Story New Game Painting New Game	Media Product Film Painting Advertisement Podcast Song
Checking Hypothesizing Critiquing Experimenting Judging Testing Detecting Monitoring	Verdict Conclusion Investigation Evaluation Speech	Debate Panel Report Speech Persuasive
Comparing Organizing Deconstructing Attributing Outlining Structuring Integrating Separate	Survey Chart Checklist Outline Report	Graph Spreadsheet Database Abstract
Implementing Solving Carrying Out Collecting Using Showing Executing Producing	Illustration Simulation Diary Sculpture Journal	Interview Performance Presentation Demonstration
Interpreting Exemplifying Summarizing Inferring Classifying Comparing Explaining Paraphrasing	Example Quiz Recitation Summary Explanation	Collection List Label Outline Show & Tell
Recognizing Listing Describing Identifying Retrieving Naming Locating Finding	Quiz Test List Facts Worksheet	List Label Reproduction Workbook



ONLY Achieved through
Active Learning

Achieved through
Active or Passive Learning

USING BLOOM'S TAXONOMY