Deepening Course Design: Alignment, Accessibility, Authentic Assessment

Dr. Shannon Dea, Professor, Philosophy
Dr. Trevor Holmes, Associate Director, Centre for Teaching Excellence
University of Waterloo, 2020

Contact: tholmes@uwaterloo.ca

Table of Contents

Introduction

This is the workbook version of a two-day workshop run by the authors in 2016 and 2017. We hope that people will find it a useful heuristic for their own thinking about course design. Many models already exist, and in fact our workshop presumes familiarity with a week-long process run by many Canadian and other institutions based on Saroyan and Amundsen's (2004) *Rethinking Teaching in Higher*

Education. In particular, some foreknowledge of "alignment" between outcomes, activities, and assessments (common to many design models) will make this workbook make more sense.

We encourage designers of learning experiences and facilitators of workshops alike to remix, adapt, or adopt any of the following into their practice; none of what follows is terribly complicated or even very new, but we have found it helpful in our own course designs, and so have a couple dozen other faculty members in theirs. Your mileage may vary! And that's okay. We believe that small, incremental changes to practice in your own contexts will be the changes that stick. So design or redesign away!

Acknowledging Territory

Before we begin, an integral part of our thinking about the goals of courses, higher education degrees, and our roles as educators is an analysis and set of ongoing critical actions around the historical formation and current maintenance of the colonial nation-state now known as Canada. One small first step is an acknowledgment that we live, work, and offer this workshop on the traditional territory of the Neutral (Attawandaron), Anishinaabe, and Haudenosaunee peoples. Our institution is on Block 2 of the Haldimand Tract, which is land six miles on each side of the Grand River from its source to its end, given to the Six Nations in 1784. We welcome further conversations about what this territorial acknowledgment means to us.

Prior course design experience

Freewriting: 5-10 minutes

Prompt: think about workshops you've taken or materials you've read about course design in the past. What concepts or tools have stayed with you?

Our workshop assumes some familiarity with a local version of course design that borrows eclectically from a few sources. In workshops run by the Centre for Teaching Excellence (CTE) at Waterloo, we start with content expertise and try to surface the ways in which one's disciplinary conceptual frame informs course design and learning (Saroyan & Amundsen, 2004). Only then do we invoke alignment (Biggs & Tang, 2011) and backward design (Wiggins & McTighe, 1998) from learning outcomes and their assessment with appropriate activities. Over the years, iterations of the following graphic (p 3) have helped to explain this.

We begin by reminding participants about our model, below. At the same time, we encourage participants to consider their own contexts, teaching philosophy, comfort zones, and exigencies. Writing in 2020, an obvious factor beyond our individual control is the online, remote, hybrid context for the world's teaching and learning during a pandemic.

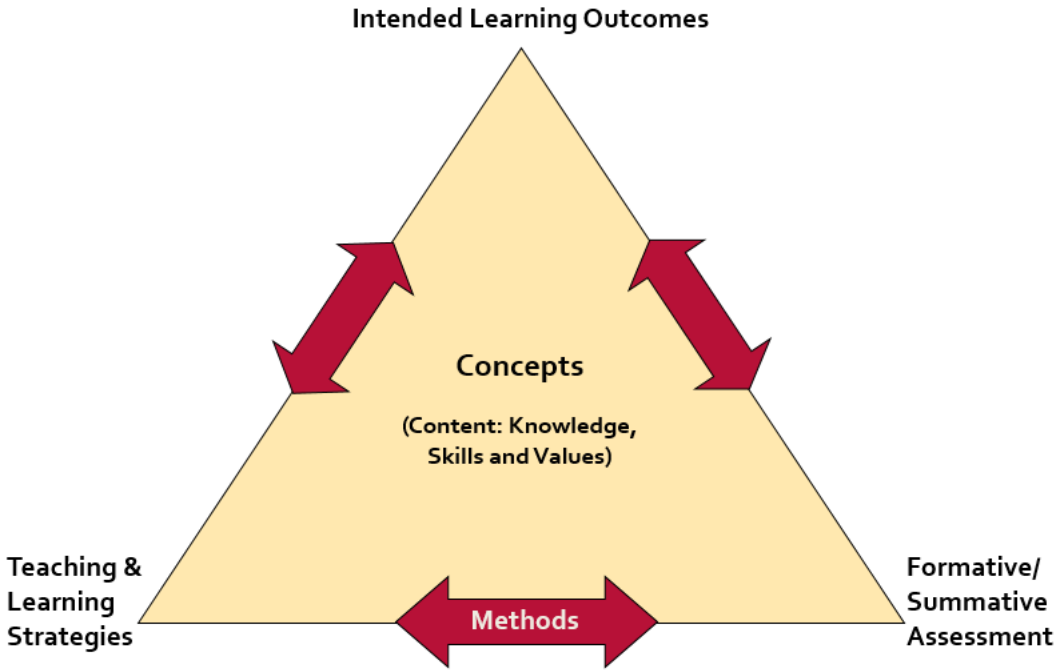

Fig. 1: the Alignment triangle with concepts at the centre. Adapted from Ellis, D. & Light, T. (2006). *Teaching Excellence Academy*, University of Waterloo.

The overall goal is to create alignment between these elements, and the deliverable for many of our design experiences is an "alignment chart" or "assessment planning matrix." (see pp 6-7).

Course content

Self-analysis of course content, creation of map, explaining it and revising: 30-45 minutes

Typically we use the concept map approach well-described in Saroyan and Amundsen, eds. (2004). Beginning with freewriting about the course, then circling key concepts, then transferring those concepts to sticky notes, participants arrange their sticky notes on a blank, open file folder to make sense with one another in the context of what the course needs to do. This could be done on paper or using online concept mapping tools. This map changes over the course of the workshop or over the course of the design. In workshop mode, the real value comes in trying to explain one's map to a neighbour, especially one from a *different* discipline. So, whether you are doing this as a workshop or on your own, try explaining it to someone else, and then revising it.

Spend ~10 minutes explaining your course concepts and skills in paragraph or list form below.

Now go back and circle what you consider to be the KEY concepts, theories, procedures, and so on. Transfer each circled item to a small sticky note. Arrange them in some way that shows their interrelationships on a blank page or open file folder. Rearrange, drop, add, colour code, etc. as needed throughout your design steps. Some people share the final version with students, or have students make their own versions as a course review activity.

Alignment: Intended Learning Outcomes, Activities, Assessments

Self-analysis: Intended Learning Outcomes Checking and Revision – 15-20 mins
Activity: fill in the alignment chart on p 6 and assessment plan on p 7 below – 30-45 mins

When we talk about aligning Intended Learning Outcomes (ILOs), Activities, and Assessments, we mean that we should be assessing what we are hoping the learners will be able to do by the end of a unit of instruction or a course. Activities are often the time-on-task experiences that help any of us to master a skill, technique, or concept – to be able to show what we know to the professor, TA, and to others (including ourselves). This is in large part why we tend toward authentic assessment rather than merely habitual assessment, which often is an understandable default setting in the context of grading workload and class size considerations.

But let's not get ahead of ourselves. Learning is often a great deal messier than alignment makes it seem like it will be; however, starting from a clear delineation of the game we're in can be very helpful both to teachers and to learners. So at this point we offer participants in our workshop the chance to map their ILOs to their assessments (A1, A2, A3 etc.) and learning activities (LA1, LA2, LA3 etc.). Assessments might be summative projects, tests, scaffolded writing assignments, presentations, participation, discussion board engagement – or they may be formative check-ins along the way with feedback for improvement. Activities might – and ought to – overlap with assessments. ILOs might be met across several assessments, or an assessment might touch in varying proportions on several ILOS. The alignment chart and assessment plan matrix on pp 6-7 (sometimes called course blueprints) can be very useful to see how much priority we are giving to various ILOs via assessment weightings, and help us to adjust accordingly as we consider what students really most need to do with content in their context.

List your overall Intended Learning Outcomes (we suggest top level ILOs, perhaps 6-8):

Prompt: Are the ILOs Specific, Achievable, Measurable? Are they more exploratory than strictly measurable (if so, they may be "expressive outcomes" often more appropriate to certain Arts disciplines and require different approaches)? Are there any in the more "affective" than "cognitive" domain? Within the cognitive domain, are they conceptual, procedural, factual, or metacognitive ILOs (Anderson and Krathwohl, 2001)?

Summary of Alignment

Intended Learning Outcome	Teaching and Learning Activities	Assessments

Fig. 2: Summary of Alignment chart. Centre for Teaching Excellence, University of Waterloo.

Assessment Planning Matrix

Intended Learning Outcomes	Assessment Methods					
1.						
2.						
3.						
4.						
5.						
6.						
Grading Breakdown						

Fig. 3: Assessment Planning Matrix. Centre for Teaching Excellence, University of Waterloo.

Ask yourself: Are all the outcomes of equal importance? Should I weight some outcomes more heavily? How do the formative assessments prepare students for the summative assessments?

Accessibility

Self-analysis of course outline, assessment plan, and activities with UDL and designing-for-one tools in mind, and subsequent revisions for accessibility and inclusion: 60-120 mins.

We are committed to eliminating barriers that are unnecessary to learning – for example, extra cognitive load unrelated to the content or skills learning, emotional and physical burdens that can be eased by advance planning, and so forth. We would like accessibility to be considered from the very beginning of course design, rather than as an afterthought or bolted-on "retrofit" later. One way to do this is to use Universal Design for Learning (UDL) or Universal Design of Instruction (UDI). We explain this in the workshop more fully and do an "advocacy exercise" to bring home the points. Below we provide the brief version of UDI principles and an alternative approach (designing for one). Please also visit Waterloo's Centre for Teaching Excellence suite of tips and tools on Inclusive Instructional Practices, and Centre for Extended Learning's User Experience Design for Learning (UXDL) site.

University of Connecticut's 9 principles of Universal Design of Instruction

1. Equitable use
2. Flexibility in use
3. Simple and intuitive
4. Perceptible information
5. Tolerance for error
6. Low physical effort
7. Size and space for approach and use
8. A community of learners
9. Instructional climate

Another approach we consider is the idea of "designing for one" – we think of a particular ability or a particular person's contextual circumstances and optimize learning for specifics. We show a video about space design at Gallaudet University (a private, U.S. university for the Deaf and hard of hearing) as an example, in which the idea of "Deaf gain" replaces "hearing loss." Then we consider how a design-for-one approach helps or hinders other learners. This can be very powerful as an approach. To this end, we created mini-biographies (samples on next page) of various hypothetical students. We distribute these to pairs or small groups and ask people to read through an existing course outline and assignment descriptions with a view to advocating for their particular student. The result is self-reflection on one's own course and assessment design.

Some mini-biographies we have used in the past – all are plausible but none is based on a real student – follow below. We share these details about the fictitious students in this exercise as a reminder of the broad range of identities, social locations, and forms of embodiment present in any classroom. However, remember that in general instructors don't have nearly this much private information about their students. Students need not disclose such information about themselves to their instructors. We hope that imagining yourself as an advocate for a student whose private details you *do* know helps you to imagine ways that you can make teaching and learning more accessible for students whose private information you *don't* know. How would each student fare with your activities and assessments? What strengths would they bring to your course as you've designed it so far, and what barriers might they face as you look at the course outline and assignment descriptions?

> Harjeet (20) is an Indo-Canadian man who speaks English as his first language, and is a 3B Honours Applied Math major (Co-op). He works remotely 3 days per week, lives with parents and young siblings, and is registered with AccessAbility services for ADHD / occasional acute anxiety.
>
> Mei-Li (18) is a Chinese woman just arriving to residence in Village 1 for her 1A term in Accounting and Financial Management. Her English writing often features typical EFL syntax errors, she is hard of hearing and wears a hearing aid, so is concerned about how she'll get on in video-based lectures and online live discussions.
>
> Alexei (45) is a first generation bilingual Ukrainian-Canadian. A mature student with a family, he is taking one course per term toward a general Liberal Studies degree while working full time. During the pandemic, he has been laid off and is taking five courses at once for the first time since community college many years ago.
>
> Amber (24) is a Black genderqueer Canadian in 4B Kinesiology (coop). Your course is their last breadth requirement, which they have put off taking because they are not very interested in the subject. But they need the course to graduate and a med school application is in play.
>
> Madison (21) is a fourth generation Irish-Welsh-French Canadian woman from a small Northern Ontario town, and fluent in Braille. She's in 2B Sociology and Legal Studies. Blind since she was 8 months old, she has a guide dog at all times. As an athlete, she has competed around the world, but is uncertain about whether she will be home in the Fall or remaining in KW (which due to unpredictable construction detours and changing transit schedules due to COVID has proven quite difficult to navigate).
>
> Jennifer (20) is a Métis woman in 2A Computer Science who was recently diagnosed on the Autism Spectrum (ASD/Asperger's). She finds she is anxious in group work settings online that require rapid writing and responses, but not in class with oral interactions with the professor. She is worried about how courses will work remotely in the Fall.

Authentic Assessment

Self-analysis -- 5-10 minutes; reflection on model – 5-10 mins

When we think of authentic assessment (Wiggins, 1998), we think of students performing tasks that are in some way close to or identical to tasks a person in the field actually performs. By contrast, much assessment is detached from what a discipline actually does in the world, perhaps assessing memorization capacity or skill at taking certain kinds of tests rather than various levels of conceptual, procedural, factual, or metacognitive depth (Anderson and Krathwohl, 2001). Additionally, class size, term scheduling, and grading workload issues take understandable precedence over our capacity to embed and assess authentic experiences. Context, as always, matters.

Prompt: Think about your own discipline or profession. What are the authentic practices, goals, content, capacities in/of your discipline? List as many as you can.

It's tempting to think dualistically about assessment; during the workshop we've had rich discussions critiquing the idea of authenticity, or a model that polarizes like the one below. However, it can be helpful to ask yourself whether the list you generated above is reflected well in your own course assessments and activities, at whatever level is appropriate.

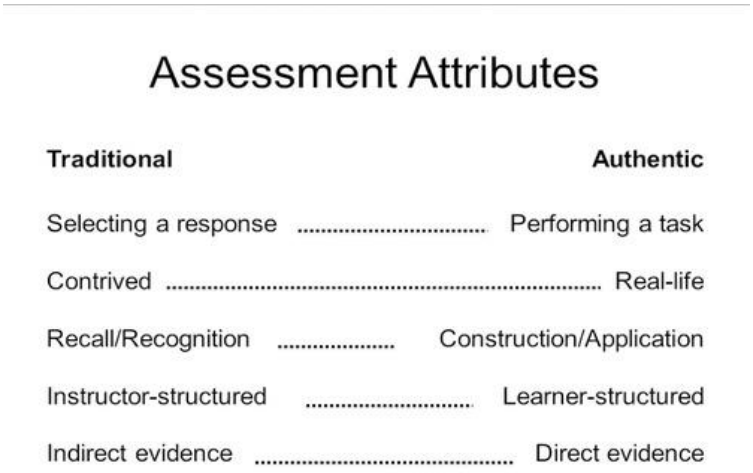

Fig. 4: Traditional vs. Authentic Assessment. Source: http://openbadges.tumblr.com/post/78130197990/openbadgesmooc-session-8-assessment-strategies

In the workshop, considerable time at this point is given to revising course outlines, assessment strategies, even outcomes again. The rest of the workbook supports further self-analysis that brings together accessibility and authentic assessment in the context of an aligned course.

Bringing it all together

Filling in the Inventory and mapping it on the matrix: 20-30 mins

Your Accessibility and Authenticity Inventory

List below the main learning activities and assessments in your course. For each of them, rate on a scale of 1-5 their accessibility (think about the UConn UDI inventory as a guide) and authenticity (how much they allow students to experience the norms and practices of the discipline).

1: not at all accessible/authentic

2: not very accessible/authentic

3: somewhat accessible/authentic

4: substantially accessible/authentic

5: highly accessible/authentic

Learning activities	**Accessibility (1-5)**	**Authenticity (1-5)**
LA1:		
LA2:		
LA3:		
LA4:		
Assessments		
A1:		
A2:		
A3:		
A4:		

Fig. 5: Accessibility and Authenticity Inventory.

Now use the matrix below to produce a snapshot of the accessibility and authenticity of your main learning activities and assessments. For each learning activity/assessment, the accessibility rating corresponds to locations on the horizontal axis and the authenticity rating corresponds to the locations on the vertical axis. Thus, an assessment that you judge a 3 on accessibility and a 4 on authenticity should be located at (3,4) on the matrix. Use the abbreviations (LA1, A1, etc.) to map the individual items onto the matrix.

Accessibility and Authenticity matrix

This matrix provides an at-a-glance snapshot of your course's accessibility and authenticity. Some scatter across the matrix is normal. This matrix is not a measure of whether your course is "good" or "bad". But in course design, it can be helpful to aim for more clustering in the top right quadrant. What small changes can you make to your course and instructional design to move more of your dots to the top right quadrant?

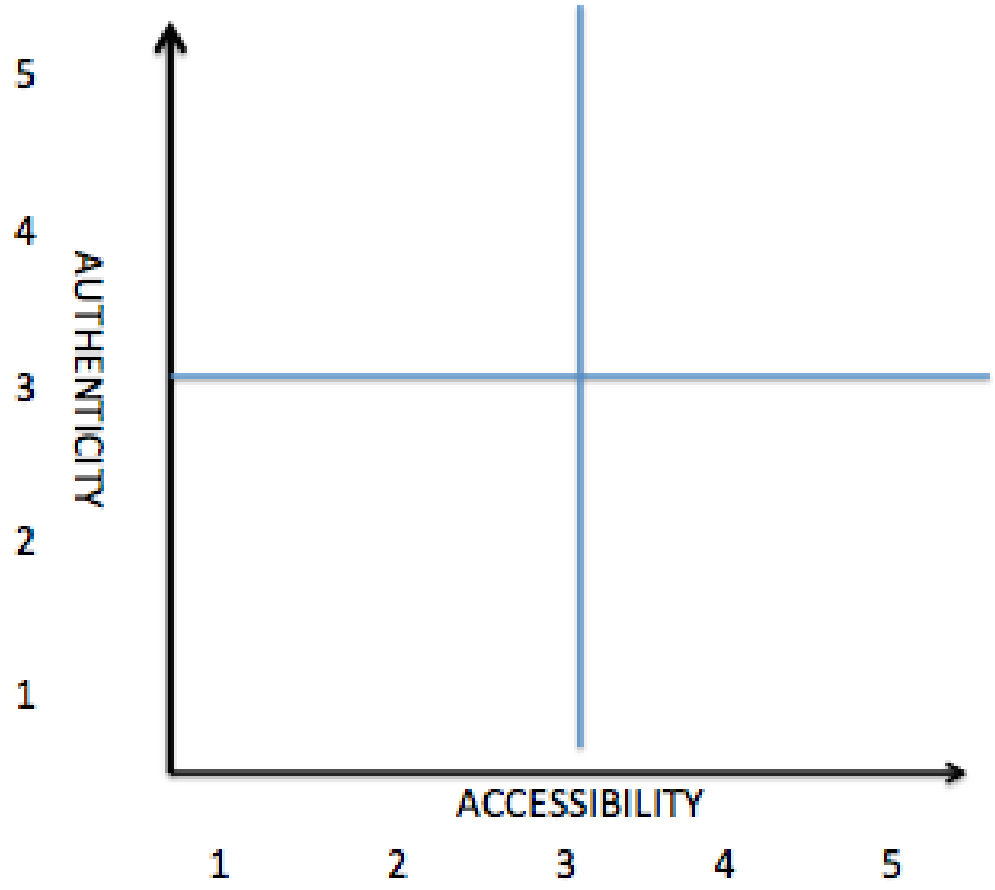

Fig. 6: Accessibility and Authenticity Matrix.

Works cited* and further reading

Anderson, L. W., & Krathwohl, D. R. (2001). *A Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.* New York: Longman.

Biggs, J. & Tang, C. (2011). *Teaching for Quality Learning at University: What the Student Does* (4th Edition). Maidenhead, England: McGraw-Hill/ SRHE & Open UP.

Saroyan and Amundsen, eds. (2004). *Rethinking Course Design in Higher Education: from a course design workshop to a faculty development framework*. Sterling, VA: Stylus.

Wiggins, G. P. (1998). *Educative assessment: Designing assessments to inform and improve student performance.* San Francisco: Jossey-Bass Publishers.

Wiggins, G. P., & McTighe, J. (1998). *Understanding by design.* Alexandria, VA: Association for Supervision and Curriculum Development.

*Note: links to websites and online resources are embedded in the workbook where they appear.