

A. General Design Process

The following well-established course design principles¹ should be applied to MOOCs to ensure courses are well designed from a pedagogical perspective.

1. Identify the intended learning outcomes for students (knowledge, skills, attitudes)
2. Ensure assessment strategy aligns with learning outcomes
3. Develop a progression of tasks and activities that will support learners in building the target knowledge, skills and attitudes
 - Present content that will support active learning; model activities/skills for students
 - Over duration of course, build upon foundational knowledge toward higher order skills such as application, integration and analysis.
4. Ensure a balance between instructor presence, social/peer interaction and cognitive challenge.²

Recent MOOC model and platform design originates in the Computer Science discipline and is based on mastery learning, a pedagogy in which students have multiple opportunities to learn the content, practice and demonstrate their knowledge. This typically includes various problems, computations, programming assignments and other quiz questions or homework that can be assessed using automated methods. These methods are more common in science, technology, and math courses for example.

However, in many courses, learning assignments do not lend themselves easily to automated grading by a computer. We are currently in an exploratory phase with regard to the potential of the MOOC model for delivery of arts, social science and humanities content. MOOCs may leverage peer assessment and crowd sourcing to address the needs of these discipline areas. In the course development guidelines below particular attention is given to suggesting activities to engage students in discipline areas that lend themselves to a more constructivist or socially situated context.

In all cases we encourage faculty to consider principles of course design noted above to ensure a high quality online experience for the learners.

B. Content Presentation, Student Activities and Assessment Planner

- Map activities to the outline of learning outcomes for each Lecture/Weekly Unit including content, skills and attitudes. Guidance on effective instructional design advises that the unit introduction should let students know what the expected outcomes are for the section (either verbal or in text). Provide a roadmap of weekly activities for learners.

¹ Wiggins, G. (1998). *Educative Assessment: Designing assessments to inform and improve student performance*. San Francisco: Jossey-Bass. <http://go.utlib.ca/cat/1524438>

² [Creating the Online Learning Environment/Learning Module](#) – A UBC resource providing a comprehensive overview on topics related to creating online learning environments

Example Week Plan		
Week 1 Outcomes: <ul style="list-style-type: none"> • Understand ... • Appreciate... • Analyse... 		
Week 1 Content	Week 1 Activities	Week 1 Assessment
Video 1.1 Video 1.2 Quiz Questions Readings	Homework Assignments Discussion External to MOOC platform: <ul style="list-style-type: none"> • Observation • Journal • Personal Research 	Multiple Choice Quiz Or Peer Assessment
Week 2 Outcomes: <ul style="list-style-type: none"> • Understand ... • Appreciate... • Analyse... 		
Week 2 Content	Week 2 Activities	Week 2 Assessment
Video 2.1 Video 2.2 Quiz Questions Readings	Homework Assignments Discussion External to MOOC platform: <ul style="list-style-type: none"> • Observation • Journal Personal Research	Multiple Choice Quiz Or Peer Assessment

Ideas for activities:

- Introduce yourself in the Introductions discussion board.
- Research topic x in your community and report your findings on the discussion board.
- Find an example of x in the media and share on the discussion board with your commentary. Comment on the posting of at least one other person.
- Structure activities/discussion carefully to ensure student time and instructor/TA time on task is optimized. Crowdsourcing may be used to support the process.
- Ask the instructor/TA a question on current topic in the discussion board. (Note: set expectation to respond to, for example “top 10” questions of the week. Students can “upvote” questions of other students to crowd source. Instructor only answers a set number of questions based on upvoting results).
- Invite guests to moderate a discussion, same as above.

Ideas for discussion boards:

- Structure discussion boards carefully for students. Default structure can be enhanced for guided discussion.
- Example Forums:
 - Introductions - Introduce yourself and meet others in the MOOC
 - Top 10 Questions on Weekly Themes/Topics – instructor facilitated

- Student Reflections of Observations on Weekly Themes/Topics - linked to structured assignments or activities
- Student Café – Open forum for sharing resources and ideas
- Course Technical and Administration - For student admin questions

C. Readings and Resources

- Consider including readings or video content or example materials for review by students. This may be linked to student activity and assessment (For example comment in discussion, write a reflection, compare historical to current context, etc.)
- Must be openly accessible to learners (ie not under UofT library or other licencing/subscription restrictions).
- Consultation with library strongly recommended prior to inclusion of resources in weekly content or activities.

D. Video Content Creation

- Map video content by week based on desired learning outcomes – consider a common pattern combining different types of video content. See multi week mapping template below. Can be included or mixed in various ways.

Example types of video content for a unit:

Intro to Theme/Topic Video Head shot	Voice over PPT screen cast + annotation	On site location shoot	Link to YouTube Video	Interview	Summary
Activate prior learning with background information, link to learner interests, prime for learning. Introduce objectives.	Substantive content presentation. May include tablet annotation or video frame insert.	If applicable – locate instructor in another context for connection to community or key concept	Link to a video clip or point in a video clip on YouTube, etc.	Short interview with community member	Instructor wrap up and setting of stage for next section.

Example Work Flow for Video Content Development in Coursera or EdX:

- Collect raw assets for editing using ScreenFlo (Mac) or Camtasia (Mac/PC) numbered for ease (1.1, 1.2, 1.3 etc.)
- Create a shared team folder in Coursera Asset Administration or EdX Files & Uploads for storage and team sharing of these raw assets ie “Draft Video” content
- Recommend technical staff edit raw video/camtasia undertaking tasks such as:
 - Insert title screen with Lecture or Lecture Section title, OISE logo, music and/or fades as required.
 - Remove any ums and coughs or problematic segments
 - Add transitions between segments if appropriate

- Segments recommended to be around 10 minute target max.
- Re-upload polished video to MOOC student interface
- Instructor or TA to review for insertion points for inline comprehension quiz questions. Provide quiz questions and time code in MSWord for each. Consider DropBox or similar for purpose of team sharing video sequence plans, reading or viewing lists, drafts of quiz questions and other resources.
- Links to external videos can be inserted using the inline quiz tool – add raw HTML code to link to video and provide any instructions with “continue” function.

E. Assessment

Homework and Assessment Options and Ideas

- a. Multiple choice test if applicable (quiz tool)
- b. Homework assignment (quiz or programming assignment)
- c. Write a commentary, review, comparison, analysis, observation within your community, reflection or other for homework (peer assessment).
- d. Response to a text, video or other media object for homework (peer assessment).
- e. Prepare a presentation on x and upload (text, photo, video, PPT) for peer assessment

Peer Assessment Rubrics Development

Peer Assessment rubrics should align with learning outcomes.

- Example dimensions for an argument or position:
 - See: <http://www.cmu.edu/teaching/resources/Teaching/CourseDesign/Assessment-Grading/Rubrics/PsychologyPaperRubric.doc>
 - Introduction is provided and organization of the argument/presentation is clearly outlined
 - Clarity of presentation of evidence or examples
 - Well articulated view and connection to theory/framework
 - Relevant references provided
 - Conclusion is clearly stated
- Example dimensions for a reflective writing piece
 - See: http://www.readwritethink.org/files/resources/lesson_images/lesson963/Rubric.pdf
 - Depth of reflection
 - Use of textual evidence and historical context
 - Language use

For more information on rubrics, John Biggs is an excellent reference.³ See *Teaching for Quality Learning at University*, Buckingham: Open University Press/McGraw Hill, 2011.

Additional support resources and example are available through the Coursera and EdX platforms. Guidelines for best practice and a gallery of example are provided in their MOOC on MOOCs.

³ Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education*, 32(3), 347-364. <http://simplelink.library.utoronto.ca/url.cfm/332359>

Appendix 1: Video Content Planning

Example Video Content Planning Template for Social Science (change combinations per needs of instructor, weekly content requirements).

	Intro to Theme/ Topic with Video Head shot	Voice over PPT screen cast	On site location shoot	Link to YouTube Video	Interview	Summary
Week 1	1.1	1.2	1.3	1.4	1.5	1.6
Week 2	2.1	2.2	2.3	2.4	2.5	2.6
Week 3						

Appendix 2: Instructional Design Template

Week 1 Outcomes:		
Week 1 Content	Week 1 Activities	Week 1 Assessment
Week 2 Outcomes:		
Week 2 Content	Week 2 Activities	Week 2 Assessment

Week 3 Outcomes:		
Week 3 Content	Week 3 Activities	Week 3 Assessment

Appendix 3: Recommended MOOC Development Team Roles

The following roles represent the range of content expertise, instructional design and technical skills required to develop a successful, high quality MOOC. It should be noted that within a team context, an individual may assume more than one of the following roles:

- **Director – OLS and/or local Educational Technology expert designate** – provides consultation and guidance on MOOC planning, instructional strategies, administrative processes, resourcing, policy.
- **Instructor** – maps course, designs major activities and assessments, content presentation, rubrics for peer assessment.
- **Liaison Librarian** – assists **with resource selection** and copyright advice.
- **TA** – assists with resource design, selection of materials, quiz questions, development and support – particularly aspects that requires content knowledge. Also monitors the MOOC discussion forums and assessment components while session is in progress.
- **Video technician** – Video production. Edits and organizes draft video. Uploads to Coursera.
- **Course Producer** – Edits screen capture components and/or organizes video in lecture sections. Adds comprehension quiz questions to video/screen capture content. Constructs quiz, homework or peer assessment components from text drafts provided instructor.