

MOOC Creation Guidelines

Northwestern University has developed the following general guidelines for creating Massive Open Online Courses (MOOCs). These recommendations were informed by a review of MOOCs offered by peer institutions, conversations with industry leaders, and the experience of Northwestern's internal experts in digital learning.

Defining a Baseline MOOC

The guidelines described here should be considered a "starting place" for each MOOC. Allowances for variation should be considered, as appropriate, based on audience needs, desired learning outcomes, and resource constraints.

General Course Structure

In order to retain as many students as possible, a MOOC should be taught over as short a time period as is reasonable to deliver rigorous content. To that end, Northwestern recommends that MOOCs be approximately eight weeks in length, allowing for variation based on each MOOC's content and design. MOOCs outside of Northwestern have ranged in length from six to 12 weeks. An eight-week MOOC will allow for delivery of substantial content, while not being perceived by students as overly burdensome. Additionally, an eight-week MOOC will place it within the range of other, existing, MOOCs.

Best practices further suggest:

- Each week of the MOOC be comprised of a lesson with a single topic or themed topics with specified learning outcomes.
- Learning assets be available at all times so that students across the world can participate fully, no matter the time zone or personal schedule.
- Each MOOC be designed according to a rigorous instructional design process and course functionality subjected to a quality assurance process.
- Communication with students should be very clear and consistent and instructors should be very clear about their expectations as well as setting student expectations for the course. Students tend to leave the course if there is confusion.
- Instructor encourage and the course enable the emergence of learning communities where students connect with each other and with course materials.

Direct Instruction Effective direct instruction may be delivered primarily through short (6-8 minute maximum) videos, with other course resources provided via web links. Faculty should also list any required or recommended readings. Uniquely-created handouts may also be used for direct instruction. The announcements feature of Coursera can be used not only to deliver reminders for due dates and course transitions, but also for direct instruction to clarify, expand, or summarize course topics.

Practice & Engagement Discussion threads can be used to effectively engage students, who may communicate in discussion board threads on key course concepts. These discussion boards are best

focused on a case study, problem, or question(s) pertinent to the lesson and should allow participants to share ideas and debate topics.

More sophisticated interactive pieces may also be developed, depending on resource constraints. For lessons in which students can appropriately practice skills or concepts, short interactive pieces can effectively supplement other course material.

Assessment Assessments within MOOCs must accommodate a large number of users and should align with the stated learning objectives, as well as all teaching activities and methods. Ideally, courses will offer both formative assessments to promote deeper learning, critical thinking and reflection, in combination with summative assessments designed to gauge student achievement and/or performance. While any assessment can be formative and/or summative in nature, generally speaking, any activity or assignment that is meant to promote ongoing reflection or help a student improve would be considered formative. Any activity or assignment that results in a final grade or summary, and does not call for additional reflection, would be considered summative.

Formative assessments may include ungraded reflection papers, quizzes that can be re-taken, discussion board responses, as well as peer and self-evaluations that are meant to help student improve or identify gaps and weaknesses. Summative assessments may include graded quizzes, reports or projects, or peer assessments if a grade is attached. Ideally, they should be criterion-referenced (allowing for variation in achievement in a range of areas). Criteria for assignments should be clear, transparent, and provided to students BEFORE the assignment is due. Rubrics are often helpful for clarifying levels of performance. All summative assessments should have a due date. After the due date, an answer key with explanations should be provided. If peer review is utilized, expectations and deadlines for reviewing peers' assignments should be clear.

Overall, assessments may be self-referenced (designed to prompt reflection on learning and performance); peer referenced (prompting reference on criteria and instructor/course expectations); or instructor (computer-mediated) referenced (which may gauge learning and/or performance).

THE DECISION TO USE DIFFERENT TYPES OF ASSESSMENTS SHOULD BE BASED ON THE STATED LEARNING OBJECTIVES FOR THE CLASS.

Evaluation Each MOOC should be considered successful if:

- It recruits and retains a large number of students
- Those students who complete the course perform well on the summative assessments
- It experiences few to no technology issues
- Students provide favorable responses on end-of-course surveys
- The faculty member teaching the course feels that it is an effective teaching and learning experience

Copyright and Intellectual Property

When creating and teaching MOOCs, copyright and other intellectual property issues typically arise in two contexts: 1) appropriate and allowable use of pre-existing material (images, video, texts, etc.) within the MOOC and 2) ownership of the newly-created MOOC course materials. Each MOOC will likely present different contexts and needs that will necessitate case-by-case identification of

intellectual property issues and processes. Faculty members are encouraged to bring these issues up with course designers in the early planning stages of MOOC development.

Time Commitment and Support

Most faculty members find that they devote a significant amount of time- often more than expected- into the development and delivery of a MOOC. Some faculty estimate this commitment at about 150-200 hours over the MOOC development timeline. It is suggested that faculty members developing a MOOC set aside ample time for the development process.