



Online Course

DESIGN GUIDE

DRAFT FOR COMMENTS



Online Course Design Guide

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To learn more about MIT-OEIT, visit oeit.mit.edu; to learn more about the NMC, visit www.nmc.org.

The New Media Consortium is an international not-for-profit consortium of learning-focused organizations dedicated to the exploration and use of new media and new technologies. For 20 years, the NMC and its members have dedicated themselves to exploring and developing potential applications of emerging technologies for learning, research, and creative inquiry.

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Introduction

The *Online Course Design Guide* was produced by the Massachusetts Institute of Technology Office of Educational Innovation and Technology (MIT-OEIT), in collaboration with the New Media Consortium (NMC), to support instructional designers, educators, and facilitators in the development and implementation of online courses. Each section of the guide contains critical information, recommendations, examples, checklists, and resources for further exploration to create and deliver effective online learning experiences.

MIT has long been committed to developing and delivering high quality online learning experiences. In 2002, MIT launched MIT OpenCourseWare (OCW), a web-based publication of virtually all MIT course content — accessible to the world. Through OCW, educators improve courses and curricula and students find additional resources to help them succeed. A decade later in 2012, MIT partnered with Harvard University to launch edX — an offering of free, open source, online courses that can be taken by anyone from anywhere. This guide leverages the online learning expertise of MIT-OEIT.

To provide support through this guide for educators building online courses, a panel of online learning experts was convened to share research and insight. A result of their discussions was a list of assumptions about online learning vs. face-to-face learning which offers a foundation for thinking about and interpreting this guide.

Solid instructional design and facilitation is the basis of an effective course, whether online or face-to-face. As online learning is receiving an increasing amount of interest from learners, education institutions are developing more and more online courses to both replace and supplement existing courses. As such, the design of these online experiences has become paramount; in order to provide effective and high quality learning experiences, they must encompass rich media, interactive features, clearly defined objectives and outcomes, and polished content, along with fostering a robust community of engaged learners.

This guide expands upon best practices that could be used in both digital and face-to-face environments to highlight considerations specific to online learning, bearing in mind the following assumptions established by the panel:

- ▶ Content development for online courses is more time-consuming because in the absence of face-to-face interaction, there is a greater need for creating rich media that stimulates virtual interaction.
- ▶ Designing online learning activities involves a diverse set of technology and tools; instructors must learn how to use the technologies and integrate them in the online environment.
- ▶ Topic- and question-driven discussion is more natural in a face-to-face environment, so instructors must intentionally plan for and build in similar engagement opportunities within online curriculum.
- ▶ Because many online courses draw in learners from all over the world, careful consideration must be given to diverse demographics and backgrounds when developing material.
- ▶ Learners do not have the benefit of sitting side-by-side with their classmates in an online course; thus, it is easier for learners to feel isolated, and a significant effort must be exerted to make them feel part of a community.

Part of the appeal of online courses is the flexibility; learners are able to engage in the material from wherever they are, generally during the times that are most convenient for them. Online courses have also become an attractive option for students who hold full-time jobs or have families, as well as for professionals who want to acquire new skills for the workplace.

The purpose of the *Online Course Design Guide* is to provide education professionals with the support needed to develop and deliver an effective online course using forward-thinking practices. This guide takes a process approach to online course development, from the pre-design cycle all the way through the evaluation phase of the course, regardless of size, and is organized in concrete sections so that educators can pick and choose the areas they wish to investigate further.

Along with the *Online Course Design Guide*, a Digital Learning Toolkit is being created to provide this same information as an interactive experience.



1. Pre-Design

Pre-Design is the first step in building an online course, and one that will guide the design and development process. This phase entails gathering all of the necessary information to ensure that the course will meet the needs of the learners and engage them throughout the learning journey. Articulating clear learning goals for the course is one of the most important components of this phase because it sets the tone for the content and learning materials you will produce, as well as the assessments you will design.



Why is this different online?

During the pre-design phase of online course development, you will make careful considerations about who your learners are and how to best introduce and engage them with course material. While this process also occurs in the pre-design of face-to-face courses, you can make more spontaneous adjustments and redirects during learning activities that take place in a physical space. Because facilitation methods are different online, with many of the learning activities being asynchronous, it is important to anticipate and integrate opportunities for check-ins and redirects into your online curriculum.

What information should be collected up front?

Asking the right questions and then seeking answers is a recommended place to begin.

| | |
|--|--|
| <i>Who are my learners?</i> | ... you need to make sure you can produce content for their level and the correct voice. |
| <i>What do they currently know?</i> | ...so you can avoid repetition and focus on growing what they have learned. |
| <i>What do they need to know before starting the course?</i> | ...you can provide prerequisite materials to learners and they can plan accordingly before the course begins. |
| <i>Who are the subject matter experts?</i> | ...you should refer learners to other field experts to encourage further exploration. |
| <i>Do you have existing material that can be used in the course?</i> | ...curating content you already have means not having to start everything from scratch. |
| <i>What other content is available that supports meeting learning outcomes?</i> | ...being able to identify other resources that support your key topics adds greater depth to the course. |
| <i>What content must be revised for an online format or created from scratch?</i> | ... taking inventory of the varying stages of content will inform the design phase and give you a better sense of how much work it will require to prepare the content for online use. |

After pinpointing answers to the above, you will be ready to ask yourself:

- ▶ Is my course ready?
- ▶ Am I ready?
- ▶ How much time is needed to teach the content?

1.1 Readiness Inventory

Effective course design begins with planning and evaluation.

Your strategic decisions regarding course structure, including synchronous vs. asynchronous communications and events as well as different types of assessment, will impact how learners engage with the material and each other. Before delving in, take time to consider 1) the readiness of the course in its current state and 2) your comfort level with the educational technologies that can enhance it. Considering these elements will help you assess the level of effort required to adapt the course to an online environment.

If you already teach a version of your online course in a physical classroom, you will need to adapt the existing materials to a digital format and factor in how to best utilize the same technologies online or choose different supporting technologies.

Remember, online course development is a longer process than for face-to-face courses because there is usually more media production, as well as more time spent on creating, testing, and troubleshooting the technology.

To help determine the scope of work that is needed to develop an online course, complete the following survey:

> go.nmc.org/course-readiness 

From the results, you will be able to better plan, organize, and allocate the appropriate time and resources.



Criteria for Evaluating the Development Time Required

The readiness of existing course content

Your experience with online teaching and learning

Your perceptions of online learning

1.2 Learner Analysis

Understanding the size and demographic of your learner population enables you to design a course that best addresses their range of needs. For example, the types of interactions in the course and the level of feedback you can provide will vary, depending on whether it is a large class that is required for a major with hundreds of learners or a graduate level seminar with just a few. Additionally, individual learner profiles should inform your course design.

The considerations listed below are important when you are thinking about your learners and determining what kind of course design, content, and delivery method will help them grow.

Being able to answer these questions as well as understand the reasoning behind them is critical to genuinely connecting to your learners and creating an effective online environment for them.

Factors to Consider about the Learners

Characteristics:

Who are my learners?

What is motivating learners to take this course?

Are learners taking my course to earn a degree or expand their professional skills in this subject area?

Do my learners have any professional experience?

Why:

Understanding the unique characteristics of your learners will help you design a course to leverage their intrinsic motivations. Additionally, identifying characteristics of a cohort or group can offer additional opportunities to engage your learners on that common ground. For example, an executive MBA program may expect learners with some degree of professional experience, while learners in an undergraduate course may not have any relevant work history.

Factors to Consider about the Learners Cont.

Prior Knowledge:

What do my learners already know?

Are learners familiar with the subject matter?

Have the learners completed the appropriate prerequisite coursework?

Do the learners have the technology skills necessary to complete assignments?

Why:

Having an idea of your learners' knowledge base will help you focus your instructional goals. This way you do not spend valuable time reviewing material that they already know or expect them to succeed with concepts for which they do not yet have sufficient foundation.

Multicultural Considerations:

Where are my learners coming from?

Do any examples require specific cultural knowledge? (e.g., baseball or sailing)

Do the learners have language barriers?

Is the content culturally sensitive?

Why:

The intent of instruction is to communicate with the learners, so it is important to be aware of any cultural factors that may impede or adversely impact the flow of information. In an online environment, this is particularly important because you cannot read body language or make eye contact with the learners.

Access to Technology:

How does access to electronic and web tools impact the learners?

How will learners access your course? (e.g., computer lab or personal devices)

Do the learners have access to all equipment necessary to complete assignments? (e.g., video camera or software)

Are your materials universally accessible? (e.g., mobile-friendly, closed captioned, meaningful link titles, etc.)

Why:

As an educator, you want to be certain that all of your learners have the tools they need to succeed. If the content is developed and shared digitally, it is best to design with these considerations in mind so that you do not have to retrofit the content. You should develop flexible content that can be presented and consumed across various devices so that you do not exclude learners with limited technology options.



2. Design & Development

Outside of the actual teaching and facilitation within your online course, design and development represent the largest and most time-intensive stages. In this phase, learning strategies are mapped out, learning content and media are developed, organized, and sequenced, and supporting technology is selected. The choices you make in the development of the course will directly and can significantly impact the quality and perception of the learning experience.

In the design and development phase, you will be describing learning objectives and outcomes for the course in a way that is approachable for the learners and then defining specific activities and tasks that fulfill those objectives and outcomes.

Online courses require you to maintain a social presence because it is important that the learners see the faculty as real human beings. Similarly, this notion must be echoed in the online learning environment itself — learners should feel like they are part of a community where they can openly initiate and participate in discussions.



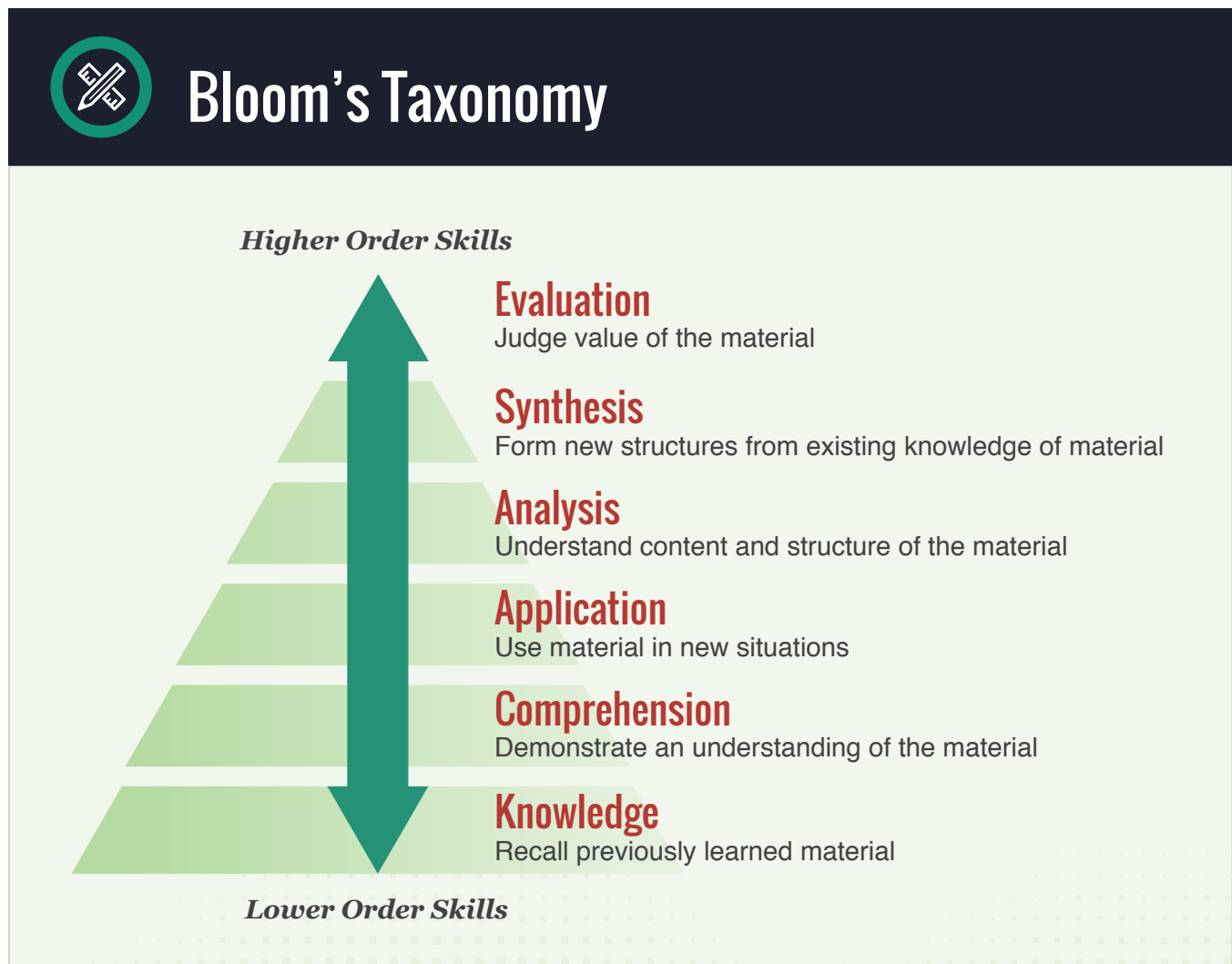
Why is this different online?

In face-to-face courses, the instructor can physically provide important instructional materials and verbally direct and redirect learners through various learning activities. Such moderated guidance is not available in the same manner online, where learning is more exploratory by nature. In most cases, learners are accessing course content and interacting with learning activities asynchronously. A great deal of care must be given to the creation, organization, placement, and support of course content. The easier it is for learners to locate and engage with learning activities, the more mental energy they will have to focus on the content.

2.1 Objectives & Outcomes

The design phase starts with keeping your desired learning objectives and outcomes at the center of every component of your course. While many educators and universities have started using the terms learning *objectives* and *outcomes* interchangeably, they are each rooted in distinctive definitions. When properly described through writing or multimedia, these elements will provide a foundation for the course and guide you in making appropriate curricular and assessment choices. Clearly expressing the objectives and outcomes informs learners as to what is expected of them. Learners can subsequently monitor their performance and learning against these stated objectives and outcomes.

Bloom's Taxonomy covers three areas: the cognitive, affective, and behavioral learning domains. Each of these domains is further divided into levels of higher order thinking and performance, as seen in the accompanying graphic. Ideally, each of these levels should be represented in the learning objectives and outcomes you design for your course. These levels do not correspond with the difficulty of the subject matter in your course, but rather the level at which the learner demonstrates their mastery of the material. For instance, even lower level undergraduate courses can include evaluation and analysis activities.



Learning Outcomes

Learning outcomes are general statements that describe the essential learning (knowledge, skills, and attitudes) that learners will achieve by the end of the course. They should encompass the depth of the knowledge and skills that you will be ultimately assessing. When composing outcomes, be mindful not to combine elements that cannot be assessed by a single method.

Outcomes are broader than objectives in the sense they apply to an entire course. Several objectives may align with and support a single learning outcome.

Example of a learning outcome statement for an education course:

- ▶ When asked to solve a problem in primary education, the learners will be able to draw upon previous knowledge, theories, and concepts from their coursework to explain and demonstrate their solution.

Example of a learning outcome statement for a STEM course:

- ▶ All learners will be able to explain the theoretic basis of Newton's Three Laws of Motion, presented in their final portfolios.

| Objectives vs. Outcomes | |
|--|---|
| <i>...are intended results of instructional activities.</i> | <i>...are evidence that learning took place.</i> |
| <i>...focus on specific types of performances that learners are expected to demonstrate.</i> | <i>...specify what learners will know and be able to do as a result of the learning activity.</i> |
| <i>...are teacher-centered in that they indicate the subjects the instructor intends to cover.</i> | <i>...are learner-centered in that they describe what the student should learn.</i> |



Resources for Exploration

Learning Objectives: Building a Solid Foundation for Your Course

*Melanie Hovland,
Faculty eCommons*

Overview of the purpose of learning objectives:

> go.nmc.org/quality-objectives

Learning Outcomes vs. Learning Objectives

University of Toronto

Distinctions between outcomes and objectives are presented:

> go.nmc.org/o-vs-o

Learning Outcomes

University of South Carolina Center for Teaching Excellence

Seven important components of learning outcomes:

> go.nmc.org/usc-outcomes

2.2 Designing a Blueprint

When designing your course, it is essential to have a comprehensive plan. In online course design, this is often referred to as a course blueprint, and enables you to design with the big picture in mind to ensure you reach every milestone and build consistency throughout the curriculum. One of the most important products of this blueprint is a course syllabus, which conveys all of the critical information about the course to the learners and serve as their course guide.

Key elements of a blueprint include:

- ▶ Course information
- ▶ Course learning objectives and outcomes
- ▶ Lesson topics and format
- ▶ Learning resources
- ▶ Activities and assessment

Course Information

Clearly identifying these elements will keep you organized during the course design process.

- ▶ Course title and course code
- ▶ Working course description
- ▶ Degree/certification program
- ▶ Required prerequisites and level

Course Learning Objectives and Outcomes

List all course outcomes and map them to specific learning objectives. Tie individual activities both to discrete objectives and outcomes. This mapping will provide a foundation for the course curriculum for learners to reach the instructional goals and ensures that the instructor is building a learning experience consistent with the goals of the overarching program or degree plan.

Lesson Topics and Format

Similar to face-to-face courses, the lesson can be introduced in a variety of formats. For online courses, it is especially important to consider the best approach for introducing all lessons. In this section of the blueprint, lay out the topic-specific learning materials and the format for delivery.



blue•print

n: A detailed plan of action. An original plan or prototype that influences subsequent design or practice.

*American Heritage
Dictionary*

Learning Resources

There are extensive resources available to aid the learner in understanding knowledge and practicing and applying concepts.

These could include but are not limited to:

- ▶ Course texts
- ▶ Online resources
- ▶ Multimedia assets

When evaluating the potential value of a learning resource for your course, take into consideration the ease of navigation. Material that is presented in multimedia formats can bolster learner engagement. Because individuals learn best in different ways (e.g., visually vs. auditory), the available resources should provide your learners with multiple pathways to comprehend the subject matter.

Performing an inventory of your learning resources will help you map each one to specific course objectives as well as to categorize which resources are required materials and which are supplemental.

Activities and Assessment

How will you assess learning and student mastery of concepts? Start by tying assessment approaches to the learning objectives. If you are strategic in designing the process for measuring learner performance, you can remove bias from the evaluation process. These descriptors should be communicated to the learner at the beginning of the course so they know exactly how they will be assessed.



Measuring Learner Performance

Measurement Types

Determine the types of assessment tools you plan to use to measure learner competence - whether it be exams, projects, or papers.

Specific Requirements

Outline criteria to identify levels of learner performance using rubrics and grading scales.

2.3 Content Patterns: Organizing & Sequencing

Constructing patterns in your curriculum is one way to infuse consistency throughout the course, which helps the learners manage time and resources. How you approach your content each week should be organized in such a way that the learner understands what is being taught and how to interact and engage with the material and community.

In an online environment, the instructional materials are your learners' first impression of your course. The easier it is for them to navigate your course online, the more they can focus on the content and the learning experience. When you weave in consistency, it allows the learners the opportunity to organize their schedules around recurring course events.

Consider applying these practices consistently in the organizing, sequencing, and presenting of content:

- ▶ Write all course content using a consistent voice
- ▶ Create patterns in activity structure (e.g., description, rationale, deliverables, and resources)
- ▶ Establish a consistent schedule (e.g., standardize due dates and plan synchronous sessions, virtual meetings, office hours, and other activities at the same time each week)
- ▶ Align learning objectives to each segment of content
- ▶ Structure the content into smaller pieces



Creating Content Patterns

Structure content into smaller pieces and repeat the same pattern for each course section or module

For example, content could be organized in the following sequence:

- ▶ Introduction
- ▶ Learning Objectives
- ▶ Multimedia Lesson
- ▶ Discussion
- ▶ Activity
- ▶ Assessment

2.4 Creating Content Relationships

Strategically organize and present all course content to leverage the learners' existing expertise on a topic against the concepts and skills they are going to learn. Maximizing the use of their prior knowledge base can help the learner identify patterns in new material by associating their existing knowledge with new concepts.

This can be accomplished through the following actions:

| | | |
|---|---|---|
| <p>1</p> <p>Create a pre-assignment that activates prior knowledge before new material is introduced as a method of contextualizing new information.</p> | <p>2</p> <p>Introduce a topic by connecting prior knowledge to the new learning.</p> | <p>3</p> <p>Present a discussion board where the learner can engage and contextualize prior knowledge with new learning.</p> |
|---|---|---|

2.5 Lesson Development with Media

Depending on how you choose to introduce, curate, or present the learning topics, creative applications of media can further engage learners in the material. A traditional lecture style approach to teaching is not effective in the online classroom. Simply posting your slides within a learning management system does not leverage the interactive learning opportunities available in this dynamic environment.

The integration of media and technology can:

- ▶ Introduce and guide main concepts
- ▶ Generate interest in a subject
- ▶ Reinforce confusing or complex ideas
- ▶ Frame overarching themes
- ▶ Set the stage for an activity
- ▶ Curate a particular approach for how the learner should explore a topic

There are a wide variety of free resources available online to help you create or enhance your lessons with media. Instructors can leverage tools, such as the ones outlined below, to develop dynamic, engaging learning activities.

- ▶ Animation
- ▶ Audio Editing
- ▶ Blogging
- ▶ Bookmarking
- ▶ Copyright Free Media
- ▶ Desktop Publishing
- ▶ Image Editing
- ▶ Instructional Videos
- ▶ Learning Management Systems (LMS)
- ▶ Mind Mapping
- ▶ Photo Sharing
- ▶ Presentations
- ▶ RSS Aggregators
- ▶ Slide Sharing
- ▶ Social Networks
- ▶ Storage
- ▶ Surveys
- ▶ Timelines
- ▶ Video Editing
- ▶ Video Hosting

Access a detailed list of free Web 2.0 tools at: > dltoolkit.mit.edu



Resources for Exploration

6 Online Presentation Tips from 60-Second Lectures

Jeff Cobb, Mission to Learn

Author shares best practices on being concise and storytelling:

> go.nmc.org/6-online



Best Practice for Online Lecture Development (PDF)

James Madison University

Tips for developing engaging lectures:

> go.nmc.org/best

Northeastern University Online Instructor Resource Center

Northeastern University

This web page provides resources for developing online content:

> go.nmc.org/northeastern

2.6 Content Licensing

When you begin designing and sharing content for your course, including articles, videos, music, and other media, it is important to understand the content licensing laws of your country. There are many venues to access and share open materials. If you are looking for content you can repurpose or adapt for your course, the Creative Commons offers an extensive, searchable database of media with flexible licensing. Resources about licensing are also readily available online for instructors, and that same information should be shared with the learners so they understand the legal parameters surrounding the dissemination, re-posting, and re-mixing of the content.



Resources for Exploration

Copyright & Creative Commons

Common Craft

An explanation of Creative Commons:

> go.nmc.org/common



Copyright Basics

Copyright Clearance Center

A brief overview of copyright law is provided:

> go.nmc.org/basics

Copyright for Educators

Peer2Peer University

Online course centered on copyright law:

> go.nmc.org/peer2peer

Code of Best Practices in Fair Use for OpenCourseWare

MIT OpenCourseWare

Recommendations for using copyrighted materials:

> go.nmc.org/fair-use

2.7 Designing Community

Designing community is a critical cornerstone of quality in online education. A robust online learning community is born in the design phase through preliminary organization and planning, and the authoring of clear community expectations. While meaningful learning can happen outside of a community, the overall learning experience usually benefits from community.

Consider designing the following community-building elements prior to course start:

Build Rapport

- ▶ Create a welcome video introducing yourself and the course.
- ▶ Design a discussion area where you and your learners introduce yourselves.
- ▶ Create a welcome note on the course's landing page that contains directions and first steps (e.g., read syllabus, review course layout, and introduce yourself in the discussion forums).

Encourage Interaction with Clear Expectations

- ▶ In your syllabus or a similar document, convey to learners the importance of participation and the expectations for their contributions throughout the course.
- ▶ As part of the design of the various assignments and activities, include opportunities for questions and other types of interaction.
- ▶ Create standalone participating guidelines that provide tips for learners on best practices in interacting.



com•mu•ni•ty

n: 1. A unified body of individuals; 2. An interacting population of various kinds of individuals in a common location

*Merriam Webster
Dictionary*



Tips for Effective Community Integration

Discussion participation, group work, and peer feedback can be embedded in your course as a learning and assessment tool.

Quantify — via grades, digital badges, or other methods — what levels of interactions are necessary to succeed in the course.

2.8 Designing Assessments

When you design and develop online assessments consider the following best practices:

Align each assessment with specific learning objectives and course outcomes. There are several methodologies to use when mapping assessment to objectives and outcomes, including Bloom's Taxonomy and Outcomes Based Assessment.

Diversify assessment types to align learning with particular objectives; the learner is assessed around competency of a particular objective with different strategies, such as projects, group work, and simulations.

Create both formative and summative assessments to evaluate the progression of learners throughout your course. Formative assessments are employed during the learning process, whereas summative assessments are employed after the learning process is complete.



Resources for Exploration

Blooms Digital Taxonomy "Quicksheets" (PDF)

Educational Origami

An infographic contains key definitions and possible activities for assessment:

> go.nmc.org/quick



Instructional Objectives

The University of Tennessee Knoxville

This web page presents a concise overview of instructional objectives:

> go.nmc.org/instructional

Whys & Hows of Assessment

Carnegie Mellon University

Distinctions between formative and summative assessment are outlined:

> go.nmc.org/whys-hows

2.9 Course Launch Checklist

Designing and developing a course is an intricate, multi-step process. A final guided review of the course will ensure alignment between course objectives, instruction, and assessment. The checklist below is an example of how to perform a review that reflects your course blueprint.

Course Introduction

- The syllabus that was created as a part of your blueprint clearly describes the course and its connection to the overall degree/certification program and to the profession/discipline.
- There are easy-to-understand instructions for learners about how to get started.
- It is clear what materials will be used in the course and how they can be accessed.

Learning Objectives & Outcomes

- The course landing page and syllabus state clear course objectives.
- The syllabus clearly states what outcomes the learner will achieve after successful completion of the course.
- The learning outcomes are measurable.
- The course objectives and outcomes are appropriately designed for the course level.

Learning Resources

- The learning resources support the course objectives.
- The learning resources are appropriately designed for the level of difficulty of the course.
- The learning resources are diverse to cater to a range of different learning styles.

Assessment

- Levels of learner performance are clearly outlined.
- The assessment measures are aligned with the stated course outcomes.
- The assessment methods are consistent with activities and learning resources.
- The assessments fit the appropriate level of difficulty for the course outcomes.



3. Facilitation

After designing and developing your course, it is time for the instruction to start in the live online environment. One of the critical components for a successful online learning experience is effective facilitation of the course. The learners should be able to absorb the information presented and share their interpretations and knowledge with their peers so that the online environment feels like a collaborative community.



Why is this different online?

Facilitation is arguably the area with the biggest distinction between online and face-to-face learning. In a brick-and-mortar classroom, the instructor's presence is easily felt because of the physical nature of someone standing in front of a room. Eye contact, body language, and all kinds of human gestures foster an unspoken connection with learners. Additionally, face-to-face environments offer the chance for learners to ask and answer timely topical questions. In an online environment, the instructor must design opportunities to engage learners at the same level. Online instructors should establish a reliable presence through active and consistent participation in discussion forums by offering continual feedback to the group as well as individual learners, in addition to being accessible for questions or check-ins on a regular basis.

3.1 Instructor Presence

There is a misconception that the online environment replaces the instructor. For online learning, the role of the instructor is pivotal and can be the single largest influencer of learning and the learner experience; learning online does not mean learning in isolation. Actively support your learners by guiding the learning process, encouraging interaction, and prompting reflection.

Welcome Learners

One of the first ways to set up learners for success is to create a welcome letter or video for the course. This will help the learners make an initial connection with you. This letter or video should summarize the course and the associated learning goals along with providing the ways that they can reach you. Make sure to include any scheduled synchronous events they need to plan to attend.

Encourage Community

In order for a community to emerge within the online environment and to build trust, learners must feel your presence throughout the course. Regularly communicate to your learners about the status of their performance by providing opportunities for both individual and group feedback.

Connect with Learners

Create a discussion forum that provides a venue for learners to get to know you and each other. This is also an excellent way for you to model desired behavior in the forum. The interactions you initiate will be mostly related to the subject matter you are teaching, but make sure they feel personal and conversational.

Actively Participate

Be present in the learning experience by actively leading, nurturing, curating, and stimulating the learning at both the course and individual level. If you build learning communities and activities that involve dialogue, consistently participate in the process.

3.2 Learner Feedback

Provide learners with regular check-ins to evaluate their performance and communicate feedback. This allows learners to assess their progress, identify areas for improvement, and celebrate achievements.

Examples include:

- ▶ Providing weekly self-diagnostic or diversified assessments that give immediate and detailed formative feedback on learner performance
- ▶ Responding substantively to learner contributions in discussion forums or other dialogue tools
- ▶ Providing weekly summaries of general class performance through video or other media-rich formats
- ▶ Sharing topical or weekly introductions through video or other media-rich formats
- ▶ Maintaining regular and accessible virtual office hours for learners to communicate with you



Feedback Tip

Course facilitation is an extension of what has been designed in the course development stage.

Within specific community activities, regular and substantive instructor feedback is important to establish presence. Model the behavior and contributions you want to cultivate in your course.

Leverage Learner Contributions

If you have discussed a particular topic in previous courses, you may be able to predict learner responses. Plan to use these expected responses to challenge learners to think deeper or differently about a topic.

Encourage, Nurture, and Recognize

Publicly acknowledge learners within a forum when their contributions are particularly strong or reflect exceptional preparation and understanding. Inspire these high performers to take their work to the next level by personally recommending additional resources to them. Their contributions and your engagement enhance the overall course dialogue. Encourage participation in your regular announcements and private correspondence with individual learners. Make sure to also motivate less advanced learners with positive reinforcements when they contribute.

Focus the Discussion in Forums

Regularly check the forums to ensure responses are appropriate and relevant. If a subject veers away from the intended material, you can reign in the group and guide them back on-topic. Sometimes a conversation may go off-course in a positive way and touch upon other instructional objectives. Find the balance between meeting learning objectives and sustaining the health of a community. Be careful not to publicly single-out or scold a learner. If one person is regularly derailing a discussion, initiate a private conversation. If several people are going off-track, gently bring the group back to the desired focus.

Respond to Individual Learners

Each week, it is not necessary to respond to every posting by each learner. You can respond at least once to each person or you can develop a schedule that shows that you are attuned to individual learners. Responding to a learner's post demonstrates that you are listening. This is a significant factor in learner satisfaction, and large classes may require a modified approach.

Involve Learners as Co-Facilitators

Leverage the learners who are excelling with their participation by asking them to be co-facilitators for the discussions. Provide clear expectations for this role and tie a grade or another qualifier to the work. While co-facilitation can enhance a forum, do not use this strategy to replace your active engagement.

Facilitate Synchronous Events

Synchronous refers to real-time communication and instruction — think of it as a live conversation with your learners. The use of synchronous tools, such as web conferencing applications, chat, and other real-time collaboration tools, can enhance the learner experience and support learning goals. Real-time community tools are great for team-building, walking through complicated processes, and offering opportunities for questions and the exchange of ideas.

Tips for facilitating synchronous events:

- ▶ Test equipment
- ▶ Use a checklist of items before event
- ▶ Manage roles
- ▶ Encourage participation
- ▶ Build in interaction
- ▶ Use visuals



Resources for Exploration

7 Principles of Good Practice in Online Teaching

Virginia Commonwealth University

The author discusses the seven core best practices of teaching online:

> go.nmc.org/principles

Assessing Online Facilitation

Humboldt State University

Guide for reviewing online facilitation:

> go.nmc.org/assessing

Managing Instructor Presence Online

Arizona State University

Steps for instructors to connect with learners.

> go.nmc.org/managing

3.3 Time Management

Teaching online requires a shift and reevaluation of how you manage your schedule. The first few times that you teach a course online will require more time and effort, so plan accordingly. There are also several aspects of online facilitation that are more time-consuming than in face-to-face settings. For example, the learners are going to have to navigate through all of the content in the environment, in many cases without your real-time guidance. If the content is not organized in a manner that makes sense to all of the learners, questions will arise that may prompt you to make adjustments to the layout and workflow.

Online courses afford more flexibility for learners, as they are able to log in any time from anywhere. As such, it is important for you to clarify expectations upfront that you cannot always be personally logged in to provide immediate responses. This is why it is critical to clearly communicate your office hours as well as how long it will generally take for you to reply to a question or comment.



4. Evaluation

Evaluation is a critical part of the teaching and learning process. It completes the feedback loop, and helps you determine if the learners have understood the material presented to them. During this phase, you should be assessing the knowledge and skills that were defined in the learning outcomes statements. These evaluations will also help you improve your facilitation and the course design as you will see how well learners have engaged with the subject matter.

In addition to giving you the sense of how learners comprehend the material, evaluations can help learners gauge their own level of understanding.



Why is this different online?

Online learning environments require more assessment measures because of the inherent lack of informal feedback that a face-to-face learner can immediately gain from chatting with a classmate mid-lecture to clarify a point, or by casually approaching the instructor with questions after class. As such, it is essential to build in such opportunities for reflection through various forms of assessment. It is equally important that your feedback, to the group and the individual, go beyond simple questioning or agreeing in order to model the level of critical thinking you expect from them.

Many learning management systems allow learners to publicly post their work. Having learners review each other's work and post feedback to one another is a type of effective informal assessment. As the instructor, you can respond to the critique as necessary to emphasize or redirect key points.

4.1 Assessment

An assessment is the process of documenting the knowledge, skills, attitudes, or beliefs of the learner after they have completed instructional activities. Assessment provides information about an individual learner, a group of learners, an institution, or an entire educational system.

The term assessment is generally used to refer to all activities used to gauge learner progress. When thinking about assessments for your course, it is important to tie them to the concrete goals and objectives that were stated at the beginning. Provide feedback to learners early and often so they feel they are supported.

Note that the terms “assessment” and “evaluation” are often used interchangeably, but they each have distinct definitions:

Assessment refers to how you will collect tangible data in your course in order to monitor whether the learning objectives and outcomes are being fulfilled. Simply stated, assessments determine what students learned and how they learned it.

Evaluation refers to your overall judgement on whether the course has met the learning outcomes and objectives you conveyed at the beginning of the course.

In the evaluation phase of your online course, you will examine the data that you collected through the assessments in order to make this judgement about whether the course was successful. As such, the assessments you develop are crucial components for evaluating your course.

While you will be assessing learners’ performance, perpetuate a learner-centered environment by creating opportunities for feedback from the learners on whether they believe these goals and objectives are being supported by the course activities and the resources made available to them. Additionally, teaching them techniques for self-assessment will allow them to chart their own growth throughout the course and take more ownership of their learning.



Types of Assessments

| Objective | Formative | Formal |
|---|---|--|
| A form of questioning in which each question only has one correct answer | Qualitative feedback that focuses on the details of content and learner performance | Assessments that quantify the knowledge gained, such as a mid-term exam or paper, and impact learners' final grades |
| Subjective | Summative | Informal |
| A form of questioning in which each question has more than one correct answer | The measuring of learning at the end of a unit or course to determine achievement of the learning objectives and outcomes | Assessment activities that do not contribute to learners' final grades that can be used to give guidance on where they need to focus their studies |

Objective Assessment

Objective assessment is a form of questioning which has a single correct answer. Examples of objective assessments are multiple choice, true/false, matching, and mathematical equations.

Typically, objective assessments are easy to deliver online. Because the questions within the objective assessment have corresponding answers, a program can evaluate and score these responses, which is especially helpful for courses with a large number of students. Objective assessments also provide immediate feedback to the learners so that they can learn from their mistakes and continue working. The challenge for you is to create quality questions that accurately measure knowledge and skills. When designing the questions, determine what makes a response correct versus incorrect.

Subjective Assessment

Subjective assessment is a form of questioning which may have more than one correct answer. Examples of activities that respond to this type of question include essays, short answer, and oral questions.

Because subjective assessment assignments are more open-ended and are not tied to one specific correct response, it is important that they are evaluated against a set of clearly defined criteria and questions, often in the form of a rubric. When you are creating a subjective assessment rubric, you can codify the expertise and scoring process. One of the biggest advantages of subjective assessments is that they provide you with an authentic and more expansive understanding of each learner's knowledge of a subject. This will help you assess the learning that is taking place at a higher level, whereas objective assessments are targeted to the lower to middle testing levels.

One factor to consider about subjective assessments is the amount of time it will take you to provide feedback to the learners, and scaling your process to meet the number of students in your course. Create feedback timelines and set expectations with your learners about when they should anticipate hearing back from you. Also consider developing a peer review process where learners assess each other's work.

Formative Assessment

Instructors leverage formative assessments to modify teaching and learning activities to improve learner performance. These assessments typically involve qualitative feedback for both the learner and teacher that focuses on the details of content and performance.

Formative assessment is integrated throughout an effective online course; the learning goals and outcomes are inherent in each activity and assignment. This will allow you to continuously take inventory of how well specific concepts are being understood. For learners, formative assessments reveal the areas in which they are excelling as well as where they need more work. Because this type of assessment is not attached to a grade or measurement, learners can work through their weaknesses without the fear of failure. Formative assessment is especially useful when it is used to adapt the experience to meet the needs of the learners and help learners monitor their own progress.

Examples of formative assessment:

A language instructor asks students to record an audio greeting using particular nouns and verbs of a given language. The instructor records audio responses to each of the students with feedback on their greeting that details recommendations.

An instructor asks learners to reflect in an online journal about concepts covered in a given module in the context of a current event. The instructor can assess how much learning was absorbed and applied in real-world context.

Summative Assessment

Summative assessment is the process of evaluating or measuring learning at the end of a unit or course to determine achievement of the pre-stated learning objectives and course outcomes.

Examples of summative assessments:

- ▶ Research Papers
- ▶ Projects
- ▶ Portfolios
- ▶ Exams

Formal Assessment

Formal assessments are attached to activities that quantify the knowledge gained. Taking an online exam where the results are recorded is one example. A score is usually provided to both the learner and the instructor in a formal assessment, and is used to measure a learner's performance, which may affect their final grade.

Offering a test towards the beginning of the course that has very little weight attached to it in terms of a grade is an effective way to alleviate learners' anxiety and prepare them for what is to come. Provide feedback about the incorrect answers so the learners understand why a response is wrong.

Informal Assessment

Informal assessments are similar to formal assessments in the sense that they can be written, and usually provide feedback to the learner and the instructor. The main difference is that the feedback or score does not contribute to a learner's final grade. Learners can use this guidance to adjust the areas in which to focus their studies.

Informal assessments usually occur in a more casual manner and may include observation, inventories, checklists, rating scales, peer and self-evaluation, and discussion. An informal assessment provides an indication as to how a learner will perform on a formal assessment.



Resources for Exploration

Assessment 2.0

Bobby Elliot, Scottish Qualifications Authority

The author provides tips for modernizing assessment methods:

> go.nmc.org/assess20



Assessment and Collaboration in Online Learning

Karen Swan, Jia Shen, and Starr Roxanne Hiltz

This paper explores collaborative activity, including exams:

> go.nmc.org/assessment

Online Resources for Higher Education Assessment

St. John's University

Resources for understanding assessment:

> go.nmc.org/online-resources

Examples of informal assessment:

- ▶ Practice quizzes or tests
- ▶ Reflection videos or blog posts
- ▶ Group journal entries

Knowledge checks placed within a learning resource can be an informal way to help students determine whether or not they have understood the material. In an online learning environment it is especially helpful to provide students with regular opportunities to monitor their own learning as they move through various topics. Providing questions that check for the understanding of key concepts will help students identify and address any learning gaps in their studies.

4.2 Reliability & Validity

Effective assessments are both reliable and valid. A reliable test means that when it is administered many times to learners who receive the same instruction, similar results are achieved. A valid test refers to a test that is measuring the desired learning impact. For example, if you are trying to teach a skill, a written test may not measure whether or not the learner can perform the task.

Assessments that are both reliable and valid are important in an online environment where feedback from students is limited. In a classroom, you may receive visual cues and you may engage in casual conversation before or after class when students may find it easier to ask questions. These signs indicate if they understand the material or need more guidance. Because these opportunities are more limited online, having reliable and valid assessments is especially important.

4.3 Learning Analytics

Whereas assessments look at the performance of learners or groups of learners, learning analytics takes this notion a step further. Learning analytics leverages a wide range of data about learners and their behaviors to help determine the optimal learning environment.

Excerpt from the New Media Consortium's definition:

Learning analytics is education's approach to "big data," a science that was originally leveraged by businesses to analyze commercial activities, identify spending trends, and predict consumer behavior. Education is embarking on a similar pursuit into data science with the aim of improving student retention and providing a high quality, personalized experience for learners. Learning analytics research uses data analysis to inform decisions made on every tier of the educational system. This data can be leveraged to build better pedagogies and target at-risk learners.

There are several different categories of usage for analytics:

Identifying At-Risk Learners

Tracking learner performance on initial activities will give you a sense of which ones are at risk of failing the course or not being able to grasp the material. Identifying these individuals early in the process allows you to give special attention to the learners before it is too late.

Tracking Interaction

Gathering data on how long learners are interacting with readings or videos you posted will help you see how engaging the course content is and how well certain topics or lessons are being understood.

Pinpointing Effective Techniques

Learning analytics are often used by instructors to identify the success of their pedagogies. Integrating systems (e.g., polling) that capture data about how comfortable learners are with the material as it is being taught can help you make the necessary adjustments to better align your teaching methods to their learning styles.



Resources for Exploration

7 Things You Should Know About First Generation Learning Analytics

EDUCAUSE

This brief describes the most pertinent aspects of learning analytics:

> go.nmc.org/7-things

Learning Analytics (PDF)

UNESCO

Context, impact, and examples are among the categories detailed:

> go.nmc.org/unesco

NMC Horizon Report > 2013 Higher Education Edition

New Media Consortium

A report summarizes learning analytics and showcases good examples:

> go.nmc.org/2013-hied

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