



Online Course Development: A Guide for Instructors

The Design Process: Course Content and Activities

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Selecting Course Materials

One of the main criteria when selecting course materials is the material selected help support the learning outcomes for the course. Materials should be written at an appropriate reading level, keeping in mind a balance of difficulty, tone, length and timing of semester. Additionally you want to ensure that you incorporate course materials by making reference to them in various course activities such as raising discussion questions. Keep in mind, you may want to consider materials beyond a course textbook like various forms of multimedia.

Each design team will be assigned a discipline-specific Liaison Librarian who will support with selecting appropriate resource, seeking copyright and creating e-resources and e-readers.

Design Course Content and Activities

Chickering and Gamson (1987) identify seven principles necessary for Good Practice in Undergraduate Education (see table). These principles should be strategically considered in online course design.

Principle 1 Maximize Learner-Instructor Contact	
Rationale	Learners need to feel supported and Instructors aware of learners' concerns.
How	<ul style="list-style-type: none"> • be present • facilitate communication • manage conflict
Principle 2 Support peer-to-peer contact, teaching, and learning	
Rationale	Learners need to feel connected to each other and this helps build a strong community of learning

How	<ul style="list-style-type: none"> • empower learners • set up a social forum • provide clear guidelines
Principle 3 Emphasize active learning and applied practice	
Rationale	Learners see the instructor as an active participant and are more likely to model this behaviour.
How	<ul style="list-style-type: none"> • inspire and support learners • encourage connections • motivate learners
Principle 4 Provide prompt feedback	
Rationale	Affirm learners' achievements and knowledge to promote greater online confidence and participation.
How	<ul style="list-style-type: none"> • respond to general questions promptly • keep learners on track • provide timely feedback
Principle 5 Allocate realistic amounts of time for effective learning	
Rationale	Learners and teachers learn to use their time well and setting this precedence establishes the basis for high performance for everyone.
How	<ul style="list-style-type: none"> • define time and expectations upfront • establish a basis for performance outline time management for learning content
Principle 6 Good practice communicates high expectations	
Rationale	Instructors set high expectations for not only themselves but also for their students by expecting them to perform well.
How	<ul style="list-style-type: none"> • set high expectations • expect that students will perform well • make extra efforts
Principle 7 Emphasize respect for diverse learning styles	
Rationale	Each learner brings different talents and ways of learning to us.
How	<ul style="list-style-type: none"> • provide opportunities for students to display talents • create a variety of ways for students to learn

Active learning

Increased student engagement and improved student learning is achieved by focusing on active and collaborative learning, and minimizing or eliminating the passive transmission of information. Additionally, active learning increases student's knowledge of content and promotes critical thinking and problem-solving abilities (Anderson et al. 2005; Williams & Lahman, 2011). Further, students actively engaged with the content promotes participation in a meaningful way and fosters development of new knowledge (Partlow & Gibbs, 2003).

Examples of active online learning strategies may include: case studies, simulations, role play, Socratic questioning, debates, problem-based learning, guided questions, graphic organizers, group projects and virtual labs.

Examples of active learning:

- [Strategies To Incorporate Active Learning Into Online Teaching \(PDF\)](#)
- [University of Waterloo, Centre for Teaching Excellence: Active Learning Activities \(URL\)](#)

Whether designing a blended course or a fully online course, consider the following factors when designing learning activities:

- Provide opportunities for a student to reflect on his or her current understanding.
- Create ways for students to construct new knowledge.
- Provide active learning opportunities for students to meaningfully apply their learning (Dixon, 2010).
- Establish alignment among learning outcomes, activities and assignments.
- Incorporate activities that are both engaging and fun for the students.
- Design activities that engage students with the content and instructor and peers (Dixon, 2010).

Current course examples include:

- weekly anonymous online polls to identify areas of difficulty
- small group virtual labs
- small group activities will be included to promote real-life application of knowledge, e.g. a group project to determine which 10 over-the-counter drugs they would choose to take on a trip to a remote location.
- weekly discussion forums, e.g. online debate about nature versus nurture.
- participate in simulation, gather group data and write a brief lab report applying the scientific method
- develop a mind map – of individual major theorists
- play a game such as online jeopardy or your favourite game
- create a group poster session
- create a virtual exhibit

Chunking

When designing learning materials for an online course, instructors and designers need to be cognizant of information overload. When information being presented to students requires more processing capabilities than available; cognitive overload occurs and information is lost (Bradford, 2011). In a face to face environment, instructors rely on nonverbal cues such as blank stares or sleeping students to adjust their approach but this is not the case in an online environment.

Instructional strategies that reduce cognitive overload include chunks, visual supports, and interactive activities (Smith, 2008). Research suggests that working memory can hold four chunks of information by finding ways to group them together. These strategies will reduce cognitive overload as well as assist with storing information in long-term memory that involves our ability to hold and store information for long periods of time. [Learn more.](#)

Chunking can also refer to more than content, consider applying this approach to long-term assignments or culminating projects. This approach allows the students to work with a manageable amount of material and enables you to check student's progress.

Suggestions:

1. Break material into management amounts, 10 minute lecture video versus 50 minutes.
2. Write a quick sentence or paragraph summarizing the key point or the muddiest point from that section.
3. List several reflection questions between videos.
4. Alter the presentation of course material; video, reading, reflection, small group work, etc.
5. Develop a glossary for terms that can be accessed directly from the course notes.

Interaction

Frequent and ongoing interaction is a significant component to a successful online course. Social interaction and the development of an online community reduces feelings of isolation, eases stress and increases confidence (Haythornthwaite, C., Kazmer, M., Robins, J., Shoemaker, S., 2000). Additionally ongoing interaction promotes motivation and learner satisfaction (Harris and Martin, 2012; Sargeant et al., 2006). Part of the course design is establishing ways for peer interaction and instructor-to-student interaction to transpire in an online community is essential and should be woven throughout the course.

Interaction between the instructor and teaching assistants (TAs) and the students

During the first week:

- encourage students to stay motivated and engaged, post weekly updates
- comment on student progress
- highlight connections between course topics and current real life examples
- provide online instructional support that addresses students' difficulties based on quiz scores, questions on discussion board, etc.
- host online office hours
- offer a synchronous exam preparation session, which will be recorded and posted

TAs will provide the front-line contact with students, checking forums regularly to respond to course-related questions, provide timely and supportive feedback on research proposal, outlining current accomplishments and identifying ways to improve.

Peer Interaction:

- Create small groups at the beginning of the course and perform activities in the same groups throughout the course.
- Have students participate in weekly discussion forums.
- Have students engage in peer feedback for various assignments papers.
- Have partnered students provide each other with formative feedback.
- Encourage students to respond to questions posted by peers about content or activities.
- Include asynchronous small group activities to promote real-life application of knowledge software to enable interactions: Blackboard Collaborate.

Design Assessment

In a well-designed course, learning outcomes and assessment closely align, with instructors using summative and formative assessments to identify learning patterns, modify instruction, and provide timely feedback. In a blended or an online course, assessment may include tests, quizzes, discussion boards, virtual labs, simulations, case studies, essays and portfolios.

Further Resources:

- [Queen's Centre for Teaching and Learning: Assessment \(URL\)](#)

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