PRINCIPLES OF ONLINE LEARNING

CTLR - Centre for Teaching Learning and Research

VANCOUVER COMMUNITY COLLEGE

Principles of Online Teaching

Background

Online teaching and learning has been studied for decades, and as such, an incredible amount of information is available on its many aspects. The purpose of this document is to pull together the key ideas and thereby provide a 'high level' overview of what makes for effective online teaching and learning. That is, each section attempts to show the main points which have been pulled from various sources.

This document can be viewed as a mix of a "how to" and as a reference to certain concepts in online learning. Readers of this document can obviously take a "deeper dive" into any and all of the sections below, and links to references are given as a starting point for such further exploration. Some initial points to keep in mind are:

- A lot is known about what does and doesn't work
- Knowing the basics can save time and will help you create an effective learning experience for your students
- Effective online learning results from careful instructional design, planning, and development
- The planning, preparation, and development time for a typical online course is six to nine months before the course is delivered
- Online learning is very different from 'emergency remote teaching'

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The Difference Between Emergency Remote Teaching and Online Learning. Retrieved from https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Bates, T. (n.d.). Teaching In a Digital Age - Free Download of 2nd Edition. Retrieved from https://opentextbc.ca/teachinginadigitalage/

The Key Principles of Online Learning

The creation of effective online learning experiences requires two elements:

- A well designed and planned online course (usually built in a learning management system) and
- Excellent online facilitation of learning

Design and Planning

- Design decisions have an impact on the quality of instruction
- Often instructors will work with instructional designers to create an online course
- Decisions need to be made around how students will:
  - Meet the desired learning outcomes (which content to include, how the content will be organized into 'blocks' of study)

- o Engage with content (which media to use e.g. text, audio, video etc. and which online activities to use)
- o Be assessed (which online assessment tools to use and when to use them)
- o Receive feedback (either informally or through formal assessment)
- o Interact with the instructor and with other students (which tools to use for which purposes)
- o Be supported in the course (including how to motivate and engage students, as well as to create community in the online course)
- Attention needs to be paid to managing instructor and student workload
- You may want to have a cohesive design and planning approach to online learning in your department
- Building an online course takes time – develop a 'work plan' that moves you through the various steps

The following resource has some excellent principles and practices for effective online learning:

Knaack, L., & Paskevicius, M. (2018). Key Principles and Practices of Effective Design for Blended and Online Student Learning. Retrieved from https://ctlr.vcc.ca/media/vcc-library/content-assets/ctlr-documents/elearning/Key-Principles-Practices-of-Effective-Design-Knaack-Paskevicius.pdf

Factors That Effect the Design of an Online Course

Before committing to certain design decisions for an online course the following factors should be considered:
- Class size (larger classes may reduce the options for feedback and assessment)
- Learner characteristics (considering who your learners are and how they will learn best)
- Accessibility issues (what access to technology do your students have?)
- Class pacing (self-paced, class-paced)
- Pedagogical approach (there are a number of approaches; facilitated learning, collaborative learning, synchronous and asynchronous learning etc.)

Bjorke, S. (2014). Pedagogical approaches in online education. Retrieved from Education for Sustainable Development: https://ufbutv.com/2014/02/26/pedagogical-approaches-in-online-education/

Learning Outcomes and Engagement with Content

- It is important to not just identify the content to cover, but also how you will support the interactions necessary to foster student learning
- Consider a Backwards Design approach that makes use of course blueprints:

  CTLR Moodle Course on Aligning Objectives Using Backward Design

Class Schedule

Once a plan has been made of which content, learning activities, and assessments to include, a schedule of what will happen during each week of the course can be created.

Some questions to consider include:
- What will students be expected to do each week?
- What will they do asynchronously?
- What will happen during synchronous sessions?
- When and how often will students interact with the instructor?
- When and how often will assessment happen?

Communication

Once you have organized your course and figured out what is happening each week it is important to be very clear to students what they are expected to do and when.

For example, at the beginning of the course you may want to be clear to students about:

- Course objectives
- Expectations of students and instructor
- Class schedule
- How students will engage with the content
- How and when communication will happen in the course

Throughout the course it is helpful for students to know what they should be working on and any assignments that may be due. Some strategies that can be effective here are:

- Introductory content for each week (e.g. 'What we will be doing this week')
- Checklists for weekly tasks
- Weekly synchronous sessions
- Summary content for each week

Facilitation

At the beginning, and throughout a course, the instructor needs to consider:

- How to engage students in the learning
- How to motivate students
- How to maintain participation of students in the course
- How to create 'community' in the course
- How to encourage collaboration
- How to determine if students are learning

Community of Inquiry (CoI) model has been used in the design and delivery of online courses. It suggests online courses that build in social, cognitive, and teacher presence will create meaningful and engaging learning experiences for students.

- **Social Presence** (sharing experiences, being open, personalizing the learning experience, being positive, being responsive)
- **Cognitive Presence** (helping the students to connect ideas, and think critically through content, activities, assessment, and feedback)
- **Teaching Presence** (direct instruction, facilitation of meaningful learning, online course planning and design)

For example, to engage students in their learning will require:

- Online experiences that foster connection, and which allow students to open up and connect more personally with their instructor and fellow students (social presence)
- Learning activities and assessments that help students connect ideas and think critically (cognitive presence)
- Good online course design and facilitated learning experiences that are meaningful (teaching presence)

Establishing an Online Teaching Presence. (n.d.). Retrieved from Duquesne University: https://www.duq.edu/about/centers-and-institutes/center-for-teaching-excellence/teaching-and-learning-at-duquesne/establishing-an-online-teaching-presence

Huang, W., Hurt, A., Richardson, J. C., Swan, K., & Caskurlu, S. (n.d.). Purdue University: Repository for Online Teaching and Learning. Retrieved from Purdue University: https://www.purdue.edu/innovativelearning/supporting-instruction/portal/files/4_Community_of_Inquiry_Framework.pdf

Universal Design for Learning

Designing a course with Universal Design for Learning (UDL) principles in mind helps to create learning environments in which all students can thrive. In any learning context, whether it be online, blended, or face-to-face, UDL provides the foundation for students of all backgrounds and abilities to fully participate in the course. The CTLR has numerous resources on UDL and accessibility to assist you as you design your online course.

- Design with UDL principles in mind (Visit CAST for more information on UDL):
  - Provide opportunities for students to engage in multiple ways (Multiple Means of Engagement)
  - Provide visual, auditory, and digital materials in your lessons (Multiple Means of Representation)
  - Offer ways for learners to demonstrate their knowledge in different ways (Multiple Means of Action and Expression)
- Create accessible learning materials
- Check student access to technology
- Provide students with tips on how to stay organized and motivated

- Offer opportunities for consistent feedback
- Simplify instructions
- Provide simple, consistent navigation through the course
- Provide multiple opportunities for student-student and student-instructor interaction
- Model good discussion forum etiquette
- Be flexible

Hollingshead, A., & Carr-Chellman , D. (2019, February). Engaging Learners in Online Environments Utilizing Universal Design for Learning Principles. Retrieved from eLearn Magazine: https://elearnmag.acm.org/featured.cfm?aid=3310383

Ten Steps Toward Universal Design of Online Courses. (n.d.). Retrieved from University of Arkansas at Little Rock: https://ualr.edu/disability/online-education/

Facilitation: Synchronous and Asynchronous

Facilitation of online learning/courses can be facilitated synchronously, asynchronously, or using a combination of both. Each has their own advantages and disadvantages.
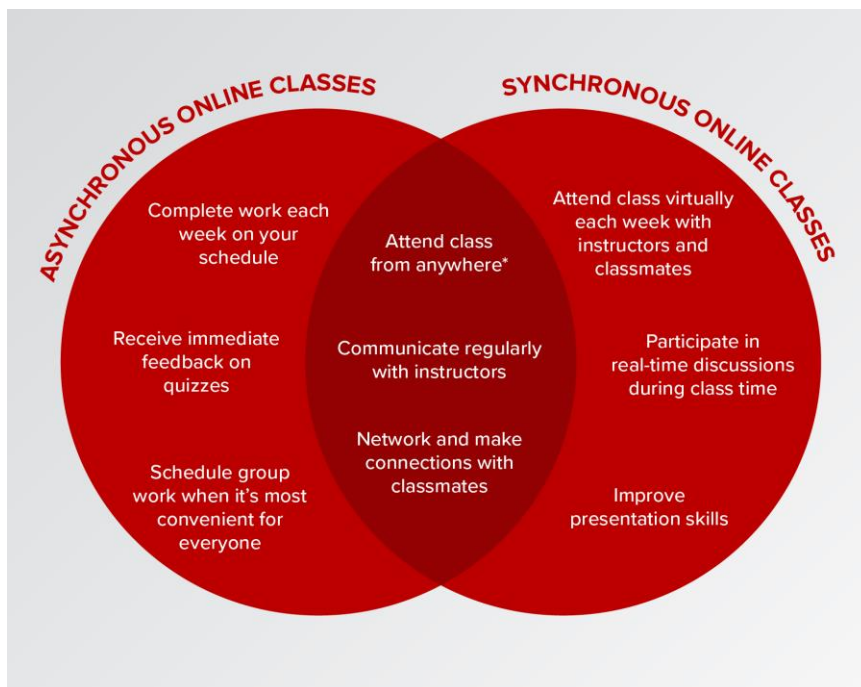
What's the Difference Between Asynchronous and Synchronous Learning? (n.d.). Retrieved from Ohio State University: https://online.osu.edu/news/2019/09/30/whats-difference-between-asynchronous-and-synchronous-learning

Synchronous Online Sessions

- Real-time interaction through chat and videoconferencing
- Like a virtual classroom
- Allows students to ask, and teachers to answer questions instantly, through instant messaging
- Rather than taking lessons alone, students can easily interact with fellow students and their teachers
- Allows for direct instruction of material
- Instructors don't necessarily need to lead each synchronous session. A synchronous session could be used by students to discuss a project they are working on for example.

Each synchronous session can achieve a number of purposes:

- Content delivery (direct instruction, demonstrations)
- Interaction with content (active learning)
- Check in with students (can be an informal 'how are you doing?')
- Build community (for example, ask students to share their personal learning experiences)
- Communicate expectations (provide reminders about deadlines, key assessments etc.)
- Chance for collaboration (students can do group work)
- Assessment (have students do short presentations)
- Provide feedback (could be one-one-one with students, or groups)

Tips for Synchronous Online Sessions

- Create an agenda for each session
- Tell students what to expect in each session
- Make each session relevant to students
- Ask participants to prepare something for the session
- Do a quick social check in
- Make sure your sessions offer novel content and activities
- Ask participants to keep their cameras on
- Pose questions to students

Asynchronous Online Sessions

- Students learn on their own schedules (flexibility)
- Instructors prepare course materials for students in advance of students' access
- Students interact with course materials over a longer period of time
- Students can review course materials as many times as they wish
- Students communicate at different times from different places using the same communication tool

- Asynchronous discussions can foster higher-level thinking as students and instructor have time to think through their ideas before interacting
- Instructor role shifts to that of facilitator helping students construct knowledge by guiding them through course content and discussions
- Quality of learning materials, interaction, and instruction lead to effective learning (not the technology)
- Moodle and the tools included can help facilitate asynchronous learning

Synchronous and Asynchronous Tools. (n.d.). Retrieved from Virginia Tech: https://canvas.vt.edu/courses/12378/pages/synchronous-and-asynchronous-tools

What's the Difference Between Asynchronous and Synchronous Learning? (n.d.). Retrieved from Ohio State University: https://online.osu.edu/news/2019/09/30/whats-difference-between-asynchronous-and-synchronous-learning

Tips for facilitating Asynchronous Online Discussions

- See Collaborative Online Learning: Fostering Effective Discussions

Tips for Building Community in the Asynchronous Learning Environment

- Welcome students to class (e.g. welcome video)
- Set expectations
- Foster respectful discussions
- Organize and manage online discussion forums
- Acknowledge the student is there (e.g. quick message letting a student know you see them on the course)
- Stay connected
    - Hold virtual office hours
    - Reach out to students
    - Encourage student-student and student-instructor interaction
    - Provide more frequent announcements, check-ins, reminders, updates, etc.
- Set up collaborative/team activities (students can present their work in your synchronous sessions)
- Use synchronous class sessions for interaction, not only content delivery
- Encourage informal, social-type conversation so everyone gets to know each other

Building Community in Asynchronous Online Courses. (n.d.). Retrieved from Duke University: https://learninginnovation.duke.edu/blog/2020/02/building-community-in-asynchronous-online-courses/

Synchronous vs Asynchronous: Advantages and Disadvantages

You may choose to engage your students synchronously or asynchronously depending on the course content or material that needs to be taught.

Advantages of Synchronous Teaching

1. Immediate personal engagement between students and instructors, which may create greater feelings of community and lessen feelings of isolation
2. More responsive exchanges between students and instructors, which may prevent miscommunication or misunderstanding

Disadvantages of Synchronous Teaching

1. More challenging to schedule shared times for all students and instructors
2. Some students may face technical challenges or difficulties if they do not have fast or powerful Wi-Fi networks accessible

Advantages of Asynchronous Teaching

1. Higher levels of temporal flexibility, which may simultaneously make the learning experiences more accessible to different students and also make an archive of past materials accessible.
2. Increased cognitive engagement since students will have more time to engage with and explore the course material.

Disadvantages of Asynchronous Teaching

1. Students may feel less personally exchanged and less satisfied without the social interaction between their peers and instructors.
2. Course material may be misunderstood or have the potential to be misconstrued without the real-time interaction.

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Original Article

Face-to-Face vs. Online Teaching

Types of Differences	Teaching Face-to-Face	Teaching Online
Pedagogy	• Mostly synchronous interaction • Content mostly presented as lectures • Content planned session-by-session	• Mostly asynchronous interaction • Various means of content presentation • Content planned out in advance
Discussions	• Mainly take place within physical walls • Responses formulated quickly in real time • Some students may feel intimidated to speak up in class	• More time to develop response • Discussions last over a longer period of time • All students have chance to contribute to discussion • More introverted students may find it easier to participate in the online environment
Learning Environment	• Students physically attend regularly scheduled sessions • When in class, instructor typically sets pace • Can be a "passive" learning environment (but not always) • Instructor and student can pick up on verbal and non-verbal cues	• Class in session 24/7 • Students can learn at their own pace (flexibility) • Students can review course materials multiple times • Typically a more active learning environment where students must work to acquire information • In asynchronous learning environment, challenge in not being able to "see" each other in real time exchanges
Role of Instructor	• Prepare, deliver and facilitate course content during regularly scheduled sessions	• Facilitator: helps students construct knowledge by guiding them through course content and discussions
Assessments	• Assessments typically take place during regularly scheduled class time • Instructor can monitor students during assessments	• See CTLR Resources on Assessment in Online Learning

	• Review of assessment typically takes place during class time	

Comparing Face to Face and Online Teaching. (n.d.). Retrieved from Johns Hopkins University:
https://ep.jhu.edu/faculty/learning-roadmap-for-new-online-instructors/comparing-face-to-face-and-online-teaching

Face-To-Face vs. Online Instruction. (n.d.). Retrieved from State University of New York Broome Community College:
https://www3.sunybroome.edu/online/students/face-to-face-vs-online-instruction/

Final Thoughts

- Take it slow and learn as you go
- Focus on pedagogy, not technology – It's not about the technology, it's about the teaching
- Don't overload the course (avoid the course-and-a-half syndrome)
- Use the resources available
- Don't go it alone (get advice from colleagues, department leaders, professional associations, articulation committees, CTLR)
- Take care of yourself and reach out to friends, family, colleagues if you're feeling overwhelmed
- Be realistic about expectations – what can you achieve in a month, two months, six months
- Be kind to yourself and to your students – lead with care and empathy

Visit the CTLR website for resources and support for moving your courses online