

**Connect, React, and Repeat:
Some pedagogical techniques in the online learning environment**

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Course Showcased

General education; skills-based; diverse student body; accelerated; asynchronous in format

- 2015: 50 students

- 2019: 150 students with a teaching team to grade the added 100 students

- applications relied on within Moodle for 150 students (more limited to address academic integrity): Quizzes; [turnitin.com](https://www.turnitin.com); Zoom; Choices

- applications used outside of Moodle:

Camtasia/Techsmith, Powtoon, and Scribe for lecture-making

Steps in course design

1. Know your teaching/learning philosophies

2. Know your learning objectives

3. Design curriculum to meet above (i.e. don't include material that doesn't meet a learning objective)

4. Develop content (lecture material, tasks, assignments)

4b. I use an instructional plan/map (bird's eye view while planning) – provided as a separate document for those who want to adapt it to their courses

5. REVISIT/reflect (ideally weekly, realistically at course's end)

Connect and React relates to **communication** mechanisms

1. Make yourself available

2. Create a communication plan (e.g. a calendar that outlines when/what you communicate)

3. Embed/encourage interaction (e.g. group work; forums; etc.)

- **Course Announcements** - weekly administrative information (e.g. content released; reminders about synchronous sessions; reminders about assignment deadlines; changes in schedule, etc.).

- **Choices** (i.e. polls) - choices for date/time of impromptu synchronous study workshops; topics of interest to frame assignments; etc.

- **Formative Evaluations** – developed using ONCE (Online Course Evaluations) and link provided on Moodle

Interactive communication mechanisms

- **Discussion Forums** - both general Q & A everyone can view and private “separate groups” for student participation. Student posts receive feedback.

- **Zoom** - synchronous Q & A, weekly

- Zoom - office appointments (useful to use whiteboard feature for aid with skills, or screen share)

- **Email** - though I emphasize all above mechanisms prior to using email

*Reach out to absent students (e.g. students who are not engaging in weekly tasks)

Wehler, M. M. (2018, July 11). 5 ways to build community in online classrooms. In *Faculty Focus*. Retrieved from <https://www.facultyfocus.com/articles/online-education/five-ways-to-build-community-in-online-classrooms/>

Repetition is embedded into the course with two connected, **learning strategies**.

Goal: sustained, meaningful, student-centered, learning in a course with a large class size. Assignments are developed with consideration of academic integrity. These learning strategies yield a task-based approach in the course showcased.

The **spacing effect** refers to the observation that knowledge retention is enhanced when repeated study sessions are spaced apart as opposed to being crammed together (Melton, 1970; Ebbinghaus, 1967).

- The tasks/assignments in this course build on each other. A participation task or a weekly quiz are worth 2% or 5% - feedback is provided. These concepts or skills will be applied again in future assignments.

The **testing effect** refers to the finding that retrieving information from memory benefits long-term knowledge retention compared to when this type of memory retrieval is not practiced (Gates, 1917). Although testing is often used to assess student learning, it can also be used as a tool to encourage and enhance learning.

- Practices quizzes before graded quizzes – no grades, used as a checkpoint for students.

Past work has also shown that this type of retrieval practice is most beneficial when it is followed by feedback, occurs multiple times, and requires effort on the part of the student (McDaniel, Roediger & McDermott, 2007).

- A combination of spacing concepts and skills learned as well as continually offering quizzes (for practice and for grades) adhere to the spacing and testing effect online.

Ebbinghaus, H. (1967). *Memory: A contribution to experimental psychology* (H. A. Ruger & C. E. Bussenius, Trans.). New York: Dover. (Original work published 1885).

Gates, A.I. (1917). Recitation as a factor in memorizing. *Archives of Psychology*, 40,1-104.

Melton, A. W. (1970). The situation with respect to the spacing of repetitions and memory. *Journal of Verbal Learning and Verbal Behavior*, 9, 596-606.

McDaniel, M.A., Roediger, H.L., & McDermott, K.B. (2007). Generalizing test-enhanced learning from the laboratory to the classroom. *Psychonomic Bulletin & Review*, 14, 200-206.