

**Taking highly interactive classes online:
Learning from an unplanned experiment in synchronous distance learning.**

Proposed 60-minute session (adjustable up or down)

Abstract: The pandemic that hit in the middle of Spring semester 2020 forced a rapid migration to an on-line learning environment. While the abrupt transition was challenging for all kinds of classes, it posed special challenges for highly interactive teaching modes. The proposed session is designed to harness participants' experiences to identify challenges and potential solutions to problems encountered in this unplanned experiment. Following a brief introduction, participants will join one of 4 breakout rooms to focus on a specific aspect of online teaching challenges and opportunities. Using a rapid-capture technique, participants will identify key challenges for their chosen topic, identify techniques they have used, experiments they have tried (including failures), and key unresolved challenges. The session will conclude with a report from each group and a final discussion on how we as a learning community can ensure that our new-found techniques are theoretically sound.

Introduction: The Covid 19 pandemic that hit in the middle of Spring semester 2020 forced a rapid migration from face-to-face classes to an all on-line learning environment, whether we were ready or not. For many of us, this sudden experience with distance learning was our first. We had simultaneously to learn to teach in a new environment, manage students' expectations and morale, maintain continuity of the learning experience, and prepare students to apply what they learned in subsequent classes. As we prepare for the possibility of continued quarantined learning, we need as a community of educators to rapidly assemble what we know, what we need to learn, and ways to make the learning environment more effective for us all.

While the rapid migration was challenging for all kinds of classes, it posed special challenges for highly interactive teaching modes, such as problem-based learning. While face-to-face classrooms allow us to disperse to breakout groups and reconvene with relative ease, and to adjust learning tasks on the fly if necessary, these basic activities are more challenging in an online environment. In particular, the online environment requires processes that allow teams to develop their ability to facilitate discussions for themselves with only intermittent help from the instructor.

These challenges were heightened by students' unequal access to technology in the quarantine period. Techniques that worked well for students connecting in by computer with strong wifi signal often worked less well or not at all with students logging in through cell phones and intermittent signal. As a community we need to develop tools that work for all of our students, and participants may have techniques to share based on their own learning this Spring.

The proposed session builds on the session leader's 25 years of experience teaching highly interactive classes at undergraduate, graduate and executive levels, as well as conducting training programs in industry. The session is designed to harness participants' experience and

skill to identify challenges and potential solutions to problems encountered in this unplanned experiment.

Theoretical foundations:

The foundations for this session are rooted in a series of books written by teachers and corporate trainers that focus on active learning modes and designing to build understanding. One effect of the rapid transformation from face-to-face to distance learning has been a reliance on assumptions and experience from one set of pedagogical traditions in an environment in which many of the assumptions and tools may not fit.

One goal for the session will be an attempt to help participants rooted in this practice-based approach connect with more recent pedagogical research focused on distance learning.

The following list of resources reflects the proposer's long experience with face-to-face learning and great inexperience with distance learning.

Bowman, S.L. (2008), Training from the Back of the Room!

Dirksen, J. (2012). Design for how people learn. Berkeley, CA: New Riders.

Fink, L.D. (2013). Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses. Jossey-Bass: Wiley. ISBN: 978-1-118-12425-3

Stolovitch, Harold D. (2002). Telling ain't training. Alexandria, VA : Silver Spring, Md. :ASTD ; ISPI,

Wiggins, G and J. McTighe, (2008). Understanding By Design

Exercise Overview: The session is designed with a dual purpose. First, it allows participants to experience a few simple tools that allow teams to explore and process ideas in a collaborative on-line space. Second, it provides an opportunity to identify challenges participants encountered during the unexpected transition to online teaching, and techniques they adopted to rebuild and maintain momentum in the learning process for their students.

The heart of the session is a small group exercise in which participants capture and then prioritize key issues they encountered and techniques they tried (both successful and unsuccessful experiments). Following the small group discussion, participants will return to a full group discussion designed to identify a priority list of techniques to adopt and refine.

Session Description:

1. (10 minutes) The introduction will identify 4 categories of problems and provide a brief example of each.

2. (25 minutes) The session will then invite participants to engage in an online discussion of one of the four topics, in a structured break out room exercise. Proposed breakout room topics will include:
 - A. Design of short “stage-setting” lectures to enable effective small group work
 - B. Design of collaborative assignments for an online environment and facilitating multiple group discussions simultaneously
 - C. Processes for reconvening and processing following small group exercises, and
 - D. Design and evaluation of new approaches to collaborative presentations

Using techniques adapted this semester, the group will meet in the online breakout rooms and do a rapid-capture approach to identify both problems and solutions participants encountered in their own teaching this spring*. Using brainstorming techniques from design thinking and similar classes, participants will cluster and then prioritize topics for which our teaching and learning community can design or adapt effective techniques.

3. (15 minutes) Following the small group exercise, the group will reconvene to share insights and conclude by developing a high priority list of techniques and practices to develop or refine. The output of the session will be a rapidly compiled and quickly prioritized list of:
 - A. Problems our community needs help with in adapting quickly to online teaching and learning environment.
 - B. Experiments and practices that participants have used (including learnings from failed experiments).
4. (10 minutes) The session will conclude with a brief discussion about how to make sure that our migration to new pedagogical techniques is theoretically sound.
5. Following the session, participants will receive a prioritized list of needs identified during the session and a list of suggested resources. Participants will also be invited to help assemble a “cook book” of techniques for making interactive teaching in an online environment more effective for students and less stressful for instructors.

* As an example, a common framework for brainstorming in face to face classes involves generating sticky notes, clustering and labelling them, and then prioritizing key clusters. The sudden move to online classrooms made that difficult. Although electronic versions of sticky notes are available, access to these tools may be uneven (particularly for students participating through cell phones instead of computers), and learning curve problems may focus the team’s attention on the tool rather than the learning exercise. Several experiments demonstrated that brainstorming by typing simultaneously into a shared document is a dynamic (and cost-effective) approach that can work with groups of at least 25 participants!