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Evidence-based teaching practices in online courses: The end of a lone-instructor model

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Abstract

Participants in our Winter 2020 graduate course on hybrid pedagogies held roles of both student and instructor. This placed them in an apt position to evaluate the strengths of and areas for improvement in technology-supported teaching. At the end of the term we asked them what instructors of online courses should focus their efforts on. Their responses emphasized community building. In this paper we examine building a teaching community as a step toward modeling and fostering a learning community in online courses.

1 Introduction: Pedagogical powers of graduate instructors

Teaching technologies are enticing. It is easy to get carried away and let them take over the course design. To not let the cart pull the horse, at the University of Washington's Center for Teaching and Learning, we introduce teaching technologies as tools in the service of learning goals. In faculty workshops we combine information on evidence-based practices with activities through which participants brainstorm and select strategies that meet specific learning goals, play to their strengths, and can be tailored to the context of their classes.

For graduate instructors we offer a course, *Hybrid Pedagogies: Using Technology in Teaching*. In Winter 2020 (January-March), the authors designed the course to combine theories of evidence-based pedagogy with the practice of implementing technology in teaching. The goals of the course were (a) to examine multiple ways to use technology to support learning goals in higher-education courses, and (b) to identify and explore areas of online teaching and using technology in teaching where there are gaps in current knowledge.

We were keenly aware that our students had a unique perspective on teaching technologies and online learning spaces: as graduate students and graduate instructors—some of them teaching their own classes, and some working as teaching assistants—they stood with one foot each in teaching and in learning. Participating in a course that combined face-to-face with online teaching provided them with an opportunity to evaluate emerging pedagogical approaches and detect areas that hold potential for growth when teaching with technology and online.

2 Course structure: Technology and evidence-based teaching practices

Three elements of the class structure supported the two main learning goals: the hybrid structure of the course, weekly learning and practice cycles, and the final project.

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2.1 The hybrid course structure

During the ten-week-long term, we met five times in a technology-enhanced active-learning classroom. One week (two-thirds into the quarter) was entirely asynchronous. The class met online four times, via Zoom.

2.2 Weekly learning and practice cycles

The format of each class followed this pattern: theory → practice → reflection → implementation → assessment[3]. The course was structured around a weekly flipped-classroom cycle:

1. *Homework 1: Read and Respond*: Examine the research behind an aspect of pedagogy by completing assigned readings with the aid of a reading guide. Then, reflect on the pedagogy by completing an assignment, typically a reflective short-answer essay or a post on a discussion board.
2. *Homework 2: Tinker with Tech*: Explore 2-3 assigned teaching technologies to support that aspect of pedagogy (students are given existing documentation and resources to learn on their own). Then, put these technologies into practice through implementation tasks.
3. Instructors have two days to go over the homework, discuss it with each other, provide feedback, and create anonymized summaries to be shared in class.
4. During class sessions, in small groups and then as a whole class, students brainstorm the outcomes of their reflections and workshop how to assess the effectiveness of available teaching technologies and make informed choices for tailoring them to their teaching contexts.

2.3 The final project

To solidify mastery of teaching technologies in the context of their own disciplines, for the final project students applied their choice of elements from the class to create a technology-supported module they could use in their teaching.

3 Survey: Graduate student-instructors' responses

At the end of the course, we asked students what using technology in teaching means for teaching and pedagogy in general. One of the open-ended questions we asked in an anonymous survey focused on online teaching:

> *Where should educators focus their efforts to make the most impact for successful online classes (for students **and** teachers)?*

A strong theme in the responses was *instructor presence and interaction*. It did not, however, stand alone in responses, but was connected to other aspects of the class, indicating that instructors should focus on instructor presence and interaction to achieve the following goals:

[3] Pedagogical topics included goals-focused course design (adapted from backwards course design), active learning, flipping the classroom, engaging students synchronously and asynchronously, inclusive teaching, accessibility and universal design, discussion activities and discussion boards, formative feedback, and summative feedback and assessment. Teaching technologies included learning management systems (Canvas), classroom response systems (Poll Everywhere, Zoom polling), video and lecture capture (Panopto), video conferencing (Zoom), collaborative documents (Google docs), annotation software (Hypothes.is), and sharing and discussion (Canvas discussion boards, Slack, Padlet).

- Make students feel a part of a community
- Provide motivation by "being present" both professionally and personally
- Support learning goals, such as through robust and timely feedback
- Model behaviors, engagement, skills, and ways of thinking
- Communicate and sustain clear expectations
- Shape the online space so it feels like an inclusive classroom

4 Analysis: Community-building in online courses

The responses to the survey question surprised us. The ten weeks of the course centered around pedagogy and technology, and in the end-of-quarter course evaluations our students indicated that they felt empowered by the possibilities offered by both. And yet, in response to this survey question, they prioritized the emotional and social aspects of teaching over technology and other aspects of pedagogy.

Promoting human presence and interaction features prominently in multiple theoretical models of teaching and learning[4]. Our students' responses appear to confirm the common thread running through those models: the instructor's engagement on the emotional and social level facilitates student learning by mediating the class. Various aspects of instructor presence and interaction that our students describe comport with and flesh out this mediating function, indicating that the nature of instructor presence and interaction in online courses can be described as *community building*.

Community building, however, often tends to fall by the wayside in course design and implementation. In our class, we dedicated a significant amount of time to forming a learning community, but the focus was still on building knowledge and skills around pedagogy and technology. So, the responses to the survey demanded attention and raised two questions for us. First, if the emphasis on community-building was affected by the students' experience in our class, was the experience more of a positive one (to be modeled) or a negative one (to be addressed and ameliorated)? In the student course evaluations, feedback leaned decidedly toward the former, leading us to the second question: what particular teaching strategies worked in our course that can be reproduced in and tailored to other courses and contexts?

5 Discussion

The interaction we created in the class is what our students identified as a key for online instructors to focus on. We asked ourselves what strategies we used to build instructor presence and interaction. We concluded that the most prominent contributor to building an effective learning community with and for our students was that, as instructors, we first created a teaching community of two. It included the following elements:

1. Planning collaboration: brainstorm learning goals and outline components of the course.

[4] Of the seven principles of learning that Susan Ambrose et al. identify, community building corresponds to the sixth: creating an inclusive class climate that takes into account emotional and social aspects of learning (Ambrose, 2010). In Donald Wulff's alignment model, it maps onto two of the four elements of effective teaching: rapport and interaction (Wulff, 2005). In the Community of Inquiry model, it matches one of the three presences that constitute the model: the social presence, which is found to mediate the other two (Garrison, Anderson, & Archer, 1999; Garrison, Anderson, & Archer, 2010; Shea, & Bidjerano, 2009; Swan, Garrison, & Richardson, 2009). And in Bloom's taxonomy of learning, it constitutes a domain of its own: even though we now usually associate Bloom's taxonomy with the six levels of the cognitive domain, the taxonomy comprises two other domains: affective and psychomotor, the former of which accounts for how feelings affect learning and how learning affects the student, and mediates between the cognitive and psychomotor domains (Bloom, 1956; Krathwohl, Bloom, & Masia, 1964; Anderson & Krathwohl, 2001; Eiss & Harbeck, 1969).

2. Implementation collaboration: ask pointed questions of each other, and play out different scenarios to finalize each activity, assignment, and module. One of us often took on the role of an educational developer consulting with the "main instructor".
3. Reflection throughout the term: after each sequence, review student work and provide feedback to sustain students' motivation and engagement and allow them to shape the course dynamic.
4. Modeling of collaborative interaction: co-create community norms with students and revisit expectations and communication during small-group and full-class discussions.

The first three of these are discussed in the literature on team-teaching[5]. But we also continuously collaborated both with each other and with students (point 4), thus not only fostering but participating in and modeling community building.

Having multiple instructors, though, is not a precondition to build a teaching community. In cases where team-teaching is not an option and there is only one instructor, they can involve a colleague or an educational developer. Partnering with someone who can ask incisive questions is key. Details of this setup may vary, but our experience shows that to model and foster a (learning) community in a class, instructors can benefit from forming their own (teaching) community, even when teaching as a sole instructor.

Whether the emphasis on building a learning community is specific to online classes or more pronounced in online environments could not be parsed from the responses we collected[6]. The next stage of the project is to interview our students about differences between in-person and online settings so as to identify how the online environment and the use of technology shape their teaching practices and teacher identity.

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[5] For different elements and formats of team-teaching in higher education, its benefits for students and instructors, and challenges for instructors (including when assessing its effects), see Dugan & Letterman, 2008; Eisen & Tisdell, 2000; Hatch & Rich, 2005; Lock et al., 2017; Plank, 2014.

[6] Neither could we assess the impact of the COVID-19 pandemic at the end of the term, when all instruction unexpectedly shifted online. Students and instructors having no choice in the mode of delivery and little time to prepare and adjust possibly brought to surface and/or amplified the need for community building.

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