

Moving Applied Learning Online: Creating Engaged and Inclusive Spaces

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Abstract

This article examines efforts to integrate Technology Enhanced Learning (TEL) with meaningful applied learning experiences to serve equitably University of North Carolina Wilmington (UNCW) students through inclusive engagement platforms. Drawing from a UNCW campus-wide applied learning initiative, we analyze course projects and activities that have utilized applied learning in online and/or hybrid courses from three fields of study: Criminology, Curriculum and Instruction, and Higher Education. Through a discussion of assessment and evaluation measures we draw conclusions tied to the augmentation of applied learning via TEL, as well as online-specific challenges to teaching and student engagement, such as dispersed groups and team formation, and coordination with external stakeholders. Finally, we offer transferable suggested courses of action to further the integration of applied and technologically enhanced learning modalities.

Keywords: Applied learning; community engagement; student learning; Flipped Classroom pedagogy

Introduction

Getting students engaged in their own learning can be a challenge in any classroom and the nature of an online learning environment often adds new trials to an already trying task (Rick & Guzdial, 2006). A flipped classroom where applied learning activities require students to directly engage in student-centered, problem-based activities is one effective practice that instructors can use to get students more actively involved in their own learning (Fulton, 2012; McLaughlin et al., 2014). In an online course held in a virtual class space, however, the very concept of flipping a class and letting students lead discussions or activities can seem daunting, impractical, or even impossible.

A lack of classroom group identity and cohesion, the difficulties of incorporating student-led activities into the structure of your online course, and greater uncertainty about individual participation and team dynamics can all plague attempts to flip an online classroom (Bowen, 2012; Major 2015; Pentland 2012). VanDusen (1997) proposed that technology can actually enhance students' learning by allowing heterogeneous groupings, problem-based activities, and collaboration, among other positive effects. Indeed, faculty members in multiple disciplines have demonstrated the value of utilizing applied learning initiatives in online and hybrid courses (e.g., Fulton, 2012; McLaughlin et al., 2014).

In this article, we share three case studies from online and hybrid courses taught at the University of North Carolina Wilmington (UNCW) that have successfully integrated applied learning. Each of these courses relied upon an institutionally-supported applied learning framework to structure the course activities and evaluation methods. In addition to providing details about the flipped strategies used in these courses, we also examine the unique challenges, obstacles, solutions, and questions that developed as a result of the instructors' attempts to flip their online courses. Recommendations for integrating engaged, applied learning practices into online learning are also provided.

Literature Review

Scholarship of Application

Our use of case studies to examine applied learning initiatives in online learning is an example of one sub-set of the scholarship of engagement: scholarship of application (Boyer 1990, 1996). The scholarship of application involves engagement in problems that affect individuals, institutions, and society, and asks questions such as: "How can knowledge be responsibly applied to consequential problems? How can it be relevant to society?" (Boyer, 1990). Each of the case studies included below required students to engage in both the examination of critical issues within their discipline and the development of artifacts that address those issues.

Technology is one current issue that cuts across all disciplines in higher education. Boyer (1996) succinctly identified the historical points that helped significantly shape higher education—at least up to 1996. Had he written his work now, undoubtedly the movement to online and hybrid learning would have entered his timeline. Boyer's (1996) statement imploring scholarship on application is perhaps even more relevant today than when written nearly 20 years ago: "This reminder that the work of the academy ultimately must be directed toward larger, more humane ends brings me to this conclusion: I'm convinced that in the century ahead, higher education in this country has an urgent obligation to become more vigorously engaged in the issues of our day, just as the land grant colleges helped farmers and technicians a century ago" (p. 28). Technology is the trade of our time, and scholars should to seek to understand its effects and constant evolution as part of a civic effort to engage greater numbers of previously underserved populations.

Applied Learning and Technology

Indeed, almost 20 years ago VanDusen (1997) emphasized that "in a student-centered system, faculty need to reach beyond traditional methods and begin to explore strategies that respond to the individual needs of students" (p. 36). Applied learning strategies that require active engagement, critical reflection, and collaboration with peers and other stakeholders are especially meaningful to utilize in online courses, because they help compensate for the physical and virtual distances that exist between students and faculty. VanDusen (1997) theorized that applied learning initiatives can be individualized to allow students to develop projects that match available resources. Additionally, students can adapt the pace of their learning and learn from students in different contexts that add to the classroom diversity and provide more meaningful learning outcomes for all students (VanDusen, 1997).

In practice, however, some researchers have found that students resist collaboration in applied activities that utilized technology (Rick & Guzdial, 2006). The authors concluded that students' perceptions of competition for grades, class environments that discouraged questions, and faculty attitudes contributed to resistance to collaboration online, particularly in STEM courses (Rick & Guzdial, 2006).

Other scholars have found the negative perceptions of online learning are one of the most difficult barriers to overcome when flipping a class. For example, McLaughlin et al. (2014) found significant changes in students' perceptions about a flipped learning environment with approximately 72% preferring a traditional format at the start of the course and over 80% preferring a flipped format at the conclusion of the course. The authors concluded that students need to learn about how to engage in this type of learning in order to be comfortable engaging with it—a perspective that has been shown to begin in secondary education. Fulton (2012) examined the integration of applied learning and digital tools at a Minnesota high school. While student evaluations revealed significant gains in learning and development over traditional methods of instruction, teachers reported the need to learn about new technologies while also training students for new ways of engaging within and beyond the classroom (Fulton). However, examples of challenges abound: for example, when parents report a stress on home resources (computer and internet availability) as one negative.

Applied Learning at UNCW

The University of North Carolina Wilmington is entering the third year of a campus-wide applied learning program called Experiencing Transformative Education through Applied Learning (ETEAL). More specifically, ETEAL is UNCW's Quality Enhancement Plan, mandated by our accrediting body: the Southern Association of Colleges and Schools Commission on Colleges (SACS COC). Building on UNCW's tradition of faculty-mentored student research, ETEAL supports faculty, staff, and students as they collaborate in applied learning experiences that seek to engage effectively with a 21st-century global knowledge economy. As such, through ETEAL we aim to improve student learning in three crucial areas: critical thinking, inquiry, and thoughtful expression.

Since its inception, ETEAL has made a conscious effort—even against vocal critics—to avoid a binary opposition in which face-to-face instruction is considered out of hand superior to online methods. Rather, in our evaluation of applications for funding, the use of technology to enhance learning is weighed to the extent that it supports the delivery of desired student learning outcomes. Additionally, UNCW is a committed and active member institution of the Association of American Colleges and Universities (AAC&U) and has stepped up support for TEL efforts align with “ensuring that Essential Learning Outcomes are addressed and high-impact practices are incorporated across all programs, including general education, the majors, *digital learning platforms*, and co-curricular or community-based programs (AAC&U 2015, our emphasis). In other words, a commitment to inclusive excellence means that a number of support mechanisms support the implementation of high-impact student engagement techniques, such as the flipped classroom model, in a technologically enhanced learning environment. Whereas, traditional, synchronous, face-to-face delivery models can often exclude participation from a wider sector of the population, online, hybrid models that are infused with applied learning modalities can provide both quality and access. Understanding that shared governance culture at UNCW remains vigilant against online delivery models where best practices in applied learning are sacrificed to obtain short-term gains in efficiencies and lower “price-per-unit” labor costs, it's crucial that ETEAL foster universal assessment and evaluation practices for funded projects, independent of face-to-face, fully online, hybrid or other delivery models.

Guidelines for assessment of applied learning

Assessing student learning is always a challenge, particularly in the case of applied learning projects. Any assessment must capture not only the information that students learned but also the way in which they use and apply that information as well as the skills they have gained. In many cases, there is no valid, reliable test of a student's ability to apply skills such as stakeholder negotiation. Moreover, the diverse nature of applied learning experiences makes it difficult to craft a single assessment that will capture student learning in all projects or across all disciplines.

In order to overcome these challenges, then, we use critical reflection as our primary form of assessment for applied learning experiences. Critical reflection not only provides clear evidence and demonstration of student competencies, it also serves as an effective and easily customizable form of assessment that can be used in multiple disciplines (Ash & Clayton 2004; Ash & Clayton 2005). At the start of each applied learning experience students are asked to articulate their intentions and learning goals for the experience. At the end of the project they reflect critically on the challenges they faced, the skills they have acquired, the knowledge they gained and applied to problems they faced, and the impact their work has had on their own education and on their discipline at large. Using an adapted form of the AAC&U Foundations for Lifelong Learning and Integrative Learning VALUE rubrics (Association of American Colleges & Universities [AAC&U], 2010), we then examine each reflection to assess a student's ability to articulate their intentions, their application of knowledge, their evaluation of the project's impact, and their ability to critical reflect.

Case Examples: Applied Learning in Online and Hybrid Courses*Case #1: Introduction to Criminal Justice (Dr. Christina Lanier)*

Course description

Introduction to Criminal Justice (CRM 105) is embedded within the sociology and criminology department and is a requirement for all criminology majors and minors. The course provides an overview of the criminal justice system in United States as well as the criminal laws that exist within the system. CRM 105 also examines the theoretical explanations for crime and victimization. There are six student learning outcomes for the course:

1. Understand the functions and purposes of the U.S. criminal justice system, including courts, corrections and police.
2. Understand the theoretical explanations for crime and victimization trends.
3. Understand the development and influence of law on the criminal justice system and society as a whole.
4. Analyze and synthesize information to describe and critically assess the criminal justice system.
5. Develop the ability to engage in critical thinking and reading.
6. Understand the development of social policies related to the criminal justice system.

Generally, CRM 105 students consist of all class levels (e.g., freshman, sophomore, junior and seniors) and a variety of majors across the University. The course is taught both face-to-face and online with approximately 30-35 students per section. The initiative described below took place in an online CRM 105.

Flipped initiatives

Upon receiving a grant from the UNCW ETEAL Supported Pedagogy Initiative, I, along with a colleague from the Office of e-Learning at UNCW, implemented an applied learning project in my online CRM 105 course. The project, “Criminal Justice in Action,” was a semester-long assignment embedded in the course that provided students with firsthand knowledge of the criminal justice system and a chance to see the “system in action.” While many students are exposed to the system at some point in their life either personally or through the media, very few have a grasp on the complexity of the system. Moreover, a limited number have the opportunity to witness the “system at work.” This experiential learning experience sought to do just that by requiring students to conduct field research by visiting a criminal justice context (e.g., a jail, courthouse, police ride-a-long, re-entry program, etc.) to conduct an in-depth observation of the location.

Prior to the initiation of the project, it was important to prepare the students in terms of both the logistics of the project as well as the pedagogical expectations. For many students, this may have been their first applied learning experience. Two approaches were utilized to accomplish this goal. First, given the challenges associated with online courses with regard to conveying information to students, I developed a Jing! video to layout the components of the project and meticulously walked through each step. Second, students were asked to write an essay outlining their expectations and intentions for the project prior to their observations. This allowed the students to think about why they chose their specific location, their expectations of what they may observe, and the rationale for those expectations. This also tied to the first student learning outcome for ETEAL, “...articulate expectations, the purpose, and/or the goals of the experience...”

The next phase of the project was the field research (i.e., the observation), which allowed students to “observe life in its natural habitat” (Maxfield & Babbie, 2008, p. 282). About half of the students chose to participate in a police ride-a-long while the other half chose to observe a courtroom. Once the observations were complete, students were paired up via email for the team final project. The final presentation required students to synthesize the findings from their observations and present their combined findings integrating course material. Thus, developing a project that was not only reflective of their personal experience but also situated within the larger knowledge base of the criminal justice system, the objective of the second student-learning outcome for ETEAL. Students presented their results as an audio/visual presentation (e.g., Prezi, PowerPoint, iMovie), a letter to the editor or as a blog post.

Lastly, a major component of the applied learning experience is the student’s ability to critically reflect on the overall experience. As stated in ETEAL’s student learning outcome #3, students will be able to communicate the impact or significance on their personal educational development and on others in the profession or in the field at the conclusion of the experience. To this end, students were asked to submit a critical reflection essay regarding their experience with the project.

Assessment and evaluation methods

As noted previously, all ETEAL applied learning projects are assessed based on three student learning outcomes: intention, application of knowledge and critical reflection. The various components of the project are focused on the assessment of these student learning outcomes. In addition, the Service Learning Benefit scale (SELEB) was utilized to evaluate the effectiveness of the project. There are two versions of the scale with one scale consisting of “...12 items representing four underlying dimensions-

practical skills, interpersonal skills, citizenship, and personal responsibility” (Toncar et al., 2006, 223). This scale asks students how important each of the 12 items are in their educational experience and was administered at the start of the course to gauge student perceptions of these areas. The second scale, administered at the conclusion of the course, contained 20 items and related directly to the project asking students if each of the items contributed to their educational experience.

Outcomes

Effects on teaching and pedagogy

A primary goal in my teaching is to encourage students to think beyond the textbook and critically assess the information provided. Integrating this applied learning project into my online CRM 105 course helped to meet and to some degree, exceed this goal. By placing students into a criminal justice context, they were able to critically assess how the textbook did (or did not) accurately reflect their experience.

As with any new project, there were some difficulties encountered that may have been amplified with the online course format. Most notably was the facilitation of assigning team members virtually. While most students reported no issues with communication, 2-3 teams did report this as an obstacle to completing the final presentation. Second, in contrast to face-to-face courses where reminders regarding due dates and such can be given in person, this type of information was distributed via email and course announcements with the expectation that students were indeed reading these reminders.

Effects on student learning

The overarching goal of the “Criminal Justice in Action” applied learning project was to provide students with an opportunity to move beyond the textbook and experience the criminal justice system at work. Based on the critical reflections essays utilized to assess SLO#3, students reported a positive experience with the applied learning project. As noted by one student, “[T]his project has influenced me to participate more in observations and actual experience rather than reading and test taking.” Another stated, “[I] think that it’s also a positive influence on my educational development because it brought a real-world aspect to my familiarity that I had not had before.” A few students noted that their uncertainty about what to expect with regard to their observations as well as with a group project in an online course.

Overall, the applied learning project was successful in meeting the student learning outcomes assessed. As one student shared, “[B]ased on my experiences with the Sheriff’s Office this semester, coupled with my collaborative experiences with my assignment partner for this project, I realized how much more my views about the criminal justice system were inappropriately influenced by media messages than by sound theories about human behavior and the causes of crime.”

Case #2: Technology in Higher Education (Dr. James DeVita)

Course description

Technology in Higher Education (EDL 556) is a required course for students enrolled in the Higher Education concentration of the M.Ed. in Education. In Spring 2014, I integrated an ETEAL-funded project into the course design in order to encourage direct application of concepts into practice. The course is framed as a critical survey of social media, mobile devices and applications used by students and professionals in postsecondary education contexts. Challenges and benefits in the use of

technology, as well as, wanted and unwanted consequences are examined. Learning outcomes are intended to provide students with the ability to:

1. Demonstrate understanding of the ways in which technologies are utilized in higher education;
2. Discuss social and ethical issues associated with technologies in contemporary higher education;
3. Identify and develop innovative ways to utilize technologies across areas of higher education;
4. Reflect upon the ways in which technology may affect their professional development and engagement as well as their role as a leader in higher education.

Students who complete this course are either current or aspiring administrators at postsecondary institutions. Approximately one-third of the students are professionals at UNCW or community colleges in the area who are able to connect their work in the course directly to their area of employment. The other students have typically recently completed their undergraduate degrees and hold assistantship and/or internship positions on UNCW's campus. Although most students are located with the local region, all courses in Educational Leadership are taught in hybrid format with 5-7 face-to-face meetings each semester. The section of Technology in Higher Education that is the focus of this discussion was taught in Spring 2014 with alternating online (8) and face-to-face (7) class sessions. A total of 22 students completed the course that semester.

Flipped initiatives

MOOC participation and critical reflection

A collaborative effort between the Higher Education graduate program at Colorado State University and an international professional organization (NASPA: Student Affairs Administrators in Higher Education) provided a Massive Open Online Course (MOOC) focused on student affairs administration, a popular subfield of Higher Education. Fortuitously, the MOOC's timeline fell within the semester in which I was teaching EDL 556: Technology in Higher Education. I saw this as an opportunity to provide students' with first-hand exposure to a hot topic related to technology in higher education: the MOOC (Mangan, 2012). Students were required to complete two associated activities: (a) to engage in all MOOC activities offered through CSU Online, and (b) participate in small group reflections and discussions within our online course modules. MOOC participation extended across 5 weeks of the course and reflections revealed markedly different perspectives among students.

Technology consultation project (TCP)

The technology consultation project (TCP) required students to work in small groups to assist in the development of a technological support or enhancement for a campus or local organization. The project was designed with the intention of promoting partnerships with non-academic entities both on- and off-campus that mutually benefit students' learning and organizations' needs. Teaching assistants, selected from students previously enrolled in the course, assisted small groups of students with their work on the TCP. The TCP required students to complete each of the following activities within their small groups to understand the complete process of developing useful and effective technological enhancements for their respective stakeholder groups:

Assessment →	Plan →	Implementation →	Evaluation
Students are required to assess the tech climate and review peer organizations & institutions to determine plan for project work.	Students will prepare an overall plan for developing tech, while also developing 1-page action plans for each technology implemented.	Based on organization priorities, students will implement selected technologies. Plans for additional technologies will also be provided.	Multiple methods of evaluating students' work with the organization will be conducted including meetings with org., students, and TAs.

Figure 1: Technology consultation project group activities

Through relationships with various campus and organization stakeholders, I identified a set of projects with which students could assist during the Spring 2014 semester. Students ranked their preferences from the list below so that they could be grouped based on area of interest:

1. Website and resource development for an academic program;
2. Development of online writing modules for graduate students;
3. Preparation of an online journal for a state research organization;
4. Development of online learning modules for tutor training for academic support unit;
5. Development of online learning modules for First-Year seminar courses; and
6. Website and resource development for a local chapter of national organization.

In order to frame the process for all project stakeholders (students, teaching assistants, and organization leaders), all groups were expected to complete all activities described in table 1 below:

Table 1: TCP group activity schedule

<i>TCP Activity</i>	<i>Description</i>	<i>Due By</i>
Initial Meeting	Group meeting with project stakeholders & group TA.	Week 1
Follow-up Meeting	Group meeting with course instructor & group TA.	Week 2
Peer Comparison Report	Report on results of assessment and peer comparison.	Week 4
Action Plans 1-4	Development of 1-page action plans that outline tech deliverables for organization.	Week 7
2 nd Consultation Meeting	Group meeting with project stakeholders & group TA; share action plans, receive feedback.	Week 9
Deliverables 1 & 2	Group implements 2 of the 4 deliverables outlined in action plans.	Week 11
Deliverables 3 & 4	Group implements 2 of the 4 deliverables outlined in action plans.	Week 13
Final Report & Presentation	Group delivers final report of tech deliverables to stakeholders.	Week 15

Assessment and evaluation

Since this was an ETEAL-funded project, I was required to collect and submit data for assessment of the applied activities in the course. There were multiple methods for evaluating the effectiveness of the project in enhancing students' learning about and development in technology in higher education. Discussion boards during online meetings of the course required critical reflection on students' goals for the course, and how they developed in terms of comfort with technology, among other topics.

These reflections were one source of data I reviewed to examine student learning and also counted as students' participation grade in online modules. A second form of evaluation was the use inclusion of a self-assessment that asked students to reflect on their engagement in course activities (e.g., MOOC, TCP), the skills and competencies they developed, and the relationship between course activities and their learning. The self-assessment also required students to rate their engagement on a scale from 1-10 that serves as their course participation grade (10 points or 10% of their overall grade).

The final method used to collect information about students' learning and development in the course was a pre-post survey I aligned with professional competencies in the field of higher education and learning outcomes of the course previously discussed. The survey was administered during the first and final weeks of the course, respectively, and was completed by all students in the course. The survey included several open-ended questions that asked students to reflect on the relationship between their learning and anticipated (pre-survey) or actual (post-survey) challenges and successes associated with engagement on the TCP. Additionally, multiple Likert scale questions required students to rate their experience and competency in the professional competencies aligned with the course outcomes: Advising & Helping, Assessment, Evaluation & Research, Human & Organizational Resource Management (which includes technology) and Leadership. These four competencies are pulled directly from the ACPA/NASPA Core Competencies for Higher Education/Student Affairs professionals (ACPA/NASPA, 2010).

Outcomes

Effects on teaching and pedagogy

Although students focused primarily on issues related to working collaboratively as part of a team and limited exposure to the stakeholders as a significant challenge in the course, the collaborative work also yielded more well developed and creative final projects. One student discussed the issues associated with group work: "Some of the biggest challenges of my groups TCP project were that we had such a big group and at times it seemed like there was not enough work for everyone to do." Similarly, the project stakeholders talked about wanting more face-time and exposure to the students working on the project, above and beyond the four required meetings. One of the stressors associated with this project was the need to balance the demands of the stakeholders with an appropriate amount of time and support for students to actually do the work that would make additional meetings beneficial. In contrast, some students showed positive growth from their collaborative work. As one stated: "Overall I think we all worked very well together. We seem to have a natural sense of when we could function on-line and when we needed to meet in person. We were flexible in our meeting times and work with one another's schedules. We were able to meet the needs of the stake holders. . . I also learned how much more is able to be accomplished working with people on a project towards a common goal."

A meaningful success of the project was that each student participated in the completion of a practical deliverable that they could see utilized in practice and that enhanced their professional portfolio. One student wrote: "A personal success was learning about the structure of the TCP project. I had never worked work direct terms like 'action plans', 'deliverables' or have ever used 'SWOT's. I enjoyed the layout of our expectations and being pushed to do the *Webex* meeting and the *Jing*. As scary as they were to do at the time, it is so valuable to be pushed that way." The use of technology appeared to "raise the stakes" for students by forcing them to learn about both content and new methods for locating, interpreting, and representing knowledge.

Effects on student learning

I was excited to see that students “got it” by the end of the course. They understood and appreciated that learning about content is important and valuable, but that the project really exposed them to a process and way of engaging with others and material that is beneficial to their identity as a professional. Students listed a number of specific skills and competencies that they believed would benefit them as they transition to professionals in the field of higher education. Some of the skills were directly connected to the content of the course, including comfort with various forms of technology (*Youtube, Jing*), website design and development), while other skills were based on the ways in which they engaged in the major project: group work, playing on a team, processing and responding to feedback, and working with external stakeholders to design and implement a product/outcome. One student summarized what she learned in this way: “I got to apply what I have been learning over the last year in class to a real project. I was able to experience first-hand these competencies. I learned how to take an idea and make it a reality with a strong group of people. I really learned about dividing tasks for a greater good to be accomplished.”

Overall, all students expressed some specific skill development as a direct result of their engagement in the TCP. Many expressed that the project itself exposed them to a side of work in higher education that they did not anticipate nor had they experienced to date—even though who held professional positions already. For example, one student who is a current staff member at UNCW talked about how the project helped her learn about technology while also growing as a leader:

The nature of the project also required me to work in a team with widely varying levels of comfort with technology and project management. I think that improved my level of comfort with both leadership [and] teamwork. I enjoyed working with a stakeholder to complete the project as well, I liked the idea of being accountable for a tangible project, rather than putting something together only in theory for a grade. I found it motivating and exciting.

Case #3: EDL 690: Curriculum Planning in Postsecondary Education (Dr. Michele Parker)

Course description

Curriculum Planning in Postsecondary Education (EDL 690) is offered through the Educational Leadership department. This course covers concepts of planning curriculum and courses, establishing goals and outcomes, aligning outcomes with professional or disciplinary standards, prioritizing content, and planning for student engagement and active learning. There are eight learning outcomes for the course:

- Identify the differences between face-to-face, hybrid, blended, internet, and lab courses and which curriculum components are necessary and beneficial to each type of course.
- Use and understand “backward mapping” to establish course objectives and student learning outcomes.
- Incorporate collaborative learning in the planning, assessment, and implementation of post-secondary curricula.
- Develop practical skills in the development, delivery, and critique of courses at the post-secondary level.
- Develop and choose appropriate course materials including syllabi, pacing guides, and texts.
- Establish appropriate assessments and grading policies including formative and summative assessments, rubrics, and collaborative learning projects and use these assessments to gauge student learning and provide feedback.

- Develop skills in the organization and management of a CMS such as Blackboard and use this system to maximize teaching and learning in an online environment.
- Anticipate curriculum changes and plan for appropriate alternatives.

EDL 690 is a required course for the College Teaching Certificate and an elective for the doctoral program. The class is capped at 20 students and may include Master's students from programs across the University. The class is offered online either in a 15-week term or during a 5-week summer term. The applied learning initiative occurred in a fully online course during a 15-week [Spring] term.

Flipped initiatives

Making EDL 690 an applied learning class, which was problem-based, was inspired by the widespread support of applied learning at the institution and by Dr. Cathy Davidson, who gave the keynote speech, at the 2014 POD Conference. In that speech she mentioned the idea of turning course planning over to students, building off her work *Now You See It: How Technology and Brain Science Will Transform Schools and Business for the 21st Century* (Davidson, 2011). Weeks after the conference I contacted Dr. Davidson for more information about this innovative teaching and learning strategy and was encouraged to participate in a webinar for more information. After participating in the webinar, I was even more excited about using the Successful Co-learning model, which had been used previously in face-to-face courses. The idea of having students plan a course from beginning to end, like they would in real-life was appealing. If someone is given a course to teach how do they go about it? What should they know about curriculum planning?

While I was ecstatic about trying a new pedagogical approach I was uncertain about what this would look like and how it would turn out. However, I pushed my anxiety to the side and began the experiment of letting student have complete ownership of the course and hence their teaching and learning. Prior to the course I uploaded resources and basic information (e.g., instructor name and contact). One week before the course, I notified the students enrolled, via email, that that it would be an applied learning experience and that I was trying something new that would be an exciting teaching and learning experience for all of us. In Blackboard, they received a welcome note on the course homepage that defined applied learning and shared the inspiration for the course. Here's an excerpt from the welcome message that framed the course:

You will create a well-developed syllabus, select the course reading, plan for student engagement and active learning, develop formative and summative evaluation methods and grading rubrics, organize the course webpage (e.g., use of folders, learning modules), decide whether to use Blackboard or a different course management system (CMS), schedule office hours, determine how final grades are calculated.

Since EDL 690 was slotted to be an online course and I had chosen a fully applied learning approach, I had to tackle the course delivery issue. This became the problem-based learning aspect of the course, which corresponded with one of the secondary objectives of the course, which was for students to anticipate and plan for curriculum change in a way that promotes student learning (e.g., university closings due to inclement weather, compressed semesters such as summer sessions and alternative delivery methods such as face to face or hybrid instruction). The students immediately expressed their preference for EDL 690 to be a face-to-face course. Hence they were forced to think about how they might plan the curriculum differently given the format that was pre-established and necessitated by

external factors. Essentially, how does someone, the students in this case, implement a planned curriculum?

The students decided how to maximize teaching and learning in an online environment since this was the pre-determined course delivery mode. They were prompted to consider and decide when, how, and which technology to use (*WebEx*, *Skype*, written or video discussions). They were coached to anticipate and plan for curriculum changes that would promote student learning. Throughout the course I encouraged students to use the research-based and the scholarship of teaching and learning literature to guide their curricular choices. I would pose questions and ask them to identify potential answers by citing authors.

The course was flipped in the sense that students read course material and then engaged in pre-designed activities. Students had weekly readings from two books:

- Fink, L. D. (2013). *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses*. San Francisco: Jossey-Bass
- Lattuca, L. R. & Stark, J. S. (2009). *Shaping the College Curriculum: Academic Plans in Context, 2nd edition*. San Francisco: Jossey-Bass.

Both texts were selected by the students, as a group, after the course began. The students met virtually using *WebEx*, in which I further explained the course and they began conversations about how to proceed as a group—especially after lengthy email exchanges that did not materialize. Three weeks into the course the students designed the course syllabi, a schedule for weekly readings, and identified who would be the lead “instructor” for each module—meaning this person was responsible for identifying, posting, and responding to the designated content in Blackboard by the pre-established deadline. Everyone else was the student for that particular module. All the students were given “Instructor” privileges in the learning management system, so that they also could begin to experience this aspect of teaching and learning as well. There were 10 modules altogether.

In terms of overall preparation and structure, the Blackboard Learning Management System was used to store course materials. There were discussion boards and two *WebEx* sessions (one early in the course and one later in the course). The readings were listed about the 2nd to 3rd week in the course and students posted material for their module in advance to the module starting. The activities in each module varied by week, ranging from video discussions to mini papers. The students were constantly engaged in hands-on activities in the course. Approximately every two weeks there was an announcement or note posted in Blackboard with guidance or redirection given recent happenings in the course. Overall there was no formal preparation for the course. Most students had taken an online course prior and two Master’s students had not taken an online course prior to this one.

Discussion of activities selected and used

Students participated in weekly discussions pertaining to the course reading (25%) and activities (25%) designed by peers in the class. Additionally, each student was responsible for being the “instructor” for their pre-selected module (25%) and there was a final project (20%) and a course reflection (5%). The final project and the course reflection are detailed here for the purpose of this paper.

Final Project

The final project, determined by the students collectively, was awe-inspiring and not an assignment that I would have created on my own. It read: “the first part of the final project is to evaluate this class (EDL690) that we have created. The idea is to determine how well we did creating this course according to Fink.” The evaluation rubric is based on Fink’s three phases. Please be sure to do the following:

1. Rate each item in the rubric by placing an "X" in the appropriate box.
2. Be sure to give comments in the far right column.
3. At the bottom of the rubric, be sure to write recommendations. (If you were to teach/create this course again, what would you change? What would you keep the same?) Be sure that your recommendations are supported by Lattuca & Stark (2009) and Fink (2013).
4. Once you have evaluated the course, be sure to post your evaluation to the discussion board. Your initial post should be completed no later than 11:59 PM [Insert Date].
5. You are also expected to respond to two of your peers regarding the evaluation. Your two peer responses should be submitted no later than 11:59PM [Insert Date five days later].

Critical Reflection – Final Component

The critical reflection for the course occurred via my prompting for a WebEx session that was scheduled the final week of the course. I asked each student to create a PowerPoint slide highlighting three takeaways from the course: (a) what they learned, (b) what they want to learn as a result of the course, and (c) how they will apply their learning in the future. Each student had 5 minutes to present and discuss their slide with the class.

Assessment and evaluation methods

Due to giving the students “Instructor” privileges in Blackboard, the Grade Book could not be used to share feedback and to post grades throughout the course. Instead students were encouraged to share their “instructor” module with the instructor prior to making it visible in Blackboard. My announcements and notes were my method of letting students collectively learn how they were doing. I followed up with individually with students as necessary throughout the course based on discussion threads, emailed statements, and activities. By the end of the course once Instructor privileges had been removed from all students simultaneously, I posted grades for the various assessments that were used. In addition to the final grade, each student received type-written 1-page personalized note that highlighted individual strengths and areas for growth based on all the work submitted during the term.

Outcomes

Effects on teaching and pedagogy

There were several outcomes for me as the instructor on record. The primary outcome was learning to let go and to truly let learner-centered instruction unfold. This was a constant challenge and balancing act. When I would do more I would often find that a student had already done or was in the process of completing my intended next step. There was also ongoing negotiation of when to give feedback, to whom, and how (since all students had access to Instructor tools). The students wanted feedback yet did not have the time for 1:1 personalized scheduled sessions that would be scheduled at mutually beneficial times. This was also the first time I had ever run into the Gradebook viewing issue since this was the first time I approached a course this way. I hadn’t realized the issue until the semester was 4-5 weeks underway. In hindsight I learned that I should have had a development course shell created

for students to work in and the actual course shell set aside for grading and feedback purposes. Even now this idea seems disjointed but perhaps double monitors would have facilitated this process. Since the students evaluated the course as part of their final project they provided ample suggestions for improvement such as regular feedback, which would have been mediated by the gradebook in a separate course shell—a solution identified too late. I also learned that I should have insisted on design consistency among the modules. While it was great to give students the latitude to make their modules however they might choose, this strength also became a weakness. I should have provided more structure even though the students had almost complete ownership of the course. My biggest take away pedagogically is that all the same principles for excellent online teaching were applicable in the flipped online course—even with applied learning.

Effects on student learning

There were also several positive outcomes for student learning in the course. The students achieved the course goals, despite being frustrated with the online nature of the course and my level of involvement. Students continually surpassed my high expectations and generated rich discussions and activities that demonstrated what they were learning and how they were thinking about the content critically. The students were able to apply their knowledge readily. Through the critical reflections, students recognized their own strengths and articulated areas for growth that did not necessarily match my cohesive summary shared in the personalized note at the end of the term. Several students, intermittently, expressed working even harder in this course compared to other courses. Ideally this is because students were challenged more and the outcomes were greater. One unintended, yet beneficial outcome, was that students became familiar with Blackboard from the instructor perspective. This was a piece they felt they needed and had not had the opportunity to explore prior. The applied learning, Successful Co-learning model online experience provided ample opportunity for students to gain this unique hands-on experience, which in my instructor viewpoint, outweighed the shortcomings of this experimentally designed course.

Discussion/Recommendations

Consistent with what other scholars have concluded, we see the online course as a challenge to effectively integrate applied learning (Rick & Guzdial, 2006). On the one hand, as instructors we all struggled to identify the most effective ways to adapt our applied learning practices to an online environment. Indeed, a consistent theme was figuring out “what works.” On the other hand, I the online environment provided a unique opportunity to encourage a greater population of students to engage in applied learning within a larger context. Essentially, it removed the boundaries and restrictions of the physical classroom in a way that also challenged students to think beyond the confines of the classroom—an outcome that was hypothesized by VanDusen (1997). Thus, similar to other scholars, we saw several positive outcomes from integrating applied learning into our online courses (Fulton, 2012; McLaughlin et al., 2014).

Challenges

One challenge we encountered is the communication of clear guidelines for students. The indirect and oftentimes asynchronous nature of our online courses meant that information about the project activities and required artifacts must be framed with detailed and repeated instructions if the project is going to be successfully implemented. One strategy that we all used was to develop projects that utilized a sequential stage-based project with varying due dates.

Another challenge was the negotiation of teams for projects and activities when students were located in different spaces. One lesson learned was to start the project early by pairing students up immediately at the beginning of the semester. The opportunity to work together from the first day of class would allow students to feel more comfortable with each other and get provide with them with an opportunity to discuss work and learning styles.

The reliance on external stakeholders to support applied projects added an additional layer of challenge for some us as well as for our students. The challenge of responding directly to the needs of external stakeholders provided students with opportunities for learning and development that were tied directly to issues in practice (Boyer 1990, 1996). Where possible, the artifacts students produced were meant to benefit not only their own learning, but also the stakeholders with whom they worked (Barker, 2004). While this raised the stakes for students, it also applied additional pressures to us as instructors to provide external stakeholders with useful artifacts.

Positive Outcomes

Students in all of our courses not only learned about technology, but utilized multiple tools throughout their engagement in course and project activities. Learning these tools lead to increased comfort with technology as well. Even as an expected outcome in the course that was directly focused on technology, students expressed greater levels of comfort exploring new forms of technology and using them in more creative ways than expected. While this may be true of any online course, the applied learning projects appeared to encourage instructors and students to utilize technology in more creative ways. As previously discussed, the online format removed restrictions and opened the realm of possibilities. Another positive outcome was that the integration of online and applied learning provided a diverse and accessible environment that enriched student learning and development.

Having students spread across the region, country or world became a benefit when those students can share their unique localized experiences with their classmates. While logistically daunting to support students' engagement in multiple, dispersed sites, the opportunities for learning are beneficial to all students in the course (VanDusen, 1997).

Conclusion

In this article we shared three examples of applied learning initiatives in courses that utilized online modalities. While we each encountered challenges to the implementation of applied projects, there were also meaningful outcomes to student learning and development that we hope encourage other instructors seeking to engage in applied learning in their online courses. The applied learning projects required intentional planning that was strengthened by the relationship to a theoretical framework and existing literature on applied and online learning practices. Virtual environments removed the boundaries and required students to engage with external stakeholders in activities that connected theory and practice in their local contexts. The "risk" associated with the activities contributed to student learning and development, but required considerable foresight, management, and communication from the instructors. Despite some challenges, online formats are an appropriate and effective means for facilitating engagement in applied learning activities.

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