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Flipping the Classroom in an Undergraduate Social Work Research Course

Abstract

The phenomenon of "research reluctance" (Epstein 1987) continues to present some measure of challenge for social work students and the educators who facilitate their movement toward research competency. "Flipped" learning pedagogy, where traditional lecture is delivered outside of the classroom, and content application becomes the classroom focus, has been well received by instructors and students in a range of disciplines, including social work. In an effort to address research reluctance and create a more engaged and meaningful student experience, an undergraduate research course in social work was redesigned for delivery in the "flipped" learning model. Two groups of undergraduate students, one in fall 2014 (n=14) and another in fall 2015 (n=15), taught by two different but collaborating faculty members, participated in a pilot of this model. Utilizing the principles of team-based learning and an action-research assignment, students participated in the "flipped" research course while simultaneously developing proposals for evaluation research to assess its effectiveness. We report on the lessons learned in the pilot and offer teaching tips to faculty colleagues who may be contemplating use of flipped learning pedagogy in their research classes. We also describe the formal evaluation study developed in the pilot, intended for use with the next cohort of social work undergraduates.

Keywords: active learning strategies, flipped classroom, flipped learning, teaching research competency, undergraduate social work research

Introduction

Today's educators have increasingly recognized the need to identify innovative approaches to teaching a new generation of students. The lecture model of teaching has given way to explorations into a range of active-learning strategies better aligned with the learning styles, diverse needs and interests, and technological sophistication of the millennial generation—that is, those born between 1982 and 2002 (Roehl et al. 2013; Barr and Tagg 1995). Contemporary social work educators have begun to systematically examine the learning styles of their students (Chesborough 2009) and to experiment with pedagogical innovations to best meet their learning needs (Judd and Moore 2013; Robinson et al. 2013; Holmes et al. 2015).

On a broader level, the Council on Social Work Education (CSWE) recently revised its Educational Policy and Accreditation Standards (CSWE 2008, 2015) to reflect a paradigm shift from the previous content-centered approach to the current competency-based model. Given present-day emphasis on evidence-based practice and accountability for social workers' interventions, among CSWE's desired competencies is the expectation that students will develop the knowledge and skills necessary "... to engage in practice-informed research and research-informed practice" (CSWE 2008, 2015). In this context the "flipped" classroom is gaining increasing attention.

What Is Flipped Learning?

Grounded in the concepts of active learning, student engagement, and intentional course design, flipped learning emphasizes collaboration between and among students, as well as with the instructor. It is a structured approach to active teaching that fosters students' interaction with course content outside of class, at their own pace, and in an environment controlled by them.

Course structure is dependent on the use of a range of technologies such as short video lectures, Internet resources, and other readings deemed appropriate to achieve desired learning outcomes. Time spent in class is primarily devoted to working collaboratively with other students and the instructor. This reversal frees the instructor to continuously assess and guide students toward learning and applying new knowledge to real-world problems during class time. Flipped learning can be applied to single or multiple course assignments and activities or used as the organizing principle for a full-course "flip."

Flipped learning is believed to hold considerable promise for teaching social work competencies. M. A. Robinson, M. B. Robinson, and McCaskill (2013) suggest that the flipped-class model may be particularly well suited to social work education because it mirrors the collaborative and cooperative client and stakeholder interactions that naturally occur in practice settings. Our primary motivation for adopting the flipped approach stemmed from a desire to create a more engaged student experience, ultimately leading to deeper learning for those taking the research course. In the following, we share observations and experiences gained from designing and implementing the flipped-learning model in an undergraduate social work research course.



As faculty members who have served as research instructors, our collective teaching experiences suggested that the research course had been the least favorite, and perhaps most resisted, course in the social work curriculum. Although some solace was gained from a review of the literature indicating that this "research reluctance" was not unique to our institution or to a particular research course (Epstein 1987; Moore and Avant 2008; Secret et al. 2003; Bolin et al. 2012), our own training impelled us to seek solutions for meeting students "where they are" by endeavoring to make the research course more engaging and meaningful for them. In short, it prompted us to "walk our talk" as social work professionals by using our teaching (i.e., practice) experience to inform our instructional research and, similarly, to use our research findings to inform and enhance our teaching. In addition, we hoped that lessons learned from two different faculty members teaching the course at different times would provide insights to guide the development of a formal plan to evaluate this model of pedagogy for undergraduate social work majors.

Table 1. The Flipped Class: What It Is and What It Is Not

The Flipped Class is NOT:	The Flipped Class IS:
A synonym for online videos	A blending of direct instruction with constructivist learning
About replacing teachers with videos	A means to <i>increase</i> interaction and personalized contact time between students and teachers
An online course	An environment where students take responsibility for their own learning
Students working without structure	A class where all students are engaged in their learning
Students spending the entire class staring at a computer screen	A classroom where the teacher is not the "sage on the stage" but the "guide on the side"
Students working in isolation	A class where content is permanently archived for review or remediation
	A classroom where students who are absentdon't get left behind
	A place where all students can get a personalized education

Source: Excerpted from Bergmann et al. (2011)

Interest in the flipped learning/classroom model has grown considerably over the last several years, but the model is often misperceived as solely synonymous with the use of online video for the delivery of lectures. Misinformation about the approach has engendered a degree of skepticism as to the viability of flipped learning as an instructional model.

To counter some of this misguided criticism, a cohort of pioneers in the flipped-learning movement recently offered its perspectives on what does and does not constitute flipped learning; these comparisons are illustrated in Table 1.

The Flipped Course: Research for Social Work Practice

Our undergraduate research course was originally structured as a survey of research methods and, as such, covered a range of research concepts and methods. A summary of the topics, essentially mirroring the textbook chapters, can be found in Table 2.

Table 2. Research Concepts and Methods Covered in Course

Research Concepts and Methods	
What Is Research?	
Ethical Research	
The What and How of Literature Reviews	
Articulating Variables and Identifying Measures	
Approaches to Sampling	
Qualitative Research Designs	
Quantitative Research Designs	
Survey Research	
Evaluation Research	
Single-Subject Design	
Introduction to Descriptive Statistics	
Introduction to Inferential Statistics	
Application of Research Knowledge and Skills	

The course was initially taught using a traditional lecture format, supplemented by a range of experiential in-class exercises to reinforce key concepts. Homework assignments outside of class provided the space for students to reflect and apply knowledge to specific projects or tasks. However, persistent faculty observations of students' "research reluctance" (Epstein, 1987) prompted several course redesigns (2004 and 2009 respectively) in an effort to address this phenomenon. The first of these utilized a single-system design project as its centerpiece, whereas the second actively engaged students in formally evaluating their own practice interventions. Unfortunately, neither approach yielded the desired results of stoking a passion for research and elevating students' interest in the course.

The ongoing quest to identify the best pedagogical fit for the course sent us back into the literature and framed the agenda

of our faculty development efforts for the next several years. As we explored the flipped learning literature and continuously deepened our understanding of the model, it emerged as a promising pedagogical fit for the research course. Thus, in preparation for a fall 2014 roll-out, we undertook our most ambitious course revision to date.

A full-course "flip" was used to structure the hybrid Research for Social Work Practice course, with one face-to-face and one designated online (asynchronous) session per week. The existing course online site was reconstructed, incorporating many instructional-design best practices (Blackboard 2013), and all course materials were made accessible on the site. Weekly mini-lecture videos (less than 15 minutes in duration), selectively vetted from available YouTube offerings, were used to replace the in-class lecture and intentionally introduced a variety of research voices and instructional styles in an effort to increase students' engagement with the course's content.

The reader-friendly *Research Methods for Social Workers: A Practice-based Approach* (S. S. Faulkner and C. A. Faulkner 2014) was adopted as the primary textbook and as reflected in Table 2, its chapters served as the organizing principle for "chunking" research concepts and principles into a sequence of learning modules intended to facilitate students' movement toward foundational research competency (CSWE 2008, 2015). Weekly reading assignments were paired with relevant video mini-lectures as a means of reinforcing the course content.

Critical Reading and Reflection Journals. Applying the observations of our collective teaching experiences, corroborated by the literature on the issues of college students' reading comprehension and compliance (Bean 1996; Hobson 2004; Hoeft 2012), a didactic mini-unit on active reading strategies was added to the beginning of the course and paired with weekly journal entries that asked students to (1) identify the specific active reading strategy(ies) they employed and the rationale for the selection relative to the particular reading assignment, (2) summarize the main ideas of the reading assignment, and (3) identify any questions or points about which the student sought clarification or greater elaboration. These questions and points constituted the agenda for the first portion of each subsequent face-to-face session.

Research Teams and Research Logs. To support the classroom transformation of flipped learning, the major course assignment was crafted as a semester-long, team-based, action research project. Students were assigned to research teams and directed to systematically move through the phases of the research proposal process in order to develop a written

evaluation-research plan designed to assess the effectiveness of the flipped-classroom model in moving them toward attainment of the course student learning outcomes. As part of the proposal process, they were also required to individually complete the training of the online Collaborative Institutional Training Initiative (CITI; University of Miami, n.d.) on the ethical conduct of research with human subjects. Considerable in-class time was dedicated to

- 1. reviewing the assignment's specifications;
- clearly articulating the expectations of students as research team members, beginning with the requirement that each team establish a written plan for accomplishing its collective goal;
- 3. stressing the importance of completing the weekly research logs as a mechanism for documenting the ongoing research process and identifying obstacles/challenges to the research as they might emerge;
- 4. discussing the writing-process approach (i.e., planning, drafting, revising) to developing the final paper that would include at least one draft submission for feedback from the instructor and the subsequent incorporation of those suggestions into the final version submitted for grading; and
- 5. reviewing the three rubrics (self-assessment, peer assessment, and instructor assessment) that would be used in calculating individual student grades for the group's proposal.

The second portion of each face-to-face session was allocated to meetings of the research teams. Adopting the instructor's role in flipped learning as the "guide on the side," the faculty member moved throughout the room offering research consultation to each team by answering questions (and sometimes posing them), making explicit connections between the work they were undertaking and the reading and video lectures to which they had been exposed, and encouraging teams to recognize and tolerate the inherent ambiguities of the research process (i.e., the absence of a single "correct" way to approach the research).

Fourteen students were enrolled in the course in fall 2014, and 15 students were enrolled in fall 2015. In fall 2014, two research teams had five students each, and one had four students. In fall 2015, three research teams had five students each. Although data pertaining to the students' experience of the course, and its impact upon their learning was collected as part of the pilot's implementation, it was for evaluation purposes specifically aimed at helping faculty further improve and enhance the instructional design, delivery, and



evaluation of the course. As such, the pilot's assessment data on students' learning outcomes is considered preliminary, and quantitative results cannot yet be reported. However, the instructional experience of implementing the flipped-learning model yielded a number of observations that may be of value to other faculty teaching undergraduate research courses.

Faculty Observations

Two main themes emerged from the instructors' retrospective observations; these centered on students' reading behaviors and the functioning and productivity of the research teams.

Regarding reading behaviors, in the main, students' entries to their weekly journals of critical reading and reflection were posted in a timely manner and generally reflected a good-to-high degree of engagement with the course content. The substance of the journal entries suggested that most students spent time engaged in critical reading of the textbook, consistently examined it in relation to the mini-lecture videos, and posed meaningful questions or identified areas for further clarification or elaboration by the instructor. This observation suggested that students came to the face-to-face sessions with gradually accumulating knowledge that informed their work within the research teams.

To foster development of students' ability to read and comprehend research journal articles, two of the journal assignments required that students read and annotate research articles (one a report on a qualitative study and the other on a mixed-methods study). Utilizing the "comments" feature of Adobe Reader, students were asked to locate and label the research concepts covered in the course including: statement of research purpose; research question(s) and hypothesis (es); literature review; type of research design; sample and data-collection method; type of data analysis used; research findings; implication and limitations of findings; and recommendations for future research. In addition to labeling the concepts, students were also asked to include an annotation reflecting their rationale for labeling the section of the article as such. Here again, high levels of engagement with course content were evidenced in most students' annotations, suggesting that, at the very least, they were grappling with the task of adjusting their reading strategies for the purposes of comprehending research reports as they appear in peer-reviewed/scholarly journals.

Regarding the research teams, given that the flipped-learning model situated a good portion of the teams' work sessions within the class itself, faculty were afforded ample opportunity to observe the teams' functioning. Both consistencies and variations in the functioning and final proposals of the

six teams were observed in this pilot implementation. For instance, the open-ended nature of defining the research question presented a nearly universal challenge for all teams. Still inexperienced in the critical-thinking skill of question formulation, students seemed intent on finding the "correct" research question. Developing a tolerance for the ambiguity inherent in this phase of the research process required considerable effort. At times, it engendered high levels of frustration within teams, with some students occasionally defaulting to urging the instructor to "just tell them the answer." However, once students were able to articulate a succinct research question (or two), subsequent teamwork on the project moved forward.

Although team functioning and proposal development in five of six teams (three in the first cohort and two in the second) reflected some differences in pace and approach to the project, the overall quality and effectiveness of the teams' functioning and final proposals were fairly consistent across groups. However, a different picture emerged in the work trajectory and quality of the final research proposal of one research team in the second cohort.

Based on both the instructor's observation and reports from team members, issues of cohesion, accountability to the team (particularly in terms of preparation for team meetings), and communication breakdowns appeared to hinder the effectiveness of this sixth team. As a consequence of these team dynamics, disproportionate responsibility for the tasks associated with shaping and drafting the research proposal fell to a single team member. Not surprisingly, the quality of the research proposal reflected the weaknesses evidenced in the group process, resulting in a far less developed proposal than those submitted by other teams.

Anecdotal Student Feedback

Discussions held during the last class session elicited the students' perceptions of the course. Students in both cohorts were generally positive about the flipped-learning model, although several noted that it took some time to acclimate to it, and a few students even acknowledged an initial dislike for it. A smaller number of students (primarily those in the less effective team in the second cohort) were less enthusiastic about the flipped-learning model overall. Several students reported that the reading/video lecture pairing afforded them the opportunity to pace their learning and integration of course content, whereas the weekly team work sessions allowed them to apply that learning. In-class access to the instructor as research "consultant" was also noted as a helpful feature because it provided a level of guidance and assurance that students had not experienced in courses with projects primarily undertaken outside of the classroom.

Table 3 Lessons Learned and Instructional Suggestions

Lessons Learned	Instructional Strategies/Suggestions
Implementation of the flipped-learning model requires high levels of instructor commitment, energy, and effort.	Allocate adequate time to familiarize yourself with the model and its best practices; be cognizant that sustained energy and effort will be needed for effective implementation.
Instructional course design is critical to the success of delivery in the flipped-learning model.	Incorporate best practices in instructional course design.
Students need to acclimate to the active-learning emphasis of the flipped-learning model while simultaneously developing a sense of research self-efficacy.	Be patient with students as they transition to the new model; ride out their initial resistance; provide encouragement and support coupled with clarity about performance expectations.
Students are most successful when they feel empowered to face the challenge of reading research texts and reports, which allows them to build both a fund of research knowledge and a research vocabulary.	Dedicate a portion of the course to ensuring that students have access to a repertoire of active-reading strategies that empower them to grapple with the reading assignments so the content can be applied to their research project.
Students appreciate being held accountable for completing reading assignments.	Create mechanisms that hold students accountable for the course reading; ensure that questions and requests for clarification/elaboration are addressed to the point of comprehension.
The skills of collaboration required for research teamwork are not innate and need to be developed.	Provide structure and guidance within the assignment to foster development of collaboration skills; create a mechanism for formative assessment of the group process as it relates to accomplishing the research goal.
Students' proposals for evaluation research, together with instructors' observations and student feedback from the pilot, provided valuable information for shaping a summative assessment approach to evaluating the effectiveness of flipped learning in moving students toward research competency.	Develop a systematic approach for evaluating the efficacy of the flipped-learning model in facilitating student movement toward attaining research competency.

Several students expressed appreciation for the intentional focus on the use of active reading strategies, with a few reporting that they had transferred the use of those strategies to other courses as well. Finally, most students indicated that they liked being held accountable for completing reading assignments through the weekly required journal entries. A number of these students openly acknowledged that this had been the first time in their college careers when they completed all course reading assignments!

Lessons Learned and Next Steps

A number of lessons emerged from the pilot implementation of our revised learning model. Many of these lessons highlighted particular instructional strategies that supported the increased student engagement in the course. Table 3 summarizes those lessons as well as some strategies and suggestions for instructors who may be considering the flipped-learning model for their own undergraduate research courses.

Synthesizing what we learned from this pilot implementation with the findings of our original literature review resulted in our developing a formal plan to evaluate the effectiveness of flipped learning as a pedagogical approach to preparing undergraduate social work students for competent research practice. Initial examination of the literature pertaining to

the teaching and learning of social work research revealed several student-centered variables that affected students' experience of the research course. Among these were student attitudes toward research; their perceptions of the value of research to the practice of social work; research self-efficacy; and mind-set. Heeding the recommendation of Secret, Ford, and Rompf (2003) to assess students' readiness for research, we have constructed student entrance/exit surveys to assess the levels of these variables at both the outset and conclusion of the course. In light of our observations of the functioning of the research teams and productivity during the pilot, several items designed to measure students' perceived level of collaborative skills were also added to the survey. Comparisons of students' responses on the two surveys will be used to assess the course's impact on these variables. In addition, assessment rubrics for students' journal entries and the research teams' proposals will be aligned with the course's desired student-learning outcomes, and aggregated ratings by student-learning outcome will be used to assess the effectiveness of the course in moving students toward attainment of research skills.



Conclusion

The pilot implementation of the flipped-classroom model provided valuable information for us as instructors and, based on their feedback, for most of our students as well. It furnished a rich opportunity to observe the progressive scaffolding of research knowledge and skills among students as they applied their learning to their research team project. Given this experience, we believe that flipped learning holds considerable promise for mitigating the frequent reluctance of undergraduate social work students to engage in research. We look forward to testing this hypothesis and subsequently reporting the findings of the formal evaluation study shaped through the flipped-learning pilot.

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