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A Survey of Online Library Tutorials: Guiding Instructional Video Creation to Use in Flipped Classrooms

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ABSTRACT

There has been a steady increase in library literature on "flipping the classroom." This teaching strategy requires students to review course material outside the classroom beforehand, thereby allowing more time during workshops to apply newly gained knowledge and techniques. The proliferation of literature on classroom flipping provoked an interest to determine if other academic libraries were making explicit reference on their websites to the preliminary viewing of videos in a classroom context. To ascertain the extent of this practice, and inform the development of instructional videos at McGill, the authors surveyed all Canadian Association of Research Libraries (CARL) and Association of Research Libraries (ARL) websites to document the production of instructional videos, determine the various types of videos, and take note of explicit pre-viewing instructions prior to a workshop. Of the 140 libraries examined, 107 (76%) provide instructional videos on their website. However, of this group, only 2 (2%) clearly instruct users to watch instructional videos before attending a library research workshop. A literature review documents this emerging trend and contextualizes the results.

INTRODUCTION AND PURPOSE

MyArts Research is a set of two 90-min workshops designed for undergraduates in McGill University's Faculty of Arts. The objective is to teach students how to search for, access, evaluate and manage the sources required to complete their current assignments. The workshops cover formulating a research question and concept identification, searching specific resources like catalogs and databases, learning search techniques and strategies (such as Boolean logic and truncation), understanding peer review and research dissemination, and using bibliographic citation software to manage search results and properly cite literature.

McGill librarians have conducted and developed these workshops over the course of five years. While student feedback has always been very positive, the instructors have long felt that increased time for additional active learning activities would increase the impact on their research skill development and overall academic literacy. The research has consistently shown that active learning techniques applied within information literacy workshops positively impact student engagement and learning outcomes (Detlor, Booker, Serenko, & Julien, 2012; Holderied, 2011; Shamchuk & Plouffe, 2013). Apart from active learning techniques, the instructors would also like to allot time for the introduction of core concepts embodied in the Association of College & Research Libraries' (ACRL) *Framework for Information Literacy for Higher Education* (Association of College & Research Libraries (ACRL), 2015b). The

Framework outlines a set of competencies beyond the mechanics of searching, such as understanding authority in different contexts, the motivations behind information creation, and the unfolding of scholarly conversation (Association of College & Research Libraries (ACRL), 2015a). These important concepts, however, require sufficient time for explanation and discussion. Working them into an already busy lesson plan can be a difficult task.

Since students already spend 3 h attending the *MyArts Research* workshops, increasing their duration to meet these objectives would likely have a negative effect on registration and attendance. New pedagogical methods, however, seek to address this obstacle. One such instructional innovation involves a technique known as "flipping the classroom," which has been discussed within many disciplines and has been given increased attention recently regarding its appropriateness for information literacy instruction (Gibes & James, 2015). Flipping the classroom is an instructional technique that optimizes the in-class interaction between students and the instructor (Becker, 2013). In a flipped or "inverted" classroom, the lecture material is viewed outside of class time through the use of interactive videos or tutorials, while homework or application of core concepts is completed during class time. The instructor acts as a facilitator, assisting students where needed and offering additional clarification as required. The objective of the flipped classroom is to have students apply core concepts to a variety of contexts and engage in active learning in order to more effectively build concepts into their knowledge base.

Given the potential benefits of this structure, the *MyArts Research* organizers decided to explore the possibility of flipping the classroom

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through the use of instructional videos as a means of incorporating new content and teaching new competencies. In light of the recent interest of instruction librarians in classroom flipping, a study was undertaken to document and describe the extent to which academic research libraries were including instructional videos on their websites, and specifically instructing students to view these videos before attending a library instruction workshop. The authors also sought to identify the various types of instructional content most commonly found within the videos, the formats used, who produced the videos, and whether there was any accompanying textual material. The results of this study will guide our own video creation by identifying the material most suitably presented online ahead of time to facilitate a flipped classroom teaching model. Furthermore, a review of the library literature on flipping the classroom was conducted to provide an overview of this emerging trend, and to place the results of the study in a broader context.

LITERATURE REVIEW

Though the concept of flipping the classroom has been given a somewhat limited treatment from the perspective of information literacy instruction, other literature exploring the topic has compared the technique to the traditional lecture, discussed its effectiveness in the context of various disciplines and courses, and evaluated the potential benefits of the flipped classroom on student learning outcomes. Many authors begin by providing a preliminary definition of the flipped classroom, indicating that the technique is driven by technological innovations and the ability to share content online (Albert & Beatty, 2014; Becker, 2013; Berrett, 2012; Garver & Roberts, 2013; Herreid & Schiller, 2013; Kim, Kim, Khera, & Getman, 2014; Rivera, 2015; Strayer, 2012; Youngkin, 2014).

The flipped classroom fundamentally shifts the way that the classroom is structured, from a frontal teaching model to a collaborative space where learning is created (Albert & Beatty, 2014; Vaughan, 2014). Many authors compare the flipped classroom model to the traditional classroom setting and examine the potential benefits of this pedagogical technique (Albert & Beatty, 2014; Berrett, 2012; Garver & Roberts, 2013; Mok, 2014; Rivera, 2015). Rivera (2015) describes the process of flipping a library competency course at Long Island University's Post Campus. The course, spanning seven weeks, had previously been structured as hour-long weekly lectures, with limited opportunities for students to actively engage with the content. To assess the impact of the flipped model on the students' comprehension of concepts, the course was first taught as a traditional lecture in one academic year and then taught using the flipped model the following year. In both iterations of the course, a pretest-posttest design was used and the test results from both the traditional and flipped classrooms were compared. Results indicated that "nonflipped courses showed a moderate increase in scores while the increase in scores in [the] flipped section was more than double of that in the nonflipped sections" (Rivera, 2015, p. 38). Similarly, Albert and Beatty (2014) present the results of a study comparing the impact of a flipped classroom to that of a traditional lecture in an undergraduate management course. The authors found that students in the flipped classroom scored significantly higher than students in the traditional classroom.

In the flipped classroom, basic course content is communicated outside of class, which allows students to contextualize the material and apply the concepts to various settings (Gilboy, Heinerichs, & Pazzaglia, 2015; Lemmer, 2013; McLaughlin et al., 2014; Schlairet, Green, & Benton, 2014). In exploring the impact of the flipped classroom model on a graduate level legal research course, the model was found to be an effective tool in preparing law students for the complexities of legal research (Lemmer, 2013). Since the flipped classroom model liberated more class time to focus on the application of core concepts to a variety of situations, students were advantageously prepared for the dynamic, unpredictable nature of legal research in a real-world context. Similarly, Gilboy et al. (2015) and Schlairet et al. (2014) cite the usefulness of the flipped classroom in enabling students

(specifically within nursing) to apply course content to various situations. These two articles underscore the flipped classroom model as an effective method for assisting nursing students in applying their knowledge to complex, unpredictable environments as they embark on their professional careers. Consequently, students who are prepared to apply their knowledge and utilize their skills are better able to understand the possibilities of controlling their own learning and engender a sense of empowerment (Arnold-Garza, 2014a; Mok, 2014; Strayer, 2012).

In addition to allowing students to apply their knowledge within a variety of contexts, the flipped classroom model favors active over passive learning and is an effective method in motivating students to achieve higher-order thinking skills on Bloom's taxonomy of learning (Albert & Beatty, 2014; Arnold-Garza, 2014a; Becker, 2013; Enfield, 2013; Gilboy et al., 2015; Murray, Koziniec, & McGill, 2015; Sams & Bergmann, 2013; Schlairet et al., 2014; Rivera, 2015; Semple, 2013; Strayer, 2012). Instead of passively viewing a traditional lecture, students participate in learner-centred activities during class time (including group discussions, problem-based learning, case studies, or conceptual exercises) and are required to engage with the content (Gilboy et al., 2015). With basic course content shifted outside the classroom in the form of online videos, students can now focus on establishing the building blocks of knowledge using active learning strategies in the application, analysis, and synthesis of content, improving overall learning outcomes (Gilboy et al., 2015; Sams & Bergmann, 2013). The flipped classroom model, therefore, is a learner-centered pedagogical technique (rather than content- or instructor-centered), with the instructor acting as a guide to facilitate the students' understanding (Albert & Beatty, 2014).

Other benefits of the flipped classroom model include the ability to optimize the limited time instructors have with students (Arnold-Garza, 2014a; Berrett, 2012; Enfield, 2013; Roehl, Reddy, & Shannon, 2013). Arnold-Garza (2014a) notes that the flipped classroom allows the instructor (once again, acting as a facilitator) to provide point-of-need assistance to students as they complete in-class exercises, aiding them where any problems arise. Enfield (2013) also asserts that providing students with feedback as they apply new skills is one of the foremost benefits of the flipped classroom model.

Another benefit of flipping the classroom is that the technique allows students to review instructional content at their own pace. They can choose to re-watch videos covering particularly complex topics or follow along with examples shown in the videos (Arnold-Garza, 2014a; Sams & Bergmann, 2013; Schlairet et al., 2014; Youngkin, 2014). Furthermore, the flipped classroom is practical since students who miss a lecture can review the content and stay up-to-date with the course (Albert & Beatty, 2014; Becker, 2013; Enfield, 2013). To address a variety of learning preferences, the in-class activities should also be sufficiently varied and might include lab work, in-class experimentation, or group and peer discussions (Arnold-Garza, 2014a). The flipped classroom is also particularly geared towards Millennial learning preferences (Herreid & Schiller, 2013; Roehl et al., 2013). Roehl et al. (2013) argue that Millennials, raised with readily available information technology and adapted to a 24/7 connection to information, have a preference for "environments that support multi-tasking" and group activities that allow them to engage with the social aspects of learning (p. 45).

Though its treatment has been limited, discussions of the flipped classroom in the specific context of information literacy instruction have also cited the more effective use of classroom time as one of the primary benefits of the model (Arnold-Garza, 2014a; Arnold-Garza, 2014b; Becker, 2013; Datig & Ruswick, 2013; Gibes & James, 2015; Rivera, 2015; Semple, 2013; Valenza, 2012; Youngkin, 2014). Furthermore, effective information literacy instruction equips students with the tools needed to cope with the complications of real-world library research (Arnold-Garza, 2014b). Although information literacy competencies are essential to a student's knowledge base, librarians providing such instruction are met with increased time constraints (Arnold-Garza, 2014a; Becker,