Christian Perspectives in Education
Send out your light and your truth! Let them guide me. Psalm 43:3

Volume 10
Issue 1 *Winter 2017*

2018

Flipped Classrooms in the Humanities: Findings from a Quasi-Experimental Study

Bryce F. Hantla
The College of Biblical Studies-Houston, bhantla@sebts.edu

Introduction

Does flipping the classroom really affect the way students perceive their learning environment, and if so, is this a good or bad thing? A number of previous studies have examined whether students prefer the flipped classroom over a traditional lecture class (Bergmann & Sams, 2012; Deslauriers, Schelew, & Wieman, 2011; Hamdan, McKnight, McKnight, & Artfstrom, 2013b; O'Flaherty & Phillips, 2015; Strayer, 2012), but the overwhelming majority of these studies have examined this question in science, technology, engineering, and mathematics (STEM) courses. Very few studies conducted on this topic, especially in higher educational settings, have examined the effectiveness of the flipped classroom in humanities settings (for example, see Chapters 2-4 and Chapter 16 of Bretzmann et al. (2013), Chapter 9 of Ostashewski, Martin, and Brennan (2014), and Ebbeler (2013)). Additionally, as Abeysekera and Dawson (2014) and Hantla (2014) note, very little research overall has been conducted on the efficacy of the teaching method, despite its popularity with faculty and students (*Faculty Focus*, 2015; Moussa-Inaty, 2017).

At its core, *flipped learning* is a blended learning model in which professors leverage technology to more actively engage students in the learning process than in traditional seminars and lecture-based courses (Allen, Seaman, & Garrett, 2007). The blended model has a longer history of being implemented in a wide variety of courses and in a wide variety of ways (Naismith, Sharples, Vavoula, & Lonsdale, 2004). Notably, blended learning can take place either synchronously, asynchronously, or both; but flipped learning has been most frequently executed in a synchronous manner (Hamdan, McKnight, McKnight, & Artfstrom, 2013a). The blended aspects of this teaching method have shown to increase learner engagement and deepen learning (Ebbeler, 2013; Greenfield & Hibbert, 2017), especially when instructors design their courses to include active learning techniques (ALTs) (McCredden, Reidsema, & Kavanagh, 2017).

Additionally, student autonomy is a primary theoretical foundation for fostering student motivation (Khan, 2011; Musallam, 2011; Wlodkowski, 2011, pp. 189-190). In her tips for developing student engagement, Barkley (2009) recommends allowing "students options in deciding how to implement classroom procedures [… allowing] students to decide when, where, and in what order to complete assignments," and helping "students to use self-assessment procedures that monitor progress as well as identify personal strengths and potential barriers" (pp. 85-86). In fact, in their ATRACT method for implementing the flipped classroom in a humanities setting (based on an extensive literature review of the flipped learning literature), Coley, Hantla, and Cobb (2013) found that autonomy was the foremost benefit that students gained from participating in flipped classrooms. Regarding how flipped teaching aligns with Barkley's (2009) suggestions for promoting autonomy, instructors can decide when and where they

would like to watch the videos (at least within a given time frame), they can model for students how to watch videos to gauge for their own understanding, and under the flipped mastery model (Bergmann & Sams, 2012), instructors can even allow students the freedom to complete assignments asynchronously (Johnson, 2013).

Although some reports have been made in the extant literature to demonstrate how flipped teaching can be implemented into non-STEM settings, many of these reports contain little detail or were not completed in an academically rigorous manner. One reason for this lack of rigor is because those who are reporting on these effects are secondary practitioners who do not have the time or training to accomplish a rigorous report. In light of the previous research conducted on the flipped classroom, a great deal of work is left to be completed (Abeysekera & Dawson, 2014). Thus, the following research question is posed in light of this identified gap: *What effect, if any, does flipping the classroom have on student perceptions of the humanities learning environment compared to traditional teaching methods?*

The remainder of this article outlines the quasi-experimental mixed method study undertaken here and then elaborates upon the results of the study. The results, which indicate that the flipped classroom matches more closely with the students' preferred learning environment, lead to a series of practical implications for humanities courses in higher educational settings.

Materials and Methods

Design

This quasi-experimental study examined the effects of the flipped classroom on the perceptions of students in a humanities college setting. The term *quasi-experimental* refers to a study where a) the subjects are not randomized and b) it is impractical to control for all confounding variables, making it impossible to rule out other explanations for obtained results (Figure 1).

Nonrandomized Pretest-Posttest	Experimental Group	Observation	Treatment	Observation
	Matched Control Group	Observation	----------	Observation

Time →

Figure 1. Quasi-experimental setup and flow of participants, adapted from Leedy and Ormrod (2010), 284.

Population

Research Site

The institution at which the study was conducted is a small, private four-year, liberal arts institution, with 650 enrolled students during the fall semester (2013) in the undergraduate college. The school also contains a graduate seminary, and many professors in the undergraduate college also teach courses in the seminary, which offers master and doctoral degrees. The college boasts a modified great books, perennialist curriculum requiring eight courses in the history of ideas (e.g., Adler, 1998), although using Koine Greek as the primary language requirement for any of the undergraduate degrees. The student-to-professor ratio is 14:1, and most courses are taught in a seminar fashion, mixing in some discussion with a preponderance of professor-driven lecture in the courses.

The college has a more conservative statement of faith that most students ascribe to upon admission to the college. Those who do not may write a statement outlining the points upon which they disagree, but they may still obtain admittance to the school. As a result, most students are more conservative in their religious views, and this may have affected their perceptions of the research project as a whole. This study was the first of its kind on this campus, although the professors and students alike produce a great deal of theological and humanities research output on an annual basis. This is addressed in more detail in the Results section.

Students

The researcher identified professors to conduct the study across multiple sections, as opposed to conducting the study within one assessor's classroom settings, as has been done previously (Deslauriers et al., 2011; Strayer, 2007, 2012). This method was intentionally used because of the limited generalizability of single-classroom case studies and because the majority of studies conducted in the previous literature were done using a single assessor. As a result, however, this quasi-experimental study included a convenience sample population of $n = 97$ students (15% of total student population) with an overall response rate of 47.7% ($n = 62$).

Students used a unique passcode to log into the survey on both the pretest and the posttest so that these results could be matched. At no time did the researcher have access to the names of the students completing the forms, and anonymity was guaranteed throughout the research process. Additionally, the institutional research board approved the study, as it was conducted on human participants. Figure 2 illustrates the flow of participants in the study across the three included courses.

Exclusion criteria for students included whether they finished the course, and assessments were not included if they were not completed.

Informed written consent was obtained from all participants prior to beginning the first test administration. No students under the age of 18 years were allowed to participate in this study, so parent consent was not necessary.

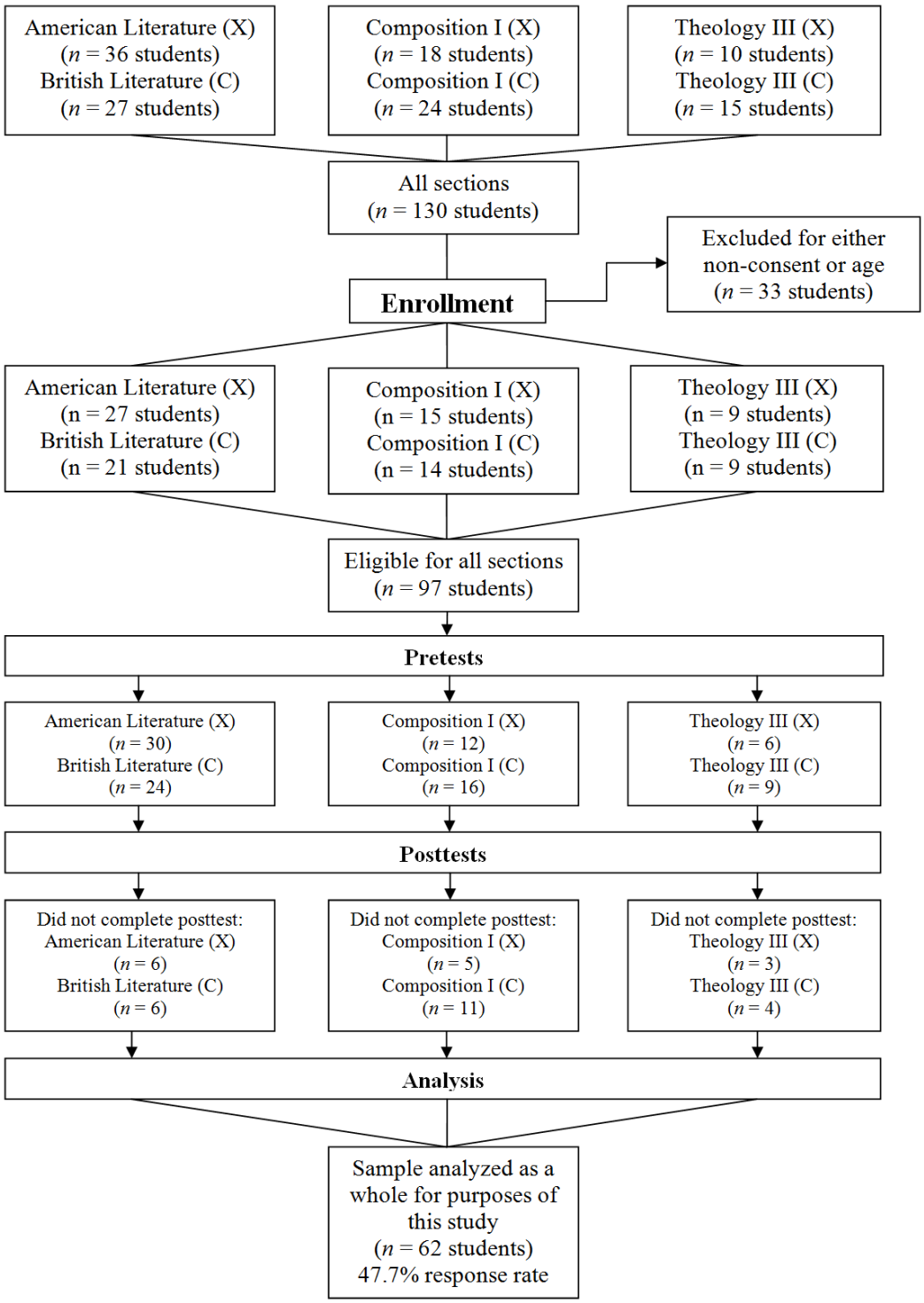

Figure 2. Flow of participants in the study.

Professors and Course Types

In addition to the students being included in the study, six professors were asked to participate (three controls and three experimental). To ensure that the experimental and control groups were matched as closely as possible, the inclusion criteria for professors of these courses were as follows: 1) taught the section at least once previously; 2) hold a doctoral degree in the subject area taught; 3) course must include a major research paper; 4) experimental professors willing to use a traditional flip method (Bergmann & Sams, 2012) for at least 25% of their lessons during a 15-week course.

Uniformity in flipped classes was limited to the presentation of lower-level content in video form before a class so that the higher-level categories in Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001) could be addressed during the face-to-face time with the professor (Bergmann & Sams, 2012). Professors used various technologies to implement the pre-viewing of lectures, but the primary measure of consistency was that lectures had to be viewed asynchronously before the beginning of class such that the professors could facilitate more in-depth ALTs during the actual class activity (Bain, 2004; Coley, 2012; Felder & Brent, 2003; Prince, 2004). ALTs are teaching techniques that 'engage the learning in the actual instruction that takes place' (Harder, Callahan, Trevisan, & Brown, 2012) and bring the learning process into the classroom in a way that a more traditional classroom lecture oftentimes does not. Other than these preliminary requirements, in-class activities, content, and video delivery method were left up to the professor's discretion, as it might be done in a typical humanities college. The researcher consulted with professors to develop lessons that were conceptually in line with ALTs and the flipped classroom in the months leading up to the start of the study period (August 2013).

Matched Controls

For this quasi-experimental research study, a control population was taught by professors using traditional lecture-based teaching and were given the same assessment instrument (i.e., the pre- and posttest College and University Classroom Environment Inventory (CUCEI)). The experimental (matched control) courses that were included were Theology III (Theology III), American Literature Survey (British Literature Survey), and Composition I (Composition I).

In addition to subject matter being taught, the assumption that the variance in this sample was equal was confirmed by Levene's test for all but two of the responses (P1, P22), so for these items, the output that did not confirm this assumption was used. Student's Independent *t*-test confirmed that the samples were matched, as only one question (P1) returned a significant difference ($p > .05$). The means between the experimental and control groups for item P1 ('The instructor considers my feeling') were significantly different, $t_{(60, 59)} = -2.353$, $p = .02$. Thus,

both group's ideal classroom environments were not significantly different from one another at pretest.

Instruments

The CUCEI questionnaire was administered during regular class time, so as to increase the likelihood of participation from the students. The CUCEI questionnaire is based on Moo's (1979) assumptions that 'human environments contain at minimum, relationship dimensions, personal development dimensions, and system maintenance and system change dimensions' (Strayer, 2007, p. 79). Therefore, the CUCEI measures seven scales of the classroom environment: *Personalization*, *Innovation*, *Student Cohesion*, *Task Orientation*, *Cooperation*, *Individualization*, and *Equity* (Fraser, 1998; Fraser, Treagust, & Dennis, 1986). Each item is quantitatively scored on a five-point, Likert-type scale, with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree.' The pretest shows the 'preferred' classroom environment, and the posttest records the 'actual' classroom environment, as reported by the students.

The content reliability of the CUCEI has been confirmed in previous studies (Hantla, 2014; Strayer, 2007, 2012), and the internal reliability of the sub-scales returned acceptable Cronbach's alpha coefficients in the range of .70 to .90 (Fraser, 1998; Fraser et al., 1986).

Procedures

The online version of the CUCEI was administered in GoogleForms™, and the responses were subsequently analyzed in Windows Excel 2010 and IBM SPSS Statistics, v. 21.0.

Statistical measures

This study uses simple descriptive statistics (e.g., means ± standard deviations, medians, and demographic variables) broken down by a number of independent variables to analyze the assessment results. Additionally, because the CUCEI was administered in a pretest-posttest fashion, two-way *t*-tests for dependent means and repeated measures ANOVAs were used to determine whether the students' actual experience in the class (posttest) met their preference stated in the pretest regarding the variables of the CUCEI. Subsequently, post-hoc least-squares difference (LSD) tests were computed, and Cohen's *d* effect sizes are reported where appropriate for *t*-tests to improve generalizability of the data, as recently suggested (Lakens, 2013; Salkind, 2008).

A significance level of 5% was set for statistical measures; however, due to a higher probability of committing a Type I error with the number of *t*-tests conducted with the survey items, more weight is given to those results that returned 1% and 0.1% significance levels. For this reason, the seven subscales, not the individual items themselves, were aggregated in the analysis of the results.

Results

This control-matched study uses aggregate analyses, not class-by-class breakdowns, due to minimum threshold considerations for statistical power. Here, significant findings for the subscales are examined individually, and a summary statement concludes this section.

In brief, at posttest, post-hoc pairwise comparisons showed all but one of the seven subscales (*Task Orientation*) as having significantly different classroom experiences for students in experimental and control classes (Table 1).

Table 1. Post-hoc pairwise comparisons between the pretest and posttest.

				95% CI for Difference	
	Mean Diff. (Pre-Post)	SEM	p	Lower Bound	Upper Bound
Personalization					
Experimental	-0.134	0.064	0.038*	-0.261	-0.008
Control	0.036	0.07	0.612	-0.103	0.174
Innovation					
Experimental	-0.004	0.092	0.964	-0.186	0.177
Control	0.74	0.107	0.001***	0.528	0.951
Student Cohesion					
Experimental	0.248	0.097	0.011*	0.057	0.439
Control	0.816	0.118	0.001***	0.583	1.05
Task Orientation					
Experimental	-0.084	0.068	0.216	-0.217	0.049
Control	-0.005	0.081	0.95	-0.165	0.155
Cooperation					
Experimental	-0.395	0.082	0.001***	-0.557	-0.233
Control	0.719	0.112	0.001***	0.499	0.94
Individualization					
Experimental	0.071	0.083	0.389	-0.091	0.234
Control	0.393	0.1	0.001***	0.195	0.59
Equity					
Experimental	-0.332	0.056	0.001***	-0.443	-0.221
Control	-0.168	0.072	0.02*	-0.309	-0.027

Notes: n, number of students; *SEM*, standard error of measure; 95% CI, 95% confidence interval; * $p < 0.05$; *** $p < 0.001$.

Additionally, most of the seven sub-scales showed strong within-group comparisons between the pretest and the posttest. In this measure, because the pretest was measuring the students' self-reported *preferred* classroom environment, a significant difference between the pre- and posttests is not desirable (Strayer, 2007, 2012). If the class does not meet the student's expectation, then the student will report a poorer classroom-level performance on the *actual* classroom environment version from the posttest. These two surveys were matched precisely for each item to ensure reliability across the two tests (Barry J Fraser, 1998; Barry J. Fraser et al., 1986), and the control classes returned more significant differences on the seven sub-scales than did the experimental group (Table 1).

Figure 2 demonstrates the between group comparisons using Student's *t*-test for independent means, which demonstrates the degree of difference between each of the subscales across the two groups (experimental and control). All of the subscales were significantly different from one another, but *Personalization* and *Equity* were more aligned with the control students' ideal classroom environments, i.e., their differences from pretest to posttest are smaller or more ideally aligned. Because *Innovation* is the only subscale that fell significantly below the control group's ideal classroom environment, *t*-tests for independent means were used to compare across the two groups. In this comparison, it is clear that students' experiences were significantly different across the two groups.

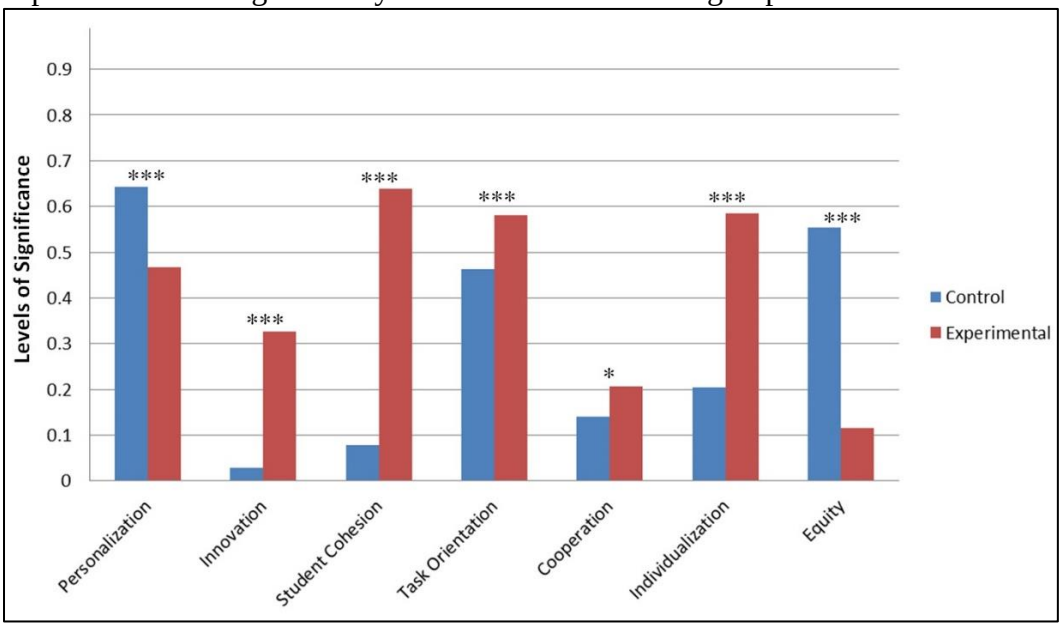

Figure 2. Significant differences across subscales between experimental and control groups. Bars demonstrate *p*-values for within group comparisons, whereas levels of significance are shown for independent *t*-tests between control and experimental groups; * $p < 0.05$; *** $p < 0.001$.

In general, these results indicate that the flipped classroom environment for the humanities student better matched with their preferred classroom environments, as recorded in the pretest version of this assessment.

Discussion

Because there are seven subscales in the survey that students took during the course of this study, this section interprets these subscale and includes of some of the comments students made while going through the survey. Some limitations to this study are then outlined, and then the final section identifies educational ministry applications for both church and community settings.

Task Orientation

Because both classes reported close-to-ideal environments in both settings, this subscale is examined first. A repeated-measures ANOVA demonstrates the student perception of the learning environment even more lucidly on the sub-scale *Task Orientation*. Overall, students found the control classes to be more closely aligned with their ideal classroom environment than experimental students, but neither groups' differences rose to a level of significance ($p = .95$ and $p = .216$ for control and experimental sections, respectively).The higher the *p*-value is on this measure, the more closely matched the course is to the students' ideal classroom environment. This finding is consistent with findings from a number of previous studies, which found that many students' expectations are challenged in a flipped classroom and that extra preparation is necessary to allow students time to adjust to the new, more interactive learning environment of a flipped classroom (Coley et al., 2013; Hantla, 2014; McLaughlin, Griffin, et al., 2013; McLaughlin, Roth, et al., 2014). However, just because some students prefer the passive learning environment of a transference classroom does not mean that they are necessarily learning more.

One reason why the flipped classes, which are generally more chaotic than traditional seminar or lecture-based classes, still maintained a semblance of task orientation may have been due to the researcher's involvement with the lesson design and implementation of the videos. Based on recommendations from the literature, the researcher helped the teaching professors identify flippable lessons before beginning the semester and then recommended that these lessons be set in weekly, bi-weekly, or monthly intervals throughout the semester (Zappe, Leicht, Messner, Litzinger, & Lee, 2009). Coley, Hantla, and Cobb (2013) recommends that maintaining a regular structure for flipped videos allows the students to have a better sense of organization for the class, as opposed to some reports in the literature about students feeling like ALT environments are chaotic. This perception of task orientation ensures that students are appropriately guided through the course material while still being given opportunities with the professor on-hand to guide their thinking at deeper levels about a topic through ALTs.

Innovation

Not surprisingly, the highest similarity in responses from the pretest to the posttest were in the area of innovative classroom practices (p = .96) (Table 1). This finding indicates that the students found the flipped classroom to be the most ideal setting for their preferred classroom environment. A repeated-measures ANOVA returned a very significant effect size (ES = .924) for this subscale, with a significance of $F_{(1, 237)}$ = 2897.55, p = .964. Again, when a difference is observed between the pre- and posttest, the indication is that the course did not meet the student's expectation of an *ideal* classroom environment. For the *Innovation* subscale, the students overwhelmingly reported that the flipped classes were more ideal in terms of how they brought interesting and new teaching methods into the classroom setting.

Personalization and Individualization

In addition to preferring innovative teaching techniques, the students in the experimental group reported high levels of agreement for the sub-scale *Individualization* (p = .389). Because of their similarity, this section jointly examines the two subscales *Personalization*, which measures whether the professor is friendly (items 1, 8, 36, and 46) or helpful during class (items 15, 22, and 29), and *Individualization*, which measures the 'tailorability' of classroom time (items 6, 13, 20, 34, and 48) and assignments (items 27 and 41). Both of these subscales relate to student autonomy (Coley et al., 2013) and resulted in similar levels of significance. Thus, the level of tailorability that students perceived they were able to achieve in the course was more closely matched with their preferred classroom environment than that of the control group for *Individualization* (p < .001) (Table 1).

With regard to *Personalization*, the differences in scores actually leaned more toward the personalization of professors from the control courses (p = .612 versus p = .038 for control versus experimental groups, respectively, where significant within-group differences are not desirable). For instance, in regard to item 15 ("The instructor goes out of his way to help me"), control students demonstrated a high level of respect for their professors, which may reflect the 'sage on the stage' structure of the traditional lecture-style course that is often promulgated in humanities classrooms. Moreover, students relied on the grader oftentimes to obtain clarification or pertinent information related to course materials, as opposed to approaching the professor himself. The type of preferred learning environment with this student population is thus detrimental to the development of autonomy and to the association of active learning in humanities classrooms (Gaikwad, 2012).

Cooperation

The sub-scale *Cooperation*, i.e., how students work together in the class, is one that returned responses that were entirely opposite of one another. Surprisingly, the

within-group comparisons for the experimental group were higher than what students preferred (Table 1). The values for the preferred CUCEI (pretest) and those for the actual CUCEI (posttest) were significantly different from one another at a very high probability ($p < .001$); however, the valence of this difference is perhaps the most meaningful aspect of this finding. In other words, the mean difference for the control group shows a less-than-ideal classroom environment with regard to students cooperating with one another throughout the semester (mean difference = 0.719, where a positive value shows responses as being, on average, lower than their preferred CUCEI). However, the mean difference for the experimental group actually reports, on average, that the student cooperation in the class was better than their ideal responses reported in the CUCEI pretest (mean difference = -0.395, where a negative shows a higher posttest score than that of the pretest). Thus, the scores on the sub-scale *Cooperation* are different for both the experimental and control groups, but the valence or directions= of the posttest responses from the pretest are different, in favor of the flipped classroom environment.

Student Cohesion

In the final two sub-scales of the CUCEI, *Student Cohesion* and *Equity*, the students reported their actual experiences in the class as being less-ideal than their preferred classroom environment for both measures, which is consistent with previous findings (Strayer, 2012). The within-group student responses for *Student Cohesion* were more similar to pretest responses in the experimental group, $F_{(1, 237)} = 6.56$, $p = .011$, than in the control group, $F_{(1, 195)} = 47.572$, $p < .001$. However, the within-group differences were still significant enough to demonstrate that this area could have been improved upon. Students in flipped classes did acknowledge the fact that they got to know their classmates better through in-class activities and interactions, but there is not an indication of this from students in control courses. One student, in response to item 17 ("I made friends easily in the class"), succinctly summarizes this in-class experience: 'Given time it [making friends] happened.' Although friendships are not a prerequisite for learning, some research has suggested that personal relationships within the learning environment can enhance student engagement and ultimately increase student learning (Abeysekera & Dawson, 2014; Allison, 2012; Choi & Johnson, 2005; Maslow, Frager, Fadiman, McReynolds, & Cox, 1970). The flipped classroom simply helps to more naturally facilitate personal interaction among students and between students and the instructor, which increases the likelihood of higher motivation to learn.

Limitations

There is a chance that self-selection bias may have played a role in the results. The conservative views of the students in the college likely played a role in the response rate. Anecdotally, many of the students expressed caution about entering their demographic information into the survey as well as about the foreign nature of an

empirical study in the college itself. Additionally, the length of the survey (49 questions) may have been an inhibiting factor in the students completing the posttest phase of the study.

Summary of Classroom Environment Measures

Overall, the students in the two groups of this quasi-experimental study reported having very different experiences according to their responses in both the quantitative and qualitative sections of the survey. The seven sub-scales of this instrument helped differentiate the experience of traditional versus flipped students. For example, in the *Cooperation* sub-scale, the qualitative responses showed that the professors of the control courses seemed to give off the impression that '*the assignments were supposed to be completed individually*,' and other students would discuss assignments outside of classroom time if they needed it. One student in the experimental course identified a '*chief benefit*' of the course as being '*in-class discussion and group work*.' This observation, although isolated amongst the qualitative responses, aligns more closely with what the quantitative data suggest, i.e., that students appreciated not having to go outside of class time to learn from their peers. This in-class discussion and interactivity, contrary to student expectations, led to more enriching learning experiences for students, which is consistent with findings elsewhere (Gaikwad, 2012; Strayer, 2012).

Not surprisingly, the students reported that their experiences were closer to their preferred learning environment for the sub-scales *Innovation* and *Individualization* than those experiences recorded for the controls. Students in the control group reported a closer-to-ideal experience for the sub-scales *Personalization* and *Task Orientation* than the experimental group. However, the differences between their preferred environment and their actual environment for the sub-scale *Task Orientation* were not significant for the experimental group. Additionally, students in the experimental group recorded a better-than-ideal experience for the sub-scale *Cooperation*, whereas the control group responses for this sub-scale were significantly less-than-ideal. Finally, the responses for the sub-scales *Student Cohesion* and *Equity* were significantly less preferable for both the experimental and control groups, but the control group responses for these two sub-scales were less significantly different than responses from the experimental group.

In the *Innovation* sub-scale, the text-based responses helped elaborate in more detail the perceptions of the two learning environments than what could be gleaned from the quantitative survey responses alone. Contrary to the experience of students in traditional classrooms, students from the experimental classes displayed a more positive disposition to innovation or new ideas; for example, the one student stated that the '*instructor is not cowed by authority, but seeeks to help students develop their own thought*.' (In this statement, 'authority' is potentially the established tradition of a lecture-based humanities classroom.) In this case,

independent thinking was regarded as a positive. In fact, in the control courses, there was a strong trend against innovative teaching styles and a strong desire to learn in a traditional manner, even coming to the defense of the professor. For instance, one student reflected that

> '*He [the professor] taught primarily through lecture and class discussion, which I think is very helpful when teaching literature*,' and again, '*He allows for time to reflect on the lecture material as he goes through the slides and ha[s] us talk it through with others*.'

One more control student noted that '*I felt very challenged in my thoughts this semester but not because of innovative activities*.' And yet another included an exclamation point in the response: '*Pretty standard, but that's no big thing*!' The dominant trend in student responses in this section pertains to the fact that the flipped students neglected to even respond in this section of the survey with qualitative responses. The predominant responses in this section were from students in the control group, again, coming to the defense of their professor's traditional, lecture-based teaching methods. Interestingly, these qualitative responses stand in opposition to their reported quantitative selections on the pretest.

The flipped classroom allows for more student autonomy and ownership over curriculum, as shown in the *Autonomy* sub-scale. In a more advanced flipped mastery method (Bergmann & Sams, 2012, 2013; Bretzmann et al., 2013), not tested in this study, the tailorability of course content is the primary benefit of implementing the flipped teaching model. Some qualitative responses suggest that many students in our classrooms are not confident in their own autonomy. This statement from the control group suggests that this student has a tendency to procrastinate and appreciates the professor setting the pace of the course: '*If I worked at my pace the work would not get done'*. Additionally, students expressed a dependence on the professor as the authority. One student expressed a strong sentiment that the professors should be the ones driving the pace, content, and learning experience of all the students in the class:

> *I really like plain-class set up. He has the phd. He knows best. I want to hear him do most of the talking, not my peers. Loved it!*

This belief is not altogether uncommon in a more traditional private institution, especially one that is primarily lecture-driven. However, the flipped classroom requires more autonomy of its students, as noted in the following report from a student in a flipped class:

> *I throughly enjoyed the new dynamic in this class. Each break out activity helped me learn far more than I was expecting them to. I learned so much in this class and my interest in American Literature as greatly increased.*

Thus, with the inclusion of technology and ALTs to invigorate the learning space, students are able to more fully develop their own learning.

Implications for Teaching in Higher Education

The flipped classroom is an innovative technology-enhanced teaching technique that can augment the learning environment for a twenty-first century learner. Despite the fact that this study was set in a very traditional private institution, students who were involved in the flipped classrooms did not regard the use of technology as a negative thing. Thus, to help segue humanities students into a technology-driven vocation or job market, these findings suggest that traditional institutions should make intentional efforts to utilize more technology in the delivery and facilitation of learning, not less. The flipped method implemented in this study (Bergmann & Sams, 2012; Bretzmann et al., 2013) was sufficient for facilitating a different learning environment to those who participated in a traditional lecture-style humanities class.

Active Learning Techniques

Although there are many applications to be drawn from these findings, at least two are immediately relevant to higher educational professors, facilitating ALTs and conducting healthy experimentation. First, learning should be an active process, and the flipped classroom opens up more classroom time for professors to implement ALTs into the course discussions that are a treasured aspect of teaching in these settings. One complaint I have heard professors express is that they do not have time do more with technology in their course because they have to cover too much material as it is. This comment, however, demonstrates a lack of understanding for what the flipped classroom will allow professors to do with their classroom time. Engaging students in ALTs while the professor is with the students maximizes the time that professors have with students (Greenfield & Hibbert, 2017). As opposed to rehashing material that students read while they were not with the professor, professors in this study built on the reading material through the strategic use of debate, group-based writing prompts, and the study of historical artifacts (in an American literature course). Thus, professors can deepen student learning by engaging the learner in the material in a more meaningful and longer-lasting way (for on how to do this, see Bain, 2004; Coley, 2012; Felder & Brent, 2003; Greenfield & Hibbert, 2017; Harder, Callahan, Trevisan, & Brown, 2012; Prince, 2004). Because the transactional content of the lecture was allocated to short videos outside of classroom time, the professor was able to use the extra time to facilitate deeper learning activities during classroom time.

Healthy Experimentation

Professors who participated in the flipped classrooms anecdotally reported two advantages to implementing the flipped classroom. First, they gained new insights into their own material through the practice of creating the flipped videos. The process of identifying flippable lessons in preparation for the semester helped seasoned professors gain a fresh and new perspective on their content because they

were moving the material in their teaching that they found themselves having to repeat each semester into short videos (Coley, Hantla, Cobb, 2013; Zappe, Leicht, Messner, Litzinger, & Lee, 2009). This allowed these professors to maintain the essential background or contextual concepts of the class that they knew to be essential to student learning.

Second, preparing for their first flipped classroom afforded more opportunities for those aspects of learning that professors loved, i.e., student interaction. The additional classroom time that the flipped model opened up for professors helped facilitate more interactive and interesting conversation around the concepts and material than was otherwise possible. Thus, professors should experiment with different portions of their material to continue honing their craft while seeking out deeper student learning experiences. Thus, the preparation for the flipped classroom helped professors gain fresh insights into their own material, and implementation helped facilitate more exciting student interaction during the semester.

In conclusion, the flipped classroom is certainly a different style of teaching that accentuates the best aspects of active learning environments. In fact, all three of the experimental professors expressed anecdotally some trepidation and excitement about having to figure out something new to do during class time in addition to traditional lecture. However, this tendency to force educators to consider alternative ways of presenting material is likely one of the most positive impacts that the flipped classroom can have on humanities educators in educational settings.

References

Abeysekera, L., & Dawson, P. (2014). Motivation and Cognitive Load in the Flipped Classroom: Definition, Rationale and a Call for Research. *Higher Education Research & Development* (Online Preprint), 1-14. http://dx.doi.org/10.1080/07294360.2014.934336

Adler, M. J. (1998). *Paideia Proposal: An Educational Manifesto*. New York, NY: Simon and Schuster.

Allen, I. E., Seaman, J., & Garrett, R. (2007). Blending In: The Extent and Promise of Blending Learning in the United States. Paper presented at the *The Sloan Consortium*.

Allison, T. M. H. (2012). *The Impact of Classroom Performance System-Based Instruction with Peer Instruction upon Student Achievement and Motivation in Eighth Grade Math Students*. (Doctoral Dissertation), Liberty University, Blacksburg, VA.

Anderson, L. W., & Krathwohl, D. R. (2001). *A Taxonomy for Learning, Teaching, and Assessing : A Revision of Bloom's Taxonomy of Educational Objectives*. New York, NY: Longman.

Bain, K. (2004). *What the Best College Teachers Do*. Cambridge, MA: Harvard University Press.

Barkley, E. F. (2009). *Student Engagement Techniques: A Handbook for College Faculty*. San Francisco, CA: Jossey-Bass.

Bergmann, J., & Sams, A. (2012). *Flip your Classroom: Reach Every Student in Every Class, Every Day*. Eugene, OR: International Society for Technology in Education.

Bergmann, J., & Sams, A. (2013). Flip your Students' Learning. *Educational Leadership, 70*(6), 16-20. Retrieved from ASCD website: http://www.ascd.org/publications/educational-leadership/mar13/vol70/num06/Flip-Your-Students%27-Learning.aspx

Bernard, H. R. (2013). Social Research Methods: Qualitative and Quantitative Approaches (2nd ed.). Los Angeles, CA: Sage.

Bretzmann, J., Bennett, B., Witten, H., Seigel, M., McLaren, A., Stevens, J., . . . Peppler, C. (2013). *Flipping 2.0: Practical Strategies for Flipping Your Class* (J. Bretzmann Ed.). New Berlin, WI: The Bretzmann Group.

Choi, H. J., & Johnson, S. D. (2005). The Effect of Context-Based Video Instruction on Learning and Motivation in Online Courses. *The American Journal of Distance Education, 19*(4), 215-227.

Coley, K. S. (2012). Active Learning Techniques in the Christian Education Classroom and in Ministry Contexts. *Christian Education Journal, 9*(2), 357-371.

Coley, K. S., Hantla, B. F., & Cobb, C. (2013). *Best Practices for Beginning a Flipped Classroom in the Humanities*. Paper presented at the *North American Professors of Christian Education Annual Conference,* Chicago, IL. http://www.napce.org/documents/!pdfs/papers-2013/hantla.pdf

Deslauriers, L., Schelew, E., & Wieman, C. (2011). Improved Learning in a Large-Enrollment Physics Class. *Science, 332*(6031), 862-864. doi: 10.1126/science.1201783

Ebbeler, J. (2013). "Introduction to Ancient Rome:" The Flipped Version, Commentary, *Chronicle of Higher Education*. Retrieved from http://chronicle.com/article/Introduction-to-Ancient/140475/

Faculty Focus. (2015) Trends in the Flipped Classroom: A Survey of College Faculty, *Faculty Focus Special Report*. Retrieved from http://www.facultyfocus.com/free-reports/flipped-classroom-trends-a-survey-of-college-faculty/

Felder, R. M., & Brent, R. (2003). Learning by Doing. *Chemical Engineering Education, 37*(4), 282-309.

Fraser, B. J. (1998). Classroom Environment Instruments: Development, Validity and Applications. *Learning Environments Research, 1*(1), 7-34.

Fraser, B. J., Treagust, D. F., & Dennis, N. C. (1986). Development of an Instrument for Assessing Classroom Psychosocial Environment at Universities and Colleges. *Studies in Higher Education, 11*(1), 43-54.

Gaikwad, P. (2012). Flipping: The Comfortability and Workable Aspects in Higher Education. *CiderOnline*. http://www.cideronline.org/proposals/proposals/pid1266.docx

Greenfield, G., Hibbert, P. (2017). Reflective and Reflexive Practices in the Flipped Classroom. In C. Reidsema, L. Kavanagh, R. Hadgraft, & N. Smith (Eds.) *The Flipped Classroom: Practice and Practices in Higher*

Education (pp. 75-86), Singapore: Springer Nature.

Hamdan, N., McKnight, P. E., McKnight, K., & Artfstrom, K. M. (2013a). The Flipped Learning Model: A White Paper Based on the Literature Review. *Flipped Learning Network.* Retrieved January 30, 2015, from http://flippedlearning.org/cms/lib07/VA01923112/Centricity/Domain/41/WhitePaper_FlippedLearning.pdf

Hamdan, N., McKnight, P. E., McKnight, K., & Artfstrom, K. M. (2013b). A Review of Flipped Learning. *Flipped Learning Network.* Retrieved January 30, 2015, from http://flippedlearning.org/cms/lib07/VA01923112/Centricity/Domain/41/LitReview_FlippedLearning.pdf

Hantla, B. F. (2014). *The Effects of Flipping the Classroom on Specific Aspects of Critical Thinking in a Christian College: A Quasi-Experimental, Mixed-Methods Study*. (Doctoral Dissertation), Southeastern Baptist Theological Seminary, Wake Forest. Retrieved from http://gradworks.umi.com/3581138.pdf Proquest database.

Harder, R. J., Callahan, R. C., Trevisan, M. S., & Brown, A. H. (2012). The Big Picture in Your Classroom: Focusing the Instruction in a Social Kaleidoscope. In: *Teaching Strategies: A Guide to Effective Instruction* (pp. 21-36). Belmont, CA: Cengage Learning.

Johnson, G. B. (2013). *Student Perceptions of the Flipped Classroom.* (Master's Thesis), The University of British Columbia, Okanagan. Retrieved from http://hdl.handle.net/2429/44070 cIRcle database.

Khan, S. (2011). Let's Use Video to Reinvent Education. Retrieved January 30, 2015, from http://www.ted.com/talks/salman_khan_let_s_use_video_to_reinvent_education.html

Lakens, D. (2013). Calculating and Reporting Effect Sizes to Facilitate Cumulative Science: a Practical Primer for *t*-tests and ANOVAs. *Frontiers in Psychology, 4*(863), 1-12. doi: 10.3389/fpsyg.2013.00863

Maslow, A. H., Frager, R., Fadiman, J., McReynolds, C., & Cox, R. (1970). *Motivation and Personality*. New York City, NY: Harper & Row Publishers.

McCredden, J., Redsema, C., Kavanagh, L. (2017). Designing an Active Learning Environment Architecture Within a Flipped Classroom for Developing First Year Student Engineers. In C. Reidsema, L. Kavanagh, R. Hadgraft, & N. Smith (Eds.) *The Flipped Classroom: Practice and Practices in Higher Education* (pp. 97-130), Singapore: Springer Nature.

McLaughlin, J. E., Griffin, L. M., Esserman, D. A., Davidson, C., Glatt, D. M., Roth, M. T., . . . Mumper, R. J. (2013). The Flipped Satellite Classroom: Student Engagement, Performance, and Perception. *American Journal of Pharmaceutical Education, 77*(9): 196-203.

McLaughlin, J. E., Roth, M. T., Glatt, D. M., Gharkholonarehe, N., Davidson, C., Griffin, L. M., . . . Mumper, R. J. (2014). The Flipped Classroom: A Course Design to Foster Learning and Engagement in Health Professions Education. *Academic Medicine 89*(2), 236-243.

Moos, R. (1979). Evaluating Educational Environments: Procedures, Methods, Findings and Policy Implications. San Fransisco, CA: Jossey-Bass.

Moussa-Inaty, J. (2017). Student Experiences of a Blended Learning Environment. *International Journal of Learning, Teaching and Educational Research, 16*(9), 60-72. https://doi.org/10.26803/ijlter.16.9.5

Musallam, R. (2011). Should You Flip Your Classroom? *Edutopia.* http://www.edutopia.org/blog/flipped-classroom-ramsey-musallam

Naismith, L., Sharples, M., Vavoula, G., & Lonsdale, P. (2004). Literature Review in Mobile Technologies and Learning. *FutureLab Series, 11*, 1-44. http://archive.futurelab.org.uk/resources/documents/lit_reviews/Mobile_Review.pdf

O'Flaherty, J., & Phillips, C. (2015). The use of Flipped Classrooms in Higher Education: A Scoping Review. *The Internet and Higher Education, 25*, 85-95.

Ostashewski, N., Martin, R., & Brennan, A. (2014). Blended Learning and Digital Curation: A Learning Design Sequence. In J. Keengwe (Ed.), *Models for Improving and Optimizing Online and Blended Learning in Higher Education* (Online Pre-Print ed., pp. 173-188). Hershey, PA: IGI Publishing.

Prince, M. (2004). Does Active Learning Work? A Review of the Research.

Journal of engineering education, *93*(3), 223-231.

Salkind, N. J. (2008). *Statistics for People who Think They Hate Statistics* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Strayer, J. F. (2007). *The Effects of the Classroom Flip on the Learning Environment: A Comparison of Learning Activity in a Traditional Classroom and a Flip Classroom that used an Intelligent Tutoring System*. (Doctoral Dissertation), The Ohio State University.

Strayer, J. F. (2012). How Learning in an Inverted Classroom Influences Cooperation, Innovation and Task Orientation. *Learning Environments Research*, 1-23.

Wlodkowski, R. J. (2011). Enhancing Adult Motivation to Learn: A Comprehensive Guide for Teaching All Adults. San Fransisco, CA: John Wiley & Sons.

Zappe, S., Leicht, R., Messner, J., Litzinger, T., & Lee, H. W. (2009). *Flipping the Classroom to Explore Active Learning in a Large Undergraduate Course.* Paper presented at the American Society for Engineering Education.