Best Practices for Beginning a Flipped Classroom in the Humanities

Author Names: Kenneth Coley, Ed.D.; Bryce Hantla, M.A.; Chris Cobb, M.A.

Affiliation: Southeastern Baptist Theological Seminary

Emails: kcoley@sebts.edu, bhantla@sebts.edu, chriscobb21@msn.com

Abstract

The flipped teaching method – a method where students complete in class that which they used to complete at home and vice versa – reaches 21st century learners on an engaging level. This teaching method has predominantly been implemented in science, technology, engineering, and mathematics (STEM) classrooms. However, Christian educators who teach non-STEM classes should implement the flipped teaching method as an integral classroom tool to extend teaching time as well as engage and equip learners. The presenters have synthesized six key insights from the literature to form the ATRACT model for what to expect when flipped teaching in humanities settings: 1) Autonomous learning is empowered learning, 2) Technical issues happen, 3) Resistance from students… at first, 4) Align videos with classroom time, 5) Consistent structure, and 6) Time for student flexibility. In addition to a thorough literature review, the researchers recently conducted two formal studies experimenting with flipped teaching: one dissertation is in process examining flipped teaching's effect on critical thinking variables in a humanities college and one case study in a secondary Bible class. The presenters will discuss

some preliminary results from these studies and will provide some additional best practices for beginning a flipped course in humanities settings.

Keywords: flipped classroom, student engagement, best practices, Christian education, inverted classroom

Best Practices for Beginning a Flipped Classroom in the Humanities

The research supporting active learning techniques (ALTs) has grown in recent years (Bain, 2004; Coley, 2012; Felder & Brent, 2003; Prince, 2004). ALTs, a teaching technique that "engage[s] the learning in the actual instruction that takes place" (Harder, Callahan, Trevisan, & Brown, 2012), bring the learning process into the classroom in a way that a more traditional classroom lecture oftentimes does not. Excellent teaching techniques are based on the goal of "students becoming the agents of their own learning rather than the object of instruction" (Hamdan, McKnight, McKnight, & Artfstrom, 2013b, p. 4), and these techniques are designed to get at the deepest levels of Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001). Additionally, in a recent literature review, Hamdan et al. (2013b) recognized that teachers achieved "increased student engagement, critical thinking, and better attitudes toward learning" when ALTs were applied. However, the practical application of implementing ALTs is not always a simple matter of shifting from lecturing less to doing group work or activities more often. Thus, how can instructors in Christian educational settings spend class time more effectively?

In their recent book, Bergmann and Sams (2012) discuss the advantages of incorporating the *flipped* teaching method, which is a method designed to deliver "instruction online outside of class and [move] 'homework' into the classroom, where students are able to discuss the topic in-

depth [*sic*]" (Poore, 2013, p. 21). In light of recent advances in technology as well as student comfortability with these technologies, Christian educators should not feel the need to forego completely the direct instruction that can be so important in the learning process. Using the flipped model, educators can incorporate engaging ALTs into their time with students while still providing an opportunity for students to receive critical direct instruction on material pertinent to the content of the course. Flipped teaching is not simply about using video in the classroom (Bergmann & Sams, 2013, p. 16); instead, this teaching method can be applied in a number of settings and may take on a number of different forms, depending on the teaching style and learning theory the instructor prioritizes in his or her instruction.

Finally, the other benefit of flipping your classroom is that you are able to obtain a wide variety of feedback from your students during class time. (Bergmann & Sams, 2012) highlight the fact that when they flipped their classes, they were able to obtain immediate, informal feedback from students as well as assess formal presentations and research projects that they did not have time for under a more traditional lecture-only teaching paradigm. Additionally, under their recommended mastery teaching method (Block & Burns, 1976), Bergmann and Sams (2012) were able to allow students to work ahead, presenting work to teachers (or completing assignments online) when the students were ready, not when the pace of the course dictated. Assessing student work as students completed it freed up the educators to circle the room, have meaningful conversations with their students that were germane to the subject matter, and gauge understanding and comprehension during class.

Thus, in this presentation, we present the basic components of the flipped teaching method and a series of best practices that we derived from a rather extensive literature review. In addition to the literature review, we have been working together to assess the effectiveness of

flipped teaching through two separate formal research projects. We present the methods of these research endeavors and some findings from our experiences.

Best Practices Derived from the Literature

If done effectively, flipped teaching will *attract* your students to your topic and engage them more fully in the course material. Thus, we developed the ATRACT model (forgive the expedient spelling), derived from the most current findings in the literature, to help you begin designing a flipped course:

- Autonomous learning is empowered learning,
- Technical issues happen,
- Resistance from students… at first,
- Align videos with classroom time,
- Consistent structure, and
- Time for student flexibility.

Applying these principles will help you avoid some of the major missteps educators encounter when they begin implementing this powerful teaching tool into their repertoire. The rest of this section outlines the ATRACT model in more detail.

Autonomous learning is empowered learning

Students who take personal responsibility for their own education, those who really own it, are more successful than students who are passive, unmotivated, or who simply go through the motions. This should not come as a surprise to anyone, but in his book on motivating adult learners, Wlodkowski (2011) discusses how motivation is foundational in motivational theory (pp. 189-190), and Schunk (2012) places his chapter on self-regulation – added new to the sixth edition – immediately after his chapter on student motivation. These two concepts are becoming

more prominent in education, and flipping the lecture-homework paradigm promotes more self-regulation and autonomy in how students interact with the course content. This component is central to a recent study by McLaughlin, Roth, et al. (In Press), whose pharmacology students reported feeling more responsible for the "homework," which in their inverted model was actually a mini-lecture. For them, preparing for class ahead of time meant richer discussions and more intelligent questions; consequently, they did not find themselves studying as long for tests. Students may not initially notice this new educational economy, but the trade-off between preparing for class versus cramming for tests moves more information into long-term memory and makes for more self-regulated students.

From a Christian perspective, Bailey (2012) discusses the importance of student motivation and autonomy. For Christian students, education is a part of stewardship (Ryken, 1995), as is disciplining oneself for righteousness (Foster, 1988; Moreland, 1997). Seen in this way, Philippians 2:12 rings especially true in congregational and educational settings in that we should all seek to work out our "own salvation with fear and trembling."

Upon this theoretical foundation of student autonomy, this literature review builds out into the other issues that you may encounter when beginning to flip your classroom.

Technical issues happen

One of the major issues that most faculty will encounter with flipping their classroom is going to be technology issues. Nothing can take the wind out of your sails faster when you're trying to keep the momentum going in a class than to have a technical malfunction for something new you've imbedded in a PowerPoint™ or to be missing that critical add-in on the only web browser your school has installed on the computer hooked up to the projector. These things happen, and it's typically our students (who intuitively know more about technology than us)

who bail us out. As frustrating as these moments can be, it is those students who are so proficient with technology and whose worldviews are so heavily shaped by it who we are trying to teach. Because our students in the next ten years will never have known a world without email, the Internet, iPhones, and texting, it is critical for us as their teachers to meet them where they are, in formats that are comfortable to them, in order to engage them and bring them along in their intellectual spiritual formation.

With that said, most articles that address flipped teaching speak to the technical issues you may encounter while starting out. Unfortunately, unless they're directly sponsored by, and thus promoting, an educational technology company (see, e.g., Bergmann and Sams (2013); Hamdan, McKnight, McKnight, and Artfstrom (2013a); Khan (2011); Knewton (2013); McLaughlin, Roth, et al. (In Press); Pearson (2013a, 2013b) to name a few), these articles' main purposes are not designed to be technical manuals for how to upload videos, post them in your school's learning management system (LMS), or even create videos on your own. In fact, the sole book on the topic, by Bergmann and Sams (2012), frequently begins to get specific about technology, but then, the authors typically pull back and direct you to your local information technologies (IT) supervisor (for more of my frustrations with this tactic, see Hantla (In Press)). On the one hand, this technique is understandable in that the authors do not want to promote or detract from someone choosing a particular technology and because technology changes so rapidly that a book will soon become outdated if it gets too specific. However, even pointing out some things that did not work would have been more helpful than skirting the issue altogether.

McGivney-Burelle and Xue (2013) offer some helpful advice regarding how to cope with technical issues when beginning a flipped method (pp. 484-485):

- Allow for some more time on the front end so that you can have as many videos posted as possible prior to beginning the course.
- Review your technology options and be consistent with what you decide to do (see section on Consistent Structure below)
- Use previously prepared videos by professional publishers.

Depending on the resource, however, we might caution you at McGivney-Burelle and Xue's (2013) last point. Flipping works best – especially when you're just beginning – with consistent structure. Additionally, your students chose your class, and they want (and are paying) to learn from you – so don't be quick to "punt" to other resources unless they are expertly put together and unless they apply directly to the activity you have planned for your students in class (see more on this under the section titled Align video learning with classroom learning).

Resistance from students… at first

This point may sound like a bit of a paradox to how we set up the previous point about the upcoming class of 21st Century learners, but your students believe they learn best when they are listening to someone else think for them in a traditional lecture class. In early studies on flipped teaching, student comfortability with both the technology and the ALTs was very low (Gaikwad, 2012; Lage, Platt, & Treglia, 2000; Strayer, 2012). However, as instructors became more proficient with the method, student self-report data in qualitative studies reflected more satisfaction with both the videos and the interactive classroom methods (McGivney-Burelle & Xue, 2013; Smith, 2012; Smith & Smith, 2012). In an interesting turn, the students in a study by McLaughlin, Roth, et al. (In Press) expressed that they did not believe technology-driven classrooms to be effective at the beginning of the semester, whereas by the end of the semester, responses to the effectiveness of the method had significantly changed ($p < .001$). Note that you

may not expect these results with your students, as we believe humanities and theology students take to technology somewhat differently than students in STEM settings, which is where most of these previous studies have been conducted. Nevertheless, just because your students may not be proponents of the method at the beginning of the semester does not mean that flipped learning is not effective.

Align video learning with classroom learning

Most courses are intentional about the curriculum they include in the class, so video lectures should be no different. Students often find it frustrating when textbook selections do not seem relevant to a class discussion, so the classroom activity that takes place after a video lecture that has been assigned for homework should be explicitly and directly related to what you plan to do in class (see the four pillars of flipped teaching in Hamdan et al. (2013a, 2013b)). In a humanities setting, Ebbeler (2013) suggests tying the content of the video lecture in directly with the following class's activity, and Ebbeler's (2013) course was a large archeology lecture class ($n \sim 400$ students), making strategic planning essential due to the involvement of multiple teaching assistants.

For flipped teaching, aligned lectures and activities are truly where *gnosis* meets *praxis*, respectively: the concept-driven lecture can be reinforced and extended through higher cognitive processes according to Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001), such as applying, evaluating, analyzing, and creating. The following is a brief selection of ideas you might think about for your class:

- Give your students an opportunity to create a project and present it in class;
- ask them to analyze a brand new passage of the Bible in light of a theological assumption or a hermeneutical principle;

- bring home a theological concept using a well-designed case study in a congregational setting or have your students create and discuss their own case studies in class while you facilitate their group work;
- host a debate and have the students evaluate both sides of a historico-political situation without feeling guilty about losing out on the *content* of the course.

The possibilities for implementing ALTs are only limited by your imagination, and you still have the opportunity to condense a great deal of conceptual material down for your students in the form of video lectures.

Consistent structure

Ebbeler (2013) discusses how important it is for students to see the structure you are using when you implement flipped teaching into your instructional methodology. Because students are not going to be accustomed to being responsible for their own education (by and large), they will require a bit more coaching on how they should interact with your course if they hope to be successful. This can be accomplished simply be using good teaching practices, such as including flipped lessons in your syllabus at the beginning of the semester (even if you have not filmed all the lessons yet), being explicit about why you decided to set up your class the way you have, and keeping them accountable for completing the out-of-class work. One thing that McCammon (2009) recommends is to model for students how they are to watch video lectures. In a pilot study for his dissertation, Hantla obtained better results from students by modeling good flipped study habits, such as stopping the video to catch up on notes, closing other browsers or tabs while watching the video, rewinding the video to better understand a concept, and rewatching a video before a test or another assignment comes due (unpublished results). To good educators, who were typically good students, these practices seem almost intuitive, but for some

of our students, these study habits may not come naturally but will save them time and frustration while going through the semester.

In addition to seeing your course structure, Ebbeler (2013) suggests keeping the pacing of the course consistent. If you aim to have the students watch one video per week for a three-day-per-week class, try to keep the flipped lesson on the same day. This structure will help students remember what they were supposed to have accomplished before class and will keep you from getting frustrated over a potential lack of participation in essential out-of-class work. Additionally, Ebbeler (2013) used a consistent feedback timetable in the form of reflective journal entries (graded by completion credit), prepared questions from students, and short quizzes on video content (posted online for students to complete before coming to class). This final quizzing method was also employed in the McGivney-Burelle and Xue (2013) study and may save you time in the long-run; however, you may want to create the videos the first semester and the quizzes the next so that you are not spending an inordinate amount of time preparing.

Time for students to be flexible

Because one of the main advantages of the flipped method, from a student perspective, is its potential for flexibility, it is important to prepare for a flipped course in such a way that students can actually be flexible. In other words, it is best to have as many videos available for student access as possible when the semester begins. In fact, McCammon (2009) offers "flipped training boot camps" for instructors to film pre-prepared lectures over the summer, and we believe that this is an excellent practice for those who wish to avoid mid-semester fatigue and technical issues.

Some professors have addressed this by simply using videos of themselves lecturing in class venues from previous semesters, but the research overwhelmingly indicates that this is not

the best method for flipped settings (Alvarez, 2012; Bergmann & Sams, 2011, 2012; Ebbeler, 2013; Gerstein, 2013; Hamdan et al., 2013b; Honeycutt, 2013; McCammon, 2009; McLaughlin, Roth, et al., In Press). Instead, designing short (<15 minutes), concept-heavy mini-lectures on topics consistently covered from one semester to the next allows students the opportunity to watch lectures outside of class without asking them to make a decision between reading required works and watching required lectures. These mini-lectures also maintain student attention while allowing them to practice the aforementioned modeled study practices (e.g., stopping, rewinding, or rewatching). Students who are given the option to front-load their semester with videos or watch videos synchronously with required readings and course activities are more likely to complete all the assigned work, not just the work they have time for when it is assigned.

In summary, we derived the above-described ATRACT method from the best practices in the literature on flipped teaching published thus far. However, very few researchers have conducted rigorous empirical studies on this method due to its relative newness, and the next several years of research and application of this method will certainly yield more information from which we can strengthen our application of flipped teaching in the classroom. In hopes to broaden this field of research, the next section discusses two studies currently underway on the flipped method in secondary and higher Christian educational settings.

Methods for Previous Studies

All the presenters have been involved in a number of experimental and survey-type studies on flipped teaching, and throughout the course of these studies, we have uncovered a number of helpful suggestions for those who are interested in implementing a flipped classroom into their teaching repertoire. The following sections outline the methods for the two principal

studies with which these researchers have been involved over the course of the last academic year.

Study 1: Hantla Dissertation

Research Purpose

Because classroom flipping has not been heretofore empirically explored in Christian educational settings, the purpose of this quasi-experimental, mixed-methods study is to explore the effects of classroom flipping on specific aspects of students' critical thinking in a Christian undergraduate college. Thus, the research problem that this dissertation explores is the effect a flipped classroom has on specific aspects of critical thinking in college humanities classes. The research questions are stated as follows:

RQ1: How do the principles integrated into a flipped classroom align with the teaching principles of the Bible?

RQ2: To what degree, if any, does flipping the classroom affect student success on the critical thinking variables of the CASE Rubric (clarifying an issue, arguing with evidence, situating a perspective, and integrating an argument in a real-world setting in a research essay)?

- **$H_0$1:** Flipping the classroom has no significant relationship with the critical thinking variables of the CASE Rubric.

RQ3: To what degree, if any, does flipping the classroom affect student success on the critical thinking variables of the California Critical Thinking Skills Test (CCTST) (Analysis, Evaluation, Induction, Deduction, and Inference)?

- **$H_0$2:** Flipping the classroom has no significant relationship with the CT variables of the CCTST.

RQ4: How do the CT variables of the CASE rubric relate to the CT variables of the CCTST?

RQ5: What effect, if any, does flipping the classroom have on student perception of the learning environment compared to traditional teaching methods?

Subjects

Southeastern Baptist Theological Seminary (SEBTS) has reviewed and approved this dissertation to be used in the undergraduate college: The College at Southeastern. As of the spring semester of 2012, the college has 650 students, and n = 119 students agreed to participate (response rate = 91.54%). During the spring semester 2013, the researcher (B.H.) recruited full-time faculty members who were interested in learning more about the flipped method. A total of three professors agreed to participate as experimental professors, and three professors teaching similar courses agreed to serve as matched controls for the experimental sections (n = 6 professors). The study period began at the beginning of the fall semester 2013 and is over at the end of the term.

Course Sections

Because this study is volunteer-based, the number of students in a professor's classes who volunteer determined the actual sample size. Thus, ten sections were included in this study: five sections were the experimental sections, and five sections were matched controls. The experimental (matched control) courses included in this dissertation were as follows: one experimental Theology III (one control Theology III), two American Literature Surveys (two British Literature Surveys), and two experimental Composition I (two control Composition I).

Prior to the beginning of the fall semester 2013, the researcher and the experimental professors collaborated on which lessons should be flipped, various ALTs the experimental

professors would use to support and extend student learning, as connected with the video lectures, and the outcomes the students would be working toward for each respective lesson. The experimental professors were asked to flip at least 25% of their class sessions, apportioning some of the class time for targeted ALTs connected with the video lecture. Students were required to watch and take notes off of these video lectures prior to attending class.

Research Design

This dissertation is a quasi-experimental study, which is a study in which it is impractical to control for all confounding variables, making it impossible to rule out other explanations for obtained results. Additionally, quasi-experimental studies are most common in educational settings because they cannot randomize enrolled subjects (McLaughlin, Griffin, et al., In Press; McLaughlin, Roth, et al., In Press; Mills, 2011; Stringer, 2007). This dissertation is also a mixed-methods study that utilizes a three-point triangulation scheme for increased validation. Thus, the qualitative data are used to elucidate the observations made from the quantitative data.

Data Collection

The data are collected in three major phases, two of which are pretest-posttest designs and one of which is a single assessment for a course research paper. The researcher used student IDs to link all pretests and posttests to maintain anonymity, and the researcher made great efforts to ensure that student data regarding the class remained hidden from course professors throughout the duration of the study. Additionally, no specific student information was made available to professors of the courses. The following sections outline the three assessment phases for the study.

CUCEI. The first pretest-posttest assessment is an adaptation of the College and University Classroom Environment Inventory (CUCEI) taken from previous studies (Strayer, 2007, 2012).

The pretest survey analyzes student perceptions for how they would prefer an ideal classroom environment to be set up and is based on a 5-point Likert-type scale, where 1 = Strongly Disagree and 5 = Strongly Agree. Students completed this survey online through a Google Form™ that the researcher made available to students after they submitted their consent form. The posttest survey, based on the same 5-point Likert-type scale as the pretest, analyzes how the classroom actually operated (i.e., as opposed to how they preferred an ideal classroom to operate).

CCTST. The second pretest-posttest assessment, the California Critical Thinking Skills Test (CCTST), is a multiple-choice test that measures a number of variables related to critical thinking. Specifically, these variables are analysis, interpretation, inference, evaluation, explanation, induction, and deduction. In addition, this test provides an overall score, which the researcher will norm to the local college population. Each variable is distinct, as determined by the definition of critical thinking produced by The Delphi Report (P. A. Facione, 1990), which is consistent with the major categories for higher-order thinking in Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001). A large number of previous studies have confirmed the validity and reliability of this test for the purposes of assessing critical thinking (see the work of N. Facione, Winterhalter, Kelly, and Morante (2013) for a more in-depth explanation of content, construct, and criterion validity, as well as reliability and previous studies conducted using the CCTST (p. 45ff)).

CASE Rubrics. As opposed to the previous methods for data collection, the College at Southeastern (CASE) Rubrics are a one-time, posttest assessment that will be used to assess a writing sample for each student enrolled in the dissertation. Each course has developed a particularized "common" rubric that is based on an institutional CASE Rubric that the SEBTS

implemented as a result of is Quality Enhancement Plan for the school's recent accreditation review (Akin et al., 2012). The professors will apply the standards of this rubric to a research paper assessed toward the end of the semester. The rubric includes four major categories that assess seven different student learning outcomes related to critical thinking. Because each of these common rubrics were derived from the institutional critical thinking rubric, the major categories can be correlated with one another to determine student levels of critical thinking between the experimental and control courses (Condon & Kelly-Riley, 2004; Kelly-Riley, Brown, Condon, & Law, 2001).

Because this dissertation is currently in progress, the researcher (B.H.) has chosen to present here only the best practices from the literature review (see previous section), not the results from his dissertation.

Study 2: Cobb Study

Participants

One teacher and thirteen students (n = 13; 6 males and 7 females) from an Association of Christian Schools (ACSI)-accredited Christian high school in a suburban city of a Rocky Mountain Region state participated in the study. The class chosen for this study was Systematic Theology. Topics covered during the semester included Pneumatology, Anthropology, Soteriology, Ecclesiology, and Eschatology. Every student is required to take a yearly Bible course. This particular course is offered as a junior level class (one sophomore was admitted during this study). In sequence, students should have completed one full year of Old Testament Survey and one full year of New Testament Survey before taking the class. The study was conducted and the data were collected during the spring semester 2013, from January to May.

Before conducting the study, the school principal approved the use of the classroom and gave permission for the teacher to have access to the students. Because the students were all younger than 18 years of age, parent letters were sent home, and written parental consent was given for the students participating in the study. The teacher (C.C.) operated in this study as a participant observer (Leedy & Ormrod, 2010; Mills, 2011). The teacher created and taught twelve flipped lessons throughout the course of the spring semester (approximately 15% of the total days represented in the semester), and he also took field notes (Mills, 2011, pp. 74-75) and wrote weekly reflection journals (Pollard, 2002). The students participated through weekly reflection journals (i.e., a learning log) and completed a summative survey at the end of the semester.

Data Collection

Teacher reflection journals. To gain a better understanding of how flipped lessons affect teachers, the researchers initially researched various methods of flipping the classroom and established that the method used by McCammon (2009) was straightforward and simply enough for easy implementation in a secondary educational setting. After analyzing these methodologies, the teacher (C.C.) decided to create twelve flipped lessons that he divided over twelve weeks during the spring semester (six lessons per quarter). After every lesson, the teacher drafted weekly journals to document how well the technology worked for the students, their engagement with the lesson, their understanding of the material, and other observations he made throughout the course of the lessons.

Student reflection journals. After each flipped lesson, every student completed a journal and turned the journal into the teacher. The teacher provided questions for students to answer about their learning style, their understanding of the material, their enjoyment of the

activities, and their retention of the material. McKnight and Berlage (2007) suggest that, "Academic journal writing – the process of writing personal thoughts or responses to a text in a notebook or journal – allows students to slowly develop a personal connection with their own writing and with the text they are reading." This process can help students tap into their personal knowledge, and it will provide them with the opportunity for reflection and contemplation of their own thoughts or feelings about a text they are reading or concepts they are learning during a lecture.

End of course survey. After the students were a part of the twelve flipped classes, they took a survey to help triangulate the data. The survey asked students included Likert-type questions as well as open-ended questions. The questions asked how often they would rewind the videos to get the information and why they did so. Also, questions asked them about their engagement in the classroom activities after they watched the videos. They were also asked about their favorite aspects of the flipped classes and what they would do different given the chance.

Research Design

Research Method. This study included a mixed methods approach. Qualitatively, the researcher asked broad, sweeping questions of the students to determine their perceptions of the flipped classroom model. Additionally, the end of course survey gave data concerning the raw data involved, gauging student motivation, involvement and engagement.

Research Procedure. The teacher (participant observer) began by randomly choosing twelve weeks during the semester to flip the classroom. During those weeks, students were notified ahead of time of the day of the flipped lesson and given time to watch each video. The teacher recorded the videos using a camcorder, which was immediately uploaded to Dropbox™,

an online storage program. Once the videos were stored in Dropbox™, the teacher edited it (if necessary) and uploaded it to YouTube™. The videos were approximately 8-13 minutes long depending on the content required for the week. Students were given the YouTube™ link and were required to watch the video on their own time and take notes. The teacher checked the students' notes in class the following day to ensure the assignment was completed.

During the class sessions, students were broken up into three or four groups to discuss the content from the video lecture in further detail. Additional questions and activities were given to each group. After a brief discussion, the groups reported the results of their discussion or group work to the entire class at the end of class period. Following this assignment, students were given a question to reflect on as it pertained to their retention of the material or other pertinent information. The teacher then compiled and recorded their answers and assessed their retention of the material through weekly assessments. The teacher also kept a weekly journal discussing the hardships or successes encountered through the process. At the end of the twelve flipped lessons, students took the end of course survey and gave feedback about their experience.

Results from Study 2

As a teacher, I cannot overemphasize how beneficial the flipped classroom model was for me as a teacher and for my students. The greatest benefits were regarding student engagement and in how our class was able to apply theological concepts. The students seemed very pleased with the videos and activities, and many told me how beneficial it was for them. One of the responses I received the most involved how glad they were to have a video they could rewind and watch over again if they missed something. The results of the qualitative survey indicated that the majority of students rewound the lectures on the videos to better understand concepts and copy down notes that they missed the first time they listened to the video. In response to a

question on the survey, students self reported that they were more engaged during the lessons following the flipped lesson. When asked about how engaged they were in regular class days with lecture, 30.77% of students said they were very engaged; however, during flipped lessons, the self reported level of engagement jumped to 61.54%.

Although there are many benefits to flipping lessons in a theology class, there are some areas in which flipping was difficult or more time-consuming than teaching in a more traditional manner. The technology aspect of flipping the classroom can be a deterrent if the Internet is not accessible or if it is slow, making it difficult to upload videos. I encountered several problems with technological issues throughout the semester (e.g., the link I would send out to students for the YouTube™ videos sometimes didn't work, the video was too large for students and would buffer for a long time, and sometimes, some students mentioned have trouble getting my emails). Another difficulty I encountered was with regard to the amount of additional time required to make this method work. I had to plan on at least 30 minutes of extra prep time to record my video every week. Many Christian school teachers do not have more than one planning period per day, making it unfeasible for a teacher to complete this work during the school day. However, making the time for this method will be well worth it.

It should be noted here that this method is front-loaded and that the time I will spend in subsequent semesters using this method will be reduced because I will not be rerecording all new videos. However, I will rewatch videos I made previously and will likely find things that require editing.

Conclusion

The investment of time and ingenuity often yields the greatest return. The flipped teaching method will require some extra effort on the part of the teacher, but the results will

speak for themselves. This teaching method is not just for STEM classes, even though much of the precedent literature has focused on those courses. Christian educators in any context can flip their classrooms to help their students attain their learning goals. The formal studies mentioned above suggest a number of effective ways in which educators can use these models in both humanities and theological settings. Teachers can certainly benefit from our work in the literature review regarding what to expect from the flipping method and how helpful the ATRACT model can be for those interested in flipping their classroom: 1) Autonomous learning is empowered learning, 2) Technical issues happen, 3) Resistance from students… at first, 4) Align videos with classroom time, 5) Consistent structure, and 6) Time for student flexibility.

The key word that keeps coming up in any discussion about flipped teaching is "engaged." Students in any context must remain engaged in the course content if they are to accomplish the course outcomes, and flipping the classroom helps students engage the material and allows teachers to better assess the learning that is taking place both in and out of the classroom.

Acknowledgements

We would like to thank DefTech High-Definition Technologies for sponsoring Bryce Hantla's travel expenses. Without this benefit, he certainly would not have been able to present.

References

Akin, D., Keathley, K., Travers, M., Burkett, J., Borger, T., Finn, N., & Hantla, B. (2012). Arguing the CASE: Critical Thinking through Writing. *Quality Enhancement Plan*, 1. http://www.sacscoc.org/pdf/2012trackbqeps/SoutheasternBaptistTheologicalSeminaryQEPExecutiveSummary.pdf

Alvarez, B. (2012). Flipping the Classroom: Homework in Class, Lessons at Home. *Education Digest: Essential Readings Condensed for Quick Review, 77*(8), 18-21.

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: Longman.

Bailey, K. G. (2012). Faith-Learning Integration, Critical Thinking Skills, and Student Development in Christian Education. *Journal of Research on Christian Education, 21*(2), 153-173.

Bain, K. (2004). *What the best college teachers do*. Cambridge, MA: Harvard University Press.

Bergmann, J., & Sams, A. (2011, 2011). How the Flipped Classroom is Radically Transforming Learning. Retrieved from http://www.thedailyriff.com/articles/how-the-flipped-classroom-is-radically-transforming-learning-536.php

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

Block, J. H., & Burns, R. B. (1976). Mastery learning. *Review of Research in Education, 4*, 3-49.

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

Condon, W., & Kelly-Riley, D. (2004). Assessing and teaching what we value: The relationship between college-level writing and critical thinking abilities. *Assessing Writing, 9*(1), 56-75. doi: 10.1016/j.asw.2004.01.003

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/

Facione, N., Winterhalter, K., Kelly, M., & Morante, J. (2013). *CCTST User Guide and Technical Manual*. San Jose, CA: Insight Assessment/California Academic Press.

Facione, P. A. (1990). Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction. Research Findings and Recommendations.

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

Foster, R. J. (1988). *Celebration of discipline: the path to spiritual growth*. San Francisco, CA: Harpers.

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

Gerstein, J. (Producer). (2013). Flipped Classroom: The Full Picture for Higher Education. *User Generated Education*. [WordPress Blog] Retrieved from http://usergeneratededucation.wordpress.com/2012/05/15/flipped-classroom-the-full-picture-for-higher-education/

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.* Retreived 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.* Retreived from http://flippedlearning.org/cms/lib07/VA01923112/Centricity/Domain/41/LitReview_FlippedLearning.pdf

Hantla, B. F. (In Press). Book Review of *Flip Your Classroom*. *Christian Education Journal*.

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 R. J. Harder, R. C. Callahan, M. S. Trevisan & A. H. Brown (Eds.), *Teaching Strategies: A Guide to Effective Instruction* (pp. 21-36). Belmont, CA: Cengage Learning.

Honeycutt, B. (2013, 2013). Why Flip? 5 Techniques Supported by Research. *Focus on your Learners by Involving them in the Process.* Retreived from http://www.flipitconsulting.com/2013/03/24/why-flip-5-techniques-supported-by-research/

Kelly-Riley, D., Brown, G., Condon, B., & Law, R. (2001). Washington State University critical thinking project. http://media.usm.maine.edu/~lenny/BOOK%20PROPOSAL%20WITH%20BEAUDRY/essay_crit_thinking.rtf

Khan, S. (2011). Let's use video to reinvent education. Retreived from http://www.ted.com/talks/salman_khan_let_s_use_video_to_reinvent_education.html

Knewton (Producer). (2013). The Flipped Classroom Infographic. [Infographic] Retrieved from http://www.knewton.com/flipped-classroom/

Lage, M. J., Platt, G. J., & Treglia, M. (2000). Inverting the classroom: A gateway to creating an inclusive learning environment. *The Journal of Economic Education, 31*(1), 30-43.

Leedy, P. D., & Ormrod, J. E. (2010). *Practical Research: Planning and Design* (9th ed.). Upper Saddle River, NJ: Merrill.

McCammon, L. (2009). Friday Institute for Educational Innovation. *FIZZ*. http://fizz.fi.ncsu.edu/

McGivney-Burelle, J., & Xue, F. (2013). Flipping Calculus. *PRIMUS, 23*(5), 477-486.

McKnight, K. S., & Berlage, B. P. (2007). *Teaching the Classics in the Inclusive Classroom: Reader Response Activities to Engage All Learners*. San Fransisco, CA: Jossey-Bass Teacher.

McLaughlin, J. E., Griffin, L. M., Esserman, D. A., Davidson, C., Glatt, D. M., Roth, M. T., . . . Mumper, R. J. (In Press). The flipped satellite classroom: student engagement, performance, and perception. *American Journal of Pharmaceutical Education*.

McLaughlin, J. E., Roth, M. T., Glatt, D. M., Gharkholonarehe, N., Davidson, C., Griffin, L. M., . . . Mumper, R. J. (In Press). The flipped classroom: A course design to foster learning and engagement in health professions education. *Academic Medicine*.

Mills, G. E. (2011). *Action Research: A Guide For The Teacher Researcher* (4th ed.). Boston: Pearson.

Moreland, J. P. (1997). *Love your God with all your mind: The role of reason in the life of the soul*. Colorado Springs, CO: NavPress.

Pearson. (2013a). Flipped Learning Model Dramatically Improves Course Pass Rate for At-Risk Students: A Case Study for Clintondale High School. *Foundations of Flipped Learning Series*, 1-2. http://assets.pearsonschool.com/asset_mgr/current/201317/Clintondale_casestudy.pdf

Pearson. (2013b). Flipped Learning Model Increases Student Engagement and Performance: A Case Study of Byron High School. *Foundations of Flipped Learning Series*, 1-2. http://assets.pearsonschool.com/asset_mgr/current/201320/Byron_standalone_casestudy.pdf

Pollard, A. (2002). Becoming a reflective teacher. In A. Pollard (Ed.), *Readings for Reflective Teaching* (pp. 3-41). New York, NY: Continuum.

Poore, R. (2013). Flipping the Classroom. *Focus on Boise State*, *34*(1), 21-22. Retrieved from Boise State website: http://news.boisestate.edu/update/files/2013/08/BSU_FOCUS_FALL2013_web.pdf

Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education*, *93*(3), 223-231.

Ryken, L. (1995). *Redeeming the Time: A Christian Approach to Work and Leisure*. Grand Rapids, MI: Baker Books.

Schunk, D. H. (2012). *Learning theories: An educational perspective* (6th ed.): Macmillan Publishing Co, Inc.

Smith, J. G. (2012). *Screen-Capture Instructional Technology: A Cognitive Tool for Blended Learning.* (Master's Thesis), Saint Mary's College of California. Retrieved from http://www.brighteyes.com/JeffreySmith_Dissertation.pdf

Smith, J. G., & Smith, R. L. (2012). Screen-Capture Instructional Technology: A Cognitive Tool for Designing a Blended Multimedia Curriculum. *Journal of Educational Computing Research, 46*(3), 207-228. doi: 10.2190/EC.46.3.a

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.

Stringer, E. T. (2007). *Action research* (3rd ed.). Los Angeles: Sage Publications.

Wlodkowski, R. J. (2011). *Enhancing adult motivation to learn: A comprehensive guide for teaching all adults*. San Fransisco, CA: John Wiley & Sons.