Students’ Perceptions on a Blended and Flipped Classroom

Katherine Graham and Kathleen Burke

Abstract

An introductory macroeconomics course was redesigned from a traditional lecture format to now incorporate components of blended learning and a flipped classroom. The students were required to prepare for class by reading the text and/or working through narrated PowerPoint presentations. Individual and group quizzes were administered to ensure that the students were prepared to participate in the group activities that occurred during class. To determine the students’ opinion of the change in the course structure, a questionnaire was administered at the end of the semester. While most students did not have trouble moving to a different course structure, there was some resistance to moving away from a traditional learning method. The students indicated that they enjoyed the group aspect of the class, they were more likely to prepare for class under this mode of learning, and they were forced to create new ways of learning the material.

Background

An introductory macroeconomics course was redesigned to incorporate components of blended learning and a flipped classroom. Over the years the instructor was becoming more and more disillusioned with the passive learning of students; never having enough time to have in-depth discussions of current events, and students were rarely prepared before class. From the instructor’s point of view, the benefits of facilitating student learning and promoting the skills of self-directed learners were highly anticipated in this redesign.

Blended learning is becoming a readily available teaching modality in all levels of education, particularly in higher education. In a 2004 survey funded by the Alfred P Sloan Foundation, results showed almost 55 percent of all institutions offered at least one blended course and 79 percent of all public institutions offered at least one undergraduate blended course (Allen, Seaman and Garrett, 2007). Given the advances in available technologies as well as internet access in and out of the classroom, we can only assume that these figures have increased significantly.

The terms blended learning and flipped learning are often used interchangeably in literature. Although there are commonalities between the two, blended learning refers to incorporating various forms of technology to promote active learning by students. The incorporation of technology can occur in or out of the classroom (Allen, Seaman and Garrett, 2007) and students have some element of control over when, where, and the pace of the online element (Christensen, Horn, & Staker, 2013). Flipped learning falls as a subset under the blended learning category and refers to a specific teaching format where students learn new material prior to attending class, often using some form of online delivery method, and then, during the face-to-face scheduled class time, the students work on activities to apply material (Christensen, Horn, & Staker, 2013).

There is a considerable effort in current literature to define the term “blended learning”, however, these definitions implicitly incorporate the pedagogy of a flipped classroom: “[…] the interweaving of face to face instruction with online technologies” (Gill, 2009); and “[…] the appropriate mix and use of face-to-face instructional methods and various learning technologies to support planned learning and foster subsequent learning outcomes” (Lim and Morris, 2009). Furthermore, a few have argued that that the term blended “learning” is a misnomer and instead “blended teaching” or “blended pedagogy” are more suitable terminology to accurately describe this teaching methodology (Oliver and Trigwell, 2005). While the word choice might slightly differ, all of the definitions comprise elements of face-to-face instruction combined with online components.

The research that culminated in the publishing of “The Seven Principles of Good Practice in Undergraduate Education” developed by Chickering and Gamson (1987), and updated in 1996 by Chickering and Ehrmann to include instructional strategies that use technology, provides useful and measurable criteria to articulate learning outcomes and can apply to blended learning methodology. Good practice encourages contact between students and faculty, develops reciprocity and cooperation among students, encourages active learning, gives prompt feedback, emphasizes time on task, communicates high expectations, and respects diverse talents and ways of learning. As opposed to a more traditional way of teaching such as lecturing, blended learning offers a more student-centered than faculty-controlled environment (Nielson, 2008; Smith, 2007) and is perceived to combine the best practices of two learning environments: face-to-face interaction in the classroom and online instruction (Bonk, 2007).

1 State University of New York at Cortland
As is discussed in Beyerlein, Burke and Hintze (2012),
the transition from lecture style instruction to a process
oriented blended format can be a challenge for an instructor,
beginning with the willingness to become a facilitator in
the student learning process rather than the sole provider
of course content. The time investment can be significant due
to the need to implement new pedagogies, creating meaningful
classroom activities in a new course design, and incorporate
the appropriate technologies while balancing face-to-face
time and online content (Napier, 2011). However, what does
it take for the student to switch from the traditional lecture
style course and engage in a blended learning classroom
environment? Kenney and Newcombe, (2011) found in an
introductory undergraduate psychology class that 64 percent
of the students felt more actively engaged with the material
using the blended format. This same study reported that
59 percent of the students perceiving an increased interest
in the content and 75 percent indicating that the approach
helped them to go more in depth on the topics. Lastly, 65
percent felt that the blended activities promoted a learning
community, allowing them to interact more easily with
other class members (Kenney and Newcombe, 2011). Other
studies report findings that blended learning increases student
responsibility for learning and can require the use of higher-
order thinking skills as delineated in Bloom’s taxonomy
(Pergot, 2013). Since blended learning utilizes interaction in
the classroom and online components, it also can provide
for a range of learning styles (Picciano, 2009). Two key
findings from the U.S. Department of Education publication
titled “Evaluation of Evidence-Based Practices in Online
Learning: A Meta-analysis and Review of Online Learning
Studies were “instruction combining online and face-to-face
elements has a larger advantage relative to purely face-to-
face instruction than did purely online instruction” and “the
effectiveness of online learning approaches appear quite
broad across different learned content and learner types”
(U.S. Department of Education, 2010).

Analysis

Our current study examines students’ perceptions in the
difference in their role in participating in a blended and
flipped classroom rather than the tradition lecture style
course. After nearly ten years of using a lecture-style
format for a Principles of Macroeconomics course, the
course was taught as flipped classroom incorporating
blended learning components for the fall 2013 semester.
The reason for this redesign was to create a more active
learning environment, increase student engagement,
provide for different learning styles and develop new
skills for learning.

Making the switch to this very different teaching format
required a considerable amount of time, effort and
research. Considerable time was spent researching the
strategies and methods of blended and flipped classrooms.
Attending a two-day hands on workshop on how to create
a blended/flipped classroom with three university faculty
presenters who were long time advocates of this method
was the final step in deciding to convert the Introductory
Macroeconomics course.

After getting a general sense of blended/flipped course
components, the instructor spent much of the early summer
trying to find the best means to provide the students with
the pre-class material. In some flipped classrooms, the
students are required to complete an assigned reading prior
to class; however, in this course, the textbook was used only
as a general guide and required a different option. After
investigating several possibilities, time constraints led to
the decision of using screen capture to narrate PowerPoint
slides with a pointer to emphasize key elements. Each of
the videos created focused only on the foundation terms
and concepts. It was strongly recommended to keep the
videos focused on only one or two topics and short. This
practice would encourage students to review them often
and provide processing time. Over fifty videos were
created with a maximum time of 10 minutes.

When the course began in the fall, the course content
remained the same as it was in the traditional course, but
now the course delivery was completely changed. Students
were required to either review PowerPoint presentations
with the voice-over or read the text prior to coming to
class. To ensure the completion of the pre-class material,
the instructor spent much of the early summer
incorporating blended learning components for the fall 2013 semester.
The reason for this redesign was to create a more active
learning environment, increase student engagement,
provide for different learning styles and develop new
skills for learning.

Making the switch to this very different teaching format
required a considerable amount of time, effort and
research. Considerable time was spent researching the
strategies and methods of blended and flipped classrooms.
Attending a two-day hands on workshop on how to create
a blended/flipped classroom with three university faculty
presenters who were long time advocates of this method
was the final step in deciding to convert the Introductory
Macroeconomics course.

Analysis

Our current study examines students’ perceptions in the
difference in their role in participating in a blended and
flipped classroom rather than the tradition lecture style
course. After nearly ten years of using a lecture-style
format for a Principles of Macroeconomics course, the
course was taught as flipped classroom incorporating
blended learning components for the fall 2013 semester.
The reason for this redesign was to create a more active
learning environment, increase student engagement,
provide for different learning styles and develop new
skills for learning.

Making the switch to this very different teaching format
required a considerable amount of time, effort and
research. Considerable time was spent researching the
strategies and methods of blended and flipped classrooms.
Attending a two-day hands on workshop on how to create
a blended/flipped classroom with three university faculty
presenters who were long time advocates of this method
was the final step in deciding to convert the Introductory
Macroeconomics course.

After getting a general sense of blended/flipped course
components, the instructor spent much of the early summer
trying to find the best means to provide the students with
the pre-class material. In some flipped classrooms, the
students are required to complete an assigned reading prior
to class; however, in this course, the textbook was used only
as a general guide and required a different option. After
investigating several possibilities, time constraints led to
the decision of using screen capture to narrate PowerPoint
slides with a pointer to emphasize key elements. Each of
the videos created focused only on the foundation terms
and concepts. It was strongly recommended to keep the
videos focused on only one or two topics and short. This
practice would encourage students to review them often
and provide processing time. Over fifty videos were
created with a maximum time of 10 minutes.

When the course began in the fall, the course content
remained the same as it was in the traditional course, but
now the course delivery was completely changed. Students
were required to either review PowerPoint presentations
with the voice-over or read the text prior to coming to
class. To ensure the completion of the pre-class material,
the instructor spent much of the early summer
incorporating blended learning components for the fall 2013 semester.
The reason for this redesign was to create a more active
learning environment, increase student engagement,
provide for different learning styles and develop new
skills for learning.

Making the switch to this very different teaching format
required a considerable amount of time, effort and
research. Considerable time was spent researching the
strategies and methods of blended and flipped classrooms.
Attending a two-day hands on workshop on how to create
a blended/flipped classroom with three university faculty
presenters who were long time advocates of this method
was the final step in deciding to convert the Introductory
Macroeconomics course.

Analysis

Our current study examines students’ perceptions in the
difference in their role in participating in a blended and
flipped classroom rather than the tradition lecture style
course. After nearly ten years of using a lecture-style
format for a Principles of Macroeconomics course, the
course was taught as flipped classroom incorporating
blended learning components for the fall 2013 semester.
The reason for this redesign was to create a more active
learning environment, increase student engagement,
provide for different learning styles and develop new
skills for learning.

Making the switch to this very different teaching format
required a considerable amount of time, effort and
research. Considerable time was spent researching the
strategies and methods of blended and flipped classrooms.
Attending a two-day hands on workshop on how to create
a blended/flipped classroom with three university faculty
presenters who were long time advocates of this method
was the final step in deciding to convert the Introductory
Macroeconomics course.

Analysis

Our current study examines students’ perceptions in the
difference in their role in participating in a blended and
flipped classroom rather than the tradition lecture style
course. After nearly ten years of using a lecture-style
format for a Principles of Macroeconomics course, the
course was taught as flipped classroom incorporating
blended learning components for the fall 2013 semester.
The reason for this redesign was to create a more active
learning environment, increase student engagement,
provide for different learning styles and develop new
skills for learning.

Making the switch to this very different teaching format
required a considerable amount of time, effort and
research. Considerable time was spent researching the
strategies and methods of blended and flipped classrooms.
Attending a two-day hands on workshop on how to create
a blended/flipped classroom with three university faculty
presenters who were long time advocates of this method
was the final step in deciding to convert the Introductory
Macroeconomics course.

Analysis

Our current study examines students’ perceptions in the
difference in their role in participating in a blended and
flipped classroom rather than the tradition lecture style
course. After nearly ten years of using a lecture-style
format for a Principles of Macroeconomics course, the
course was taught as flipped classroom incorporating
blended learning components for the fall 2013 semester.
The reason for this redesign was to create a more active
learning environment, increase student engagement,
provide for different learning styles and develop new
skills for learning.

Making the switch to this very different teaching format
required a considerable amount of time, effort and
research. Considerable time was spent researching the
strategies and methods of blended and flipped classrooms.
Attending a two-day hands on workshop on how to create
a blended/flipped classroom with three university faculty
presenters who were long time advocates of this method
was the final step in deciding to convert the Introductory
Macroeconomics course.
To determine the success of this blended and flipped class structure, the students that were enrolled in two sections of a Principles of Macroeconomics course during the fall semester of 2013 were asked for their feedback at the end of the course. A questionnaire consisting of 15 Likert scale statements was developed to examine student’s opinions regarding various aspects of the course. Out of a total of sixty-seven students in the two courses, 59 students responded on the survey.

The class met twice a week for one hour and 15 minutes. As an introductory course, there were a wide range of majors in both sections: Business Economics/Economics made up the largest percentage, 57 percent and 56 percent respectively. A variety of other majors were enrolled in the class, such as History, Biology, Adolescent Education and the largest portion of this group in both courses were Sports Management majors, 15 percent and 20 percent respectively.

Both classes were comprised of all four class levels. The percentage of juniors in the earlier class was by far the largest group at 57 percent. Only 2 freshmen were in this course and the remainder was split between seniors and sophomores. In the second course, sophomores comprised the largest percentages at 56 percent, with juniors at 31 percent, and the remainder consisted of one senior and three freshmen.

None of the students had ever taken a blended/flipped class before. Nearly 12 percent had taken an online course prior to this course. Most students did not have trouble switching to a course using a blended format, 61 percent of students reported they did not find it difficult. One student stated, “Definitely overwhelming at first but I ended up loving the format of the class and the group work”. However, nearly 40 percent of students reported at least some difficulty switching to the new learning format.

While some students indicated that they had difficulty switching, the change from a lecture format to a blended, cooperative learning format was preferred. Over 80 percent of the students indicated that they liked that the course was not lecture for the entire class period (see Figure 2). The ability to work in groups on the class material was perceived as a benefit by 95 percent of the students in the course as depicted in Figure 3. Finally, 81 percent of the students thought that the course had the right mix of lecture and active learning activities (Figure 4). Student comments also portray this sentiment: “I also liked the group idea because it helped to obtain information better than always having to wait for the professor to explain an answer to my question;” “I loved the group work;” “Interaction with a group was great” ; “I had a good time interacting with my fellow peers to learn and it was a positive experience”.

Figure 1 I found it difficult to adjust to the blended format

Figure 2 I liked that we did not spend each class listening to a lecture for the entire time

Figure 3 I liked working with others in a group on the class material

Figure 4 The time in the classroom had the right balance of group work and lecture
As all instructors understand, having students come to class prepared for discussion is a key to active participation and a lively classroom as well as a key to student success in the course. The use of the blended learning classroom assisted in producing this outcome. Sixty-eight percent of the students indicated that they would not have reviewed the material before class if they were not required to do so. As is typical, more students preferred to review the PowerPoint (85 percent) to review the pre-class material than reading the textbook (25 percent). An ideal outcome was realized, 85 percent of the students indicated that they were forced to develop new study techniques to succeed in this class. The students indicated that the course “Taught me a lot about my study habits and how to improve them.”

Also, “[The course] was different and provided me with a new perspective on how to learn.”

As was discussed, the PowerPoint presentations were available to the students in the eLearning room through BlackBoard. Although the students were required to review the presentations before class, the PowerPoint slides were always available to review. Students overwhelmingly appreciated the flexibility this provided; 90 percent liked the ability to review at any time (Figure 9). “I liked how I could view the PowerPoints whenever I needed to; they were very helpful when preparing for the tests and quizzes.” Students could see the direct linkage of these cooperative learning activities in the classroom.

**Figure 5** If there were no quizzes on the pre-class lecture I would have always reviewed it anyway

**Figure 6** I mainly used the book to learn the pre-class material

**Figure 7** I mainly used the PowerPoint to learn the pre-class material

**Figure 8** The change in format forced me to learn some new study techniques

**Figure 9** I liked the flexibility of being able to review lectures (PowerPoint) anytime

**Figure 10** The online PowerPoint and class work complemented each other
with the online content. Ninety-one percent of the students thought that the classroom activities complemented these PowerPoint presentations. Furthermore, 88 percent of the students indicated that they understood the material better after completing the activities in class. “I liked being able to work on concepts in class rather than going home and being confused.”

The students overall review of the course was contradictory. While, as depicted in Figures 12 and 13 respectively, 41 percent of students indicated that they would have liked the traditional classroom setting, 70 percent of the students indicated that they would like to be in a blended course again. Overall, 89 percent of the students thought that the course was of average difficulty or easy (Figure 14). This inconsistency is captured by the students’ comments:

The positives of the course

- “I would much rather be involved in a class rather than sit and listen for the whole time”
- “I felt like the class taught me a lot. I just wish there was more in-class lecture”
- “The class was challenging but in a good way. It gave me a brand new perspective on problem solving and pushed me outside my comfort zone. I learned a lot of useful information.”

The negatives:

- “I thought there was more work with a blended learning [class]”
- “Too much work for a 100 level class”
- “Mixed feelings. There needs to be more involvement in the classroom from the professors. Teachers are supposed to teach. That seems to have been forgotten.”

Reflection and Concluding Thoughts

When the instructor introduced the new format for this course to the students little thought was given to the affective adjustment they would have to make. Intuitively, she thought the students would be thrilled not to have to sit in one place, listening to long lectures and transcribing many notes; consequently, she believed they would quickly embrace this instructional change and there was no need to address impact on affect. With that mindset, on the first day of the course, the instructor described the format of the course, and summarized the difference as just switching the timing of the two class components: lecture and homework.

After some initial confusion, most of the students had adapted by the start of the second Learning Module. The results, however, indicate that a group of students never
fully accepted this new teaching approach and strongly voiced their dissatisfaction. They told the instructor she “was not doing her job” because “they were teaching themselves”. Attempts by the instructor to help these students only seemed to make them more firmly entrenched in their dissatisfaction dislike for the class. These students begrudgingly completed the course but their negative affect was a persistent undercurrent, which worked against fostering a cohesive class. In retrospect, more should have been done early in the course to provide the students with tools and techniques to assist in managing affect, which is important to getting immediate buy-in and a quality learning environment.

Despite this resistance, the instructor’s overall experience in the course was quite encouraging. Student engagement improved, many active discussions of current macroeconomic events took place, and students expanded their learning skills. Given these positive changes, the instructor plans to continue to use the flipped and blended teaching model in her Principles of Macroeconomics course in the future.

References


Faculty Guidebook (2007) Classification of Learning Skills. Section 2, paragraph 2.3.3. p 201.


