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Flip Don't Flop

Best Practices for Flipping Marketing Courses

Michael S. Garver

Course Title:	Market Research
Course Description:	This senior-level undergraduate course is required for all marketing majors in the College of Business at Central Michigan University. The content is research methods, consisting of both qualitative and quantitative research methods with data analysis and statistics being a major part of the class.
Course Format:	This flipped class meets face-to-face two days a week for 75 minutes each over the course of a 16-week semester.
Course Enrollment:	Typically between 35 and 65 students are enrolled.
Institutional Context:	Central Michigan University is among the nation's 100 largest public universities with more than 20,000 students at its Mount Pleasant campus.

My motivation for experimenting with the flipped classroom was a desire to help students achieve higher-order learning. This goal guides all of my teaching and learning activities in and out of the classroom. In particular, I hope to challenge students to attain the top two levels of Bloom's Taxonomy—creating and evaluating—which are crucial skills for marketing professionals. Unfortunately, lecture classes often address only the two lowest levels of the taxonomy (Bonwell & Eison, 1991). In many undergraduate marketing courses, the concern for instructors is to cover the necessary material in the textbook, which often takes the majority of class time (Garver & Roberts, 2013). In these courses, the instructor's focus is on delivering a large quantity of information, and a lecturer can cover a great deal of material in a relatively short time.

Two major problems are associated with the lecture-only teaching style. First, research suggests that much of the material will be forgotten soon after being delivered (Bonwell & Eison, 1991). Second, even if material is remembered, the learning takes place at the two lowest levels of learning—remembering and understanding. Although students memorize the material, they will not be able to think about it critically or implement the content.

Active learning is essential to achieving higher-order learning. Research clearly demonstrates that students engaged in an active-learning environment learn more than students in a lecture setting (Bonwell & Eison, 1991). Yet, research findings from neuroscience and education also suggest that learning synergies take place when lectures are combined with active, hands-on learning exercises (Zull, 2002).

The problem is that active learning, though it often results in higher-order learning, takes a great deal of class time compared with lecturing. Because of limited time, instructors do not have the

opportunity during class to lecture *and* conduct active-learning exercises. As a result, higher-order learning is often not achieved.

In the Market Research course that is the subject of this case study, the textbooks are traditionally very technical in nature and can be overwhelming for most undergraduate students. As a result, many students simply do not like the content matter of this course (i.e., research and statistics), even though it is important to their future careers in marketing.

If students pursue a career in market research, they will need to be able to implement the content of this course on a regular basis as professionals. Most marketing students, however, will not pursue careers in market research, but they will use market research data in the future to make strategic and tactical marketing decisions. With this in mind, it is important for marketing students to be able to critique and evaluate the quality of market research data and results, asking questions such as, "Can I trust the research findings?"

The question is, how can instructors "cover" the material in lectures and then "uncover" the material in active-learning exercises? The answer is flipping the classroom.

Methods

Learning Objectives

Overall, the primary learning objective for this and of all my courses is for students to be prepared to thrive in the business world. In order to achieve this goal, students must be able to remember, understand, apply, analyze, evaluate, and implement content from the course (all levels of Bloom's Taxonomy).

Learning objectives for this class include the following:

- Remember, understand, apply, analyze, evaluate, and implement:
  - information that is critical for developing strategic and tactical plans,
  - different market research methods that are appropriate for delivering different types of information that is critical for developing strategic and tactical plans, and
  - statistical techniques that are needed to answer strategic and tactical management questions.
- Remember, understand, apply, analyze, evaluate, and create:
  - a qualitative research project, from start to finish, and
  - a survey to answer strategic and tactical questions.
- Present research findings clearly and effectively to encourage implementation of results.

To meet the learning objectives, students are assigned the following activities:

- Watch scheduled podcast lectures before attending each class.

- Take a daily quiz to assess learning from the podcast lectures and to help find motivation to prepare for in-class active-learning competitions.

- Compete in a team-based active-learning competition, either by using "clickers" or by "doing" the content.

- Take three exams to assess learning of the material.

- Develop two outside-of-class market research projects in order to apply, create, and implement the content materials, as well as assess learning of the material.

- Read the book, then "do" the book by applying the concepts in market research project presentations. (Knowledge of the book is assessed on the first exam as well.)

All these activities are aligned, meaning that content from the podcast lectures drives all downstream activities (i.e., quizzes, active-learning competitions, exams, and outside projects) and that all the activities focus on learning the content at different levels of Bloom's Taxonomy.

Pre-Class Preparation

To prepare for teaching this course, I created podcasted lectures using screen-recording software. While there are a number of software tools available, I used Camtasia Studio® for Mac, a screen-capture recording software developed by TechSmith (http://www.techsmith.com/camtasia.html). Lectures were composed of PowerPoint presentations with narration. The podcast lectures resembled short vignettes or "chunks" of content, with a focus on being engaging for the audience. "Edutainment" (i.e., education via entertaining methods) is embraced and embodied in these podcast lectures. For example, in one podcast lecture, I launched a missile at and blow up a common misconception about market research. Students enjoyed this aspect of my podcast lecture, but, most important, the delivery of the message was unique and unexpected, making it stick with my audience.

Before the semester began, all podcast lectures were created, edited, and made available for students to access via a learning management system as well as YouTube. I used multiple distribution channels to deliver the podcast lectures so that students could view the presentations on desktop computers, laptop computers, tablets, smartphones, and other mobile devices, whether connected to the Internet or not. Some students preferred to download the MP4 files, while other students preferred to watch the streaming podcast lectures via YouTube.

Before each class period, students were assigned to watch a certain number of podcast lectures (between one and seven, depending on the topic). Because the students watched the podcast lectures before class, this eliminated the need to lecture during class. As a result, the *entire* class period was used to engage in hands-on, active-learning exercises.

What About the Textbook?

Reading comprehension is an important skill that was relied on in this flipped classroom. Because students watched podcast lectures before each class, I did not use a textbook in the traditional manner (i.e., students did not read a chapter before they came to each class). Instead, students read the assigned book (*Presentation Zen* by Garr Reynolds (2011)) during the first four weeks of the semester and were tested on the material from the book during the first exam. This book was a top business book of the year in 2008 and focuses on delivering engaging presentations—an important skill set for marketers and market researchers. Key concepts from the book were then applied to the students' presentations for the rest of the semester.

Active Learning During Each Class

When most instructors think of the flipped classroom, their immediate attention focuses on the technology used to create and deliver lectures outside of the classroom. Yet, the motivation for this flipped classroom was to free up time within each class period so that active learning could be the primary focus. I typically implemented two active-learning components in each class period: the daily quiz and an active-learning competition.

Individual daily clicker quizzes. Clickers (i.e., student response systems) are part of an interactive system that allows the instructor to pose questions to the class and have students submit answers via handheld devices. Research has demonstrated that clickers improve student engagement and help promote higher-order learning (Bruff, 2009; Dufresne, Gerace, Leonard, Mestre, & Wenk, 1996; Zhu, 2007). In addition, clickers give students instant feedback on their answers, which is key to effective learning.

Student accountability is a key part of the learning process. The use of daily clicker quizzes has been shown to ensure that students come to class, come to class on time, and come to class prepared to participate (Bonwell & Eison, 1991). More important, research has demonstrated that a daily quiz results in better retention of knowledge and significantly improved learning outcomes (Poljičanin et al., 2009).

At the beginning of the semester, some students were apprehensive about daily quizzes, yet they soon realized how the quizzes helped them better learn and understand the material. After the initial semester of implementing daily quizzes, more than 71 percent of responding students noted in their course evaluations that daily quizzes were a strength of the course and that they helped students learn the material better.

Active-learning competitions. The business world for marketers and market researchers is highly competitive. A key part of my philosophy of teaching and learning is to model the classroom after the business world. Competition in the classroom achieves this goal and is also a key to student motivation and engagement. Motivation is a critical component to student learning, one that is lacking in many undergraduate classrooms (Ames, 1990). Active-learning competitions in my class were a team-based event, which employed peer-to-peer learning methods. Peer-to-peer interactions support learner-centered designs in which learning is active,

fluid, flexible, and organic rather than static (Yardi, 2008). Students developed their own four-person teams for all in-class exercises and out-of-class projects.

In general, there were two types of active-learning competitions implemented in this classroom: clicker competitions and creating competitions. After the daily clicker quiz, I implemented clicker competitions. Clicker competition questions were designed to achieve higher-order learning by having students *evaluate* a market research scenario, *evaluate* a market research decision, or actually make or *create* a market research decision.

Each clicker competition contained 5 to 15 questions, each of which was asked twice. The first time the question was asked, students were given approximately 30 seconds to answer individually. I viewed the individual results but did not share them with the students. Then, the exact same clicker question became a team question, and team members had approximately two minutes to discuss the question and possible answers. After the team discussion, each of the team members answered the question again. At the end of the team question, the results were immediately displayed to the entire class. At that point, a classroom discussion ensued, typically including my providing detailed formative feedback for each of the possible answers.

Surveys conducted with students from one class revealed that 82 percent of students "really like[d]" classroom competitions, where "really like" is the top scale point on a seven-point semantic differential scale. Additionally, content analysis from written student evaluations showed that 74 percent of students thought that clicker competitions were a strength of the class. Students noted that the clicker competitions were extremely difficult, but students were hungry for the right answers and were motivated to do their best work. Student engagement peaked at this point in the process because they wanted to know the answers. Students enjoyed the fun and excitement of the clicker competitions, but they also felt that the competitions helped them better learn the material.

Not all of the market research content fits within the clicker competition format. To help students learn about these other content areas, I presented market research scenarios along with quantitative data to the students. In these competitions, student teams used SPSS, a statistical software package, to analyze survey data in order to meet the objectives put forth in the task. In addition to the data analysis in SPSS, students graphed and presented the findings in a manner consistent with principles put forth in *Presentation Zen*. Each of the competitions was turned in (i.e., e-mailed to me) by the end of the class period, and I graded the competition and determined the winners.

Evaluation

Comparison to Best Practices in Teaching and Learning

More than 90 percent of class time in most sessions of my course was devoted to the top two levels of Bloom's Taxonomy. Because students obtained the content via podcast lectures prior to class, the clicker quiz and the active-learning competitions had students *do* and *evaluate* the concepts during class. In this approach, every level of the taxonomy was reached, and the

majority of the class period was dedicated to active-learning exercises aimed at achieving higher-order learning. (See differences in evaluation strategies from a traditional course in Table 7.1.)

Assessment of Student Performance

Students' scores on quizzes, exams, and outside market research projects have increased. Making comparisons from 2006 to the 2010 time period, quiz and exam grades (using the same questions) have improved approximately 18 percent since the implementation of the flipped methodology. For example, the content of the third exam is statistics, and student performance on this test was historically low. Before the implementation in 2006, only two students (i.e., approximately 5 percent of the class) scored above a 90 percent on this exam. In 2010, three students (i.e., approximately 3 percent of the class) scored a perfect 100 percent on the statistics exam, with 23 students (i.e., approximately 23 percent of the class) scoring above a 90 percent.

Table 7.1 Comparison of assignments between traditional and flipped courses

Note
a Total course points for both classes approximately 1,200.

Prior to implementing the flipped classroom method, I was disappointed in the quality of the students' outside projects. It was obvious that students' understanding of key concepts was limited and that actual implementation of these concepts was of low quality. After the implementation of the flipped methodology, the quality of the students' projects dramatically improved. In my opinion, students showed a better grasp of understanding key concepts and demonstrated that they could *do* the concepts effectively.

Feedback from Students

Informally, student feedback has overwhelmingly embraced the flipped classroom approach. Students enjoyed the podcast lectures and appreciated the time and effort devoted to making them engaging as well as informative. While the class was often described as rigorous and demanding, students often mentioned intense learning that took place in the classroom.

Additional quantitative evaluation from an anonymous survey of students suggests that learning was greatly improved and more enjoyable. The final sample from the 2010 course was 98 students, representing approximately 98 percent of the class. Ninety-four percent of students "strongly preferred" or "preferred" (top 2 choices on a 7-point scale) the podcast lecture and active-learning exercises over a traditional class format.

Student evaluations of my teaching delivered by the university at the end of the semester (i.e., anonymous responses) have also improved since implementing the flipped classroom approach. Before the flipped classroom, overall student evaluations for this market research course averaged 3.54 on a 4.00-point scale. After flipping the classroom in 2010, my overall student evaluations averaged 3.87, a statistically significant improvement ($p < 0.05$).

Lessons Learned

During the first implementation of the flipped classroom, I simply gave the same lectures that I had given live in the classroom but recorded them using screen-capture software. The original podcast lectures were typical PowerPoint lectures where many of the individual slides displayed four to six bullet points of text. These original podcast lectures averaged 30 to 45 minutes in length. This was a big mistake.

Through a number of iterations, the current podcast lectures now are very different from the original ones. As of this writing, the podcast lectures emphasize delivering the necessary content in a manner that students find engaging, often using music, pictures, and video to achieve maximum impact.

The Importance of Focused Topics for Podcasts

Research suggests that human attention spans are limited and that the human brain will begin to wander after 10 minutes, unless there is a change in the stimuli (Medina, 2010; Zull, 2002). With this research finding in mind, I attempted to create short podcast lectures—no longer than 10 minutes in length but preferably even shorter. This, however, was not always feasible, but it was a good guideline. An examination of organizations that deliver excellent content via streaming videos or podcasts (e.g., Apple) will reveal that most of their videos are two minutes or less.

This suggests that instructors ought to break their content into smaller chunks and then sequence the smaller chucks of information appropriately. For example, I used to deliver a 20-minute podcast lecture on asking eight types of qualitative questions. When remaking these podcast lectures, I created eight podcast lectures—one for each type of question—that were about two to three minutes long.

Eighty-four percent of my students strongly preferred shorter podcast lectures, suggesting that it is easier and less intimidating to start a two-minute podcast lecture as opposed to a 20-minute lecture. In addition, focused podcast lectures made it easier for students to review the material for quizzes, exams, and projects. This has an additional benefit for instructors as well: While it is more difficult to manage a larger number of podcast lectures, topic-specific podcast lectures are easier to use across different courses. For example, I have a five-minute podcast that is used in every course I teach.

Telling Engaging Stories Using Pictures and Music

Research suggests that the human brain is hardwired to remember and enjoy stories (Heath & Heath, 2007). With this in mind, each of my podcast lectures is now focused on telling stories that illustrate concepts. The human brain also does a much better job of remembering pictures as compared with text (Defetyer, Russo, & McPartlin, 2009; McBride & Dosher, 2002). A concept known as the picture superiority effect suggests that humans more easily learn and recall information that is presented as pictures than when the same information is presented in words (Curran & Doyle, 2011; Whitehouse, Maybery, & Durkin, 2006). For example, in one study, one group of students was given a lecture with text-filled PowerPoint slides. Another group of

students was given the same exact lecture, but there was no text on the slides; in this lecture, only pictures were used. After 72 hours, students who received the text-filled slides remembered 10 percent of the content, while students who received the picture-only slides remembered 65 percent of the content. It is thought, therefore, that the brain functions in such a way as to allow us to remember and enjoy pictures more than text (Curran & Doyle, 2011; Whitehouse, Maybery, & Durkin, 2006).

I have implemented concepts learned from the picture superiority effect, which teaches us to tell stories with pictures and to limit the amount of text included in the slides, in my flipped classes. Survey responses from my students in one semester suggest that engaging and enjoyable stories using funny, creative, and engaging pictures in presentations is appreciated by students and that it helps them remember and better understand the concepts.

Think of your favorite scene from your favorite movie. Without question, most of the scenes would include music that helps reinforce the story being told while simultaneously making the scene more enjoyable to watch. Why not use music, then, to make podcast lectures more enjoyable? Research has shown that music can positively influence student learning (Brewer, 1995; Jensen, 2000). Similar to your favorite movie, I use background music (i.e., royalty free music from www.videoblocks.com) at a low level to make the podcast lectures more engaging. It is important, though, to use instrumental music that does not include any lyrics; if students are singing along, then they cannot pay attention to the message.

In contrast to background music, theme music can also be used to get the attention of students (Brewer, 1995). I use music in the beginning of the podcast lectures to gain student attention or during the middle of the podcast lecture when trying to draw attention to an important point.

Different Flipped Formats

Research suggests that the human brain tends to tune out familiar objects and, in contrast, pays attention to new, unique, and different objects (Medina, 2010; Zull, 2002). In an effort to be more engaging, I experimented with a number of different styles and formats for delivering podcast lectures.

PowerPoint voice-over is my most common format for delivering podcast lectures. After creating a PowerPoint slide with a large number of pictures and using limited text, I add a voice-over recording using screen-capture software. Once the lecture is recorded, background music (i.e., royalty free music) that matches the theme of the lecture is added at the correct volume (i.e., not too soft to hear but not so loud as to be distracting). This is an effective approach that students enjoy and that is easy and convenient to create.

Another format for flipping is the whiteboard talk. This model involves the instructor giving a lecture in front of a whiteboard recorded by a digital video camera. As with other formats, after the recording is completed, background music is added in an effort to increase student engagement. Students have commented that they like whiteboard talks because they add to the diversity of types of lectures and they allow students to see the face of their professor who is talking to them. Whiteboard talks are relatively easy to create as well.

Blue screen podcast lectures are a variation of PowerPoint voice-overs. In these presentations, video clips of the instructor are overlaid into the PowerPoint presentation. This is very similar to a weather forecaster interacting with a weather map. Blue screen podcast lectures are the most difficult to create, and I use them sparingly because of this fact. Blue screen podcast lectures are used later in the semester and are saved for the least engaging material. These lectures add extra energy and engagement to the course when it is particularly valuable, during the most difficult part of the semester and with the least engaging content.

I also use videos that include only text and images put to music—without the instructor speaking. I use these videos as a summary tool as well as for scaffolding. For example, videos containing only text and images are typically only two minutes long and contain big-picture ideas that look across all of the podcasts for a single class. Content from one class often scaffolds the learning for the next class. Thus, videos containing only text and images are used to bring important concepts from the prior class to mind so that students understand how the current class material builds on the material from a prior class.

Each of these different styles has its own strengths and weaknesses. Most important, using different styles throughout the semester helps to keep the podcast lectures fresh and engaging for students.

Classroom Culture

Classroom culture is an important element that can significantly enhance or detract from student learning (Pascarella & Terenzini, 1991). Developing a positive classroom culture that gains student buy-in to the flipped classroom approach is critical. During the first semester of the initial implementation, I spent very little time trying to get student buy-in to the flipped classroom approach. While students enjoyed the interactive, hands-on exercises during class meetings, some complained about the workload to prepare for each class, and others complained about the daily quiz. Student pushback threatened the success of the implementation.

During the following semester, I set the specific goal of fostering a more positive classroom culture with the hope of increasing student buy-in from the first class meeting. During the first session, I gathered student feedback on great and “not so great” learning experiences. As described by students, great classroom learning experiences were characterized by hands-on, interactive classrooms where students put the content to use and actually “did” the content. Below-average learning experiences were described as the typical lecture class, where the instructor talked and students took notes and then memorized the material for exams. In short, the discussion suggested that students truly desired an active-learning classroom where they could put the knowledge into action.

During the second class period, I presented the latest research findings from neuroscience and psychology that suggest that the best learning takes place in an active-learning classroom. But, to have a productive active-learning classroom, students learned that they must be prepared with a base level of knowledge. The most interesting aspect of this class was that students learned that their perceptions of great learning aligned with the research. As a result, students understood

why I implemented the flipped classroom and appreciated the innovations aimed at improving learning.

Course Alignment

If every aspect of the course is aligned, the students are motivated to work hard because they see the logic of every assignment and how all the assignments fit together. In an aligned course, the path for students is clear: they understand how to do well in the course, and there is no wasted time or effort. More specifically, from the students' perspective, the following aspects of the course need to be well aligned:

- The learning objectives are aligned with the podcast lectures.
- The material from the podcast lectures is aligned with the daily clicker quiz.
- The material from the podcast lectures is aligned with the active-learning competitions.
- The material from the podcast lectures is aligned with the exams.
- The material from the podcast lectures is aligned with the outside projects.
- The quizzes, exams, active-learning competitions, and outside projects are aligned with one another.

If the above alignment takes place, then students heavily rely on the podcast lectures, which helps assure student accountability.

Final Conclusions

Achieving higher-order learning was my motivation for experimenting with the flipped classroom method. In addition to delivering the course content, I created podcast lectures with the goal of maximizing student engagement by using storytelling, music, and pictures. Active learning became the focus of each class meeting, with clicker competitions being used during most classes. Clicker competitions motivated students to do their best while simultaneously achieving higher-order learning. Most important, the class culture was created and maintained to support everything implemented in this course.

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