

Ensuring Gen Y Students Come Prepared for Class; then Leveraging Active Learning Techniques to Most Effectively Engage Them

Kathryn Simons Davis¹ and J. Roberta Minifie^{2*}

¹*Huston-Tillotson University, Austin, TX, USA*

²*Texas State University, San Marcos, TX, USA*

Improving student learning and engaging students during class is a goal of most educators. As the generation of the student in the classroom changes, so should our teaching methods. In order to identify a teaching tool that would effectively engage generation Y students, a class preparation assignment (CPA) teaching method was tested during the 2011-2012 academic year. Comparing student grades and perception of the course between classes between using CPAs and not using CPAs, yielded strong improvements in test scores, greater depth of analysis in projects, an increased level of class participation, and higher attendance rates. This case study discusses how class preparation assignments were used with a definitional grading system in an active learning environment to achieve these outcomes. The case concludes with an analysis of the class grades and attendance records, quotes from two student interviews, and a year-to-year comparison of the faculty evaluations for each benchmark course. This initial investigation would imply that using CPAs in courses with generation Y students would more effectively engage them in the learning process.

Keywords: Gen Y, class preparation assignment, active learning, case study, definitional grading, collaborative learning, cooperative learning, flipped classroom

Introduction

At the college level, there is a vast amount of information to present in a short amount of time; which is one of the reasons that the traditional lecture model has remained popular. Given a 50-minute class and 30 – 45 PowerPoint (publisher-sourced) slides to present in an average principles-level slide deck, students are drinking in new concepts through the proverbial fire hose.

Faculty has been using the lecture model since medieval times (Gieysztor, 1992). While this method was appropriate when textbooks were not widely available; its efficacy as the optimal instructional modality is now called into question given the broad availability of printed and electronic resources to today's student. According to a 2008 survey, 65% of faculty was still teaching using the traditional lecture model (Borreson & Salaway, 2008); despite the fact that studies have found that collaborative classrooms yield greater learning outcomes relative to traditional individual-learning classrooms (Johnson, Johnson & Smith, 1998; Johnson, Johnson & Smith, 1998; Springer, Stanne & Donovan, 1999).

Perhaps one of the reasons that the traditional method has remained popular is because it is a fast way to convey extensive information in a short period of time. However, there is an alternative that embraces the learning preferences of Gen Y while yielding full coverage of the material.

Effectively Teaching Generation Y

Gen Y students favor using technology (Bracy, et al., 2010). Their upbringing, which includes micromanaging and guidance, has resulted in a preference for a trial and error approach, where success is the result of failure (Oblinger, 2003) and although extremely confident, they expect a more structured environment that focuses on them (Simons, 2010). Gen Y also tends to believe that "doing" is of greater importance than having the correct answer (Aggerholm, 2006). According to Zemke, mentoring is a very effective way of teaching and communicating with this generation and is highly suggested (2001). The learning style of Gen Y tends to respond best through collaborative learning rather than other learning styles (Oblinger, 2003). Research has demonstrated that active learning techniques are consistently more effective than traditional lecturing in facilitating long-term retention of

*Corresponding author.

information, development and improvement in problem-solving skills and in stimulating interest in a subject (Sutherland & Bonwell, 1996; Bonwell & Eison, 1991; Svinicki & McKeachie, 1999; Wankat & Oreovicz, 1992).

Students now expect a moderate use of technology, at minimum, as well as different forms of active learning techniques which require students to “think inclusively and collaboratively” (Zemke, 2001), better preparing them for the workplace. Active learning techniques are commonly viewed as effective tools to reach Gen Y students. However, active learning techniques can only be implemented once there is a common ground of knowledge from which to base an activity.

It has been proven that students retain information better (Florida State University, 2012) and are more enthusiastic to attend class (The National Center for Academic Transformation, 2005) when active learning techniques are utilized. When faculty provide rapid-fire coverage of new concepts using the traditional lecture model, there remains little class time to incorporate active learning techniques. How then, can faculty cover all of the material that needs to be taught in the average course and still have time for the active learning techniques that students prefer? (Susman, 2012).

An Alternative to the Traditional Teaching Method

Picture instead, a scenario where students were motivated to read the chapter before coming to class and addressed some of the most pertinent concepts in a preparatory assignment before the instructor ever covered them. This notion is referred to as the ‘flipped classroom’; a concept that was discussed by Dan Berrett (2012) in “*How ‘Flipping’ the Classroom Can Improve the Traditional Lecture*”. In a flipped classroom, students work on information outside of class that was traditionally presented in class. Students’ first exposure to new material is via their textbook, the Internet, recorded content or other means. The student then comes to class and works on problems or participates in small group discussions. This model puts the expectation on the student; that their first exposure to content will occur between student and author, not between instructor and student.

If an instructor spends class time introducing a concept (first exposure by instructor), they lose precious instructional time that could be used for deep learning. One way to capture this time is to have the students become familiar with and apply the content *before* it is discussed in class (first exposure by student). This can be achieved through the use of class preparation assignments (CPAs). Walvoord and Anderson (1998) discussed the Interactive Model as a means of shifting the time and space during which students are exposed to

and mentally process new material. Walvoord and Pool (1998) stated their expectations that students come prepared to class each session by reading and thinking about the material before they enter the classroom. This advance preparation makes possible the flipped classroom. Class preparation assignments are an effective tool to achieve a flipped classroom and have been proven to result in higher learning outcomes (Yumane, 2006).

This concept was tested in three classes during the 2011/2012 academic year at a liberal arts university in the southern United States. The concept was tested in four classes: Principles of Marketing, Marketing Research, Consumer Behavior and Internet Marketing. In each class, the learning outcomes were stronger than in prior years. Two modifications were made in each of these classes: (1) class preparation assignments were added and (2) a definitional -grading system was implemented to encourage CPA completion. While there is considerable literature available on CPAs and the effectiveness of active learning, there is not published content on the act of blending CPAs with a definitional grading system.

As its name indicates, a class preparation assignment is one that is completed before the material is initially discussed in class. In other words, the students’ first exposure to new content is on their own time. The students use the questions in the CPA as a structured guide to their reading and initial analysis of the content. The CPA questions are then discussed en masse during the following class session. Following Bloom’s *Taxonomy of Educational Objectives*, the students are largely responsible for the first three levels of learning: *knowledge, comprehension* and *application*; then when they come to class, the instructor can address the higher-levels of learning including: *analysis, synthesis* and *evaluation* (Bloom, 1956).

Writing a CPA Assignment

At the beginning of the term, CPA questions are written to ensure a rudimentary level of comprehension based on the terms in the reading assignment (a chapter or a portion of a chapter). The initial assignments are constructed in a manner to impart ease of acceptance among students. As the term progresses, the CPA questions intensify to encourage synthesis and analysis of the reading material.

A typical CPA assignment is three to five questions in length and can result in a two to three page paper (for marketing or management students) and a page or two of problems for an accounting or a finance class. Figure 1 reflects some sample CPA questions from a class early in the term while Figure 2 depicts questions that might be used later in the term.

CPA 1: Chapter 1 – Introduction to Marketing Research

1. Provide one example of applied market research and one example of basic market research.
2. Look online and provide printed examples of product research, pricing research, distribution research, and promotion/marketing mix research.
3. Provide one example of each: data, information, and intelligence.

Figure 1. Sample questions from the first CPA for a Marketing Research class based on the textbook readings.

CPA 19: Chapter 15 – Survey Design

Create a survey that incorporates at least one question using each of the following question formats into your survey. Be sure to incorporate a funneled approach when ordering your questions, appropriate anchors on attitude scales and a logical skip pattern in your survey.

1. Open ended response questions
2. Fixed-alternative questions
 - a. Simple dichotomy
 - b. Determinant choice
 - c. Frequency determination
 - d. Checklist

Instructor's Note: In-class activity

1. Use think-pair-share with open ended questions
2. Have several students write their fixed-alternative questions on the board; collectively critique them
3. Identify if the resulting data would be nominal, ordinal, ratio, interval.

Figure 2. Sample questions from the fifteenth CPA for a Marketing Research class based on the textbook readings.

Administration and Use of CPAs

To keep students focused on the current content and ensure that the material is fresh in their minds, the CPAs are released with a short window of preparation; the CPA for the next session is distributed at the end of the current class. Students are asked to print two copies of their assignment: one to submit to the instructor and one to reference during the current class. When discussing the CPA in class, (either en masse or using a small group technique), students correct their work and note the effective ideas that were shared by their peers. The content is later applied in their semester project and when studying for the next exam. In this manner, students reference the content multiple times. According to the principles of Variation Theory (Oliver & Trigwell, 2005), students learn most effectively when they process information from a variety of perspectives and modalities. This is further supported in the preponderance of neural research that highlights the fact that repeated exposure to content in various manners reduces synaptic gaps, making

recall more consistent and longer lasting (Abiola & Dhindsa, 2011). It has been observed that when students prepare before class using the textbook, the Internet, personal research, or some other means to become familiar with a subject and then discuss the material in class and then later address the content again in a project or exam, the potential for long-term recall (and hence higher learning outcomes) is increased.

During class, the instructor references the submitted assignments directly and unobtrusively. With a hard copy in hand, the instructor glances at the CPAs and quickly gauges the topics that are broadly understood and those that require more discussion. After class, pass/fail credit is assigned for each student's work.

Class projects, such as marketing plans or business plans, typically incorporate many of the concepts learned in class. The class preparation assignments serve as an effective vehicle to synthesize concepts that are later implemented in the class project. For example, marketing plans typically incorporate a mission statement and marketing

objectives. When mission statements are addressed in a chapter of the textbook, students are asked to write or critique a mission statement in their CPA. Later, when the students work on their class projects, they reference this work as an example. Given such prior experiences, their project work is stronger compared to the projects submitted in prior terms (before implementing CPA/ definitional grading method).

Definitional Grading System

It has been discovered that the lynchpin for CPA compliance is using a definitional grading system. A definitional grading system yields two different calculated averages for each student (Gillette, Davis & Gillette, 2012). The first average is based on their exam scores, projects, quizzes, etc. The second average is based on the percentage of CPAs they complete. If a student completes 90% or more of the CPAs, they earned an 'A' for their CPA average. Once both of their averages are calculated, the lower of the two grades is submitted to the university as their final grade (see Table 1). The definitional grading system keeps students motivated to submit every CPA given the consequence that non-compliance can have on their final grade.

Table 1. Grade value for exams and projects.

Course grade	Exams/ project/ quizzes	Grade value for CPAs submitted
A	A: 90% or higher	A: 90% or more
B	B: 80 – 89.9%	B: 80 – 89.9%
C	C: 70 – 79.9%	C: 70 – 79.9%
D	D: 60 – 69.9%	D: 60 – 69.9%
F	F: 59% or lower	F: 59.9% or lower

Hypothetically, if a student earns an average of 87% on exams/projects/quizzes and submits 92% of the CPA assignments, a 'B' will be reported to the University as their final grade because 87% is the lower value of the two averages. It was found that the CPA grade averages and exam/project/quiz averages are typically quite similar.

The CPAs are graded on a pass/fail basis. If a student makes an honest attempt to complete the work, they receive credit, even if it is not all correct. The important thing to consider is that the student made an earnest effort and then uses the class time for clarification. This methodology keeps the students motivated to work on the material prior to class, without imparting undue duress to submit a perfect preparatory assignment.

Given the premise that these are preparatory assignments for in-class discussions, late assignments are not accepted. If a student doesn't attend class or if they do not complete the assignment before they arrive in class, it negates the premise of submitting a preparatory assignment. Credit is assessed only for those assignments that are submitted in-person, which imparts greater pressure for the student to attend every class session, yielding higher attendance rates.

Results

While the results of the CPAs and the definitional grading system are qualitative in nature, they collectively reflect a strong indication of effectiveness. For example, the distribution of exam grades for the initial Principles of Marketing course were, on average 8.6% higher relative to the scores from the same course one year prior (without CPAs and the definitional grading system). In this course, the time of class, the textbook and the project were the same; the only variable that changed was the addition of the class preparation assignments and the definitional grading system.

In the Market Research class; exam scores rose by 4% across the board. The teaching methodology and materials remained the same to facilitate comparison. Further, the students' analysis in their research projects was far more robust than in years past.

The results for the Consumer Behavior class were also stronger after the adoption of the CPA assignments and the definitional grading system. From a faculty evaluation standpoint, scores by the students rose considerably from before the CPA/ definitional grading system was implemented to after it was implemented.

The scores in Table 4 represent the average student evaluation score from the semesters that the CPA/ Definitional grading system was implemented minus the average student evaluation score from the semesters (for the same classes) prior to implementation. It is evident that perceptions of these classes and the instructor were considerably higher post-implementation. Attendance tracking is mandatory for every class at the University; facilitating comparison of attendance rates before and after implementation of the CPA/ Definitional grading methodology (Table 3). The grades for the courses that the methodology was implemented are stated in Table 4; in each of these courses, the project and exams followed the same format.

Table 2. Average faculty evaluation scores post vs. pre-implementation of CPA/ Definitional grading system.

Category	Evaluation Score
	<i>Excellent</i>
Rate the overall performance of your instructor	46.13% higher
This course was intellectually stimulating	<i>Strongly Agree</i> 46.40% higher
This course was well organized	41.50% higher
The course increased my understanding of concepts and/or skills in the field	25.37% higher
The instructor demonstrated adequate knowledge of the subject matter	41.82% higher
The instructor explained the material clearly	39.82% higher
The instructor was fair	42.95% higher
The instructor was well-prepared for class.	13.40% higher

Table 3. Student attendance rates post vs. pre-implementation of CPA/ Definitional grading system.

	With CPA/Definitional Grading	Without CPA/Definitional Grading	Percent Difference
Consumer behavior	92.50%	88.90%	3.60% higher
Market research	87.10%	88.10%	1.00% lower
Internet marketing	99.4%	97.3%	2.10% lower

Table 4. Grade point averages post vs. pre-implementation of CPA/ definitional grading system.

	With CPA/ Definitional Grading	Without CPA/Definitional Grading	Percent Difference
Consumer behavior	81.7%	69%	12.8% higher
Market research	85.3%	81.6%	3.7% higher
Internet marketing	87.2%	83.6%	3.59% higher

Student Comments Regarding the Use of CPAs

Taped interviews were conducted with two students to obtain their perception of CPAs. One of the students had taken the Consumer Behavior class in spring 2011, before CPAs were used in the class. This student failed the course. He took the same class again in spring 2012. His comments contrast what it was like to experience the class before and after the CPA method was implemented. The second interview was with a high-achieving student who compared his experience in a class with CPAs and all of his other courses.

Was there a difference in your experience in the Consumer Behavior class with and without CPAs?

Taking the Consumer Behavior class with CPAs and without CPAs, a major difference was that with the CPAs I was more focused, more prepared for class. Without the CPA, being told just to read the book was motivation, but without the CPA, there wasn't anything mandatory due that I had to focus on so I would nonchalantly read the book. With the CPA, there was a guideline for you to base your information. In class, you could participate in discussions way more; you would be more involved. It was just an overall better experience with the CPA, and this is coming from someone who didn't want to

have do them every single class, but it was a great way to be prepared for work every class. Just being prepared was the number one thing.

You were given the same project [assignment] in both classes. Did the CPAs make a difference in doing the project? Absolutely. Since a lot of the information that we used from the CPAs were in the project, it made it to where I was, once again, more prepared but I actually absorbed the information better as well. Everything that was in the project I could relate to one of the CPAs, or many of the CPAs. You can tell in my grade between projects that it was way better with the CPAs. Like I said, it's a guideline to keep you motivated, to keep you prepared; and so, I thought it was overall better with the CPAs. (Amador Munoz, personal communication, 2011).

Can you tell me what your thoughts are of the CPA assignments? The CPA assignments definitely get the student to get more involved into the chapter; it makes you more prepared for class. Instead of learning the chapter that you are going to touch on that day [if a student's first exposure to the material is when they come to class], you already have an idea. When the teacher reinforces it on the day, it makes it a lot stronger. Since it's the second time that you are going over that subject, it is more installed in your head.

Were there any aspects [of the CPAs] that you liked or didn't like? They are definitely a lot of time and it's an everyday thing. There are pros and cons. You are more involved in the class, so out of this whole semester, this is the class that I learned the most. But, it also took an hour or two on average a day; that's probably why I learned more.

How much time did you spend on your other classes in comparison, on a daily basis? Like I said, 1-2 for Consumer Behavior. French, after class, 0-1, and Science 0-1; Business Communications, 0-1, and Quantitative Analysis, that one I tried an hour, max. So Consumer Behavior was definitely the class that I put the most time into.

Do you think that your participation in class was different because of the CPAs? Definitely. Once you are already familiar with the concepts, even though you may not grasp it completely at first, it does influence a lot. Like, you actually know what you are talking about and you can have your input or your opinion on the matter and agree or disagree; and it definitely improves your participation.

Do you, relative to other classes; maybe not this term, but in aggregate, do you think that you ended up participating more in class? Did the CPAs have an influence on the amount of participation that you had or that you noticed in the class in general? I think in the other classes, I always tried to participate when I had an opinion on something; but in this class, for instance, I didn't just participate because I knew about the subject, but because I had other ideas. And that, opens it up to the whole class; so you are not the only one learning, the whole class is learning and seeing your point of view, the way that you think about something.

Any final thoughts on CPAs? They are pretty much a catch-22: you need them to improve and learn more but you need time to invest in them. It's a good thing. (Oscar Rodriguez, 2011).

Conclusion

In conclusion, class preparation assignments are an effective means of boosting student involvement and comprehension of course material. When adding a definitional grading system, it increases the students' motivation to complete the incremental preparatory work on a daily basis. Prepared students who reliably attend and participate in class are more satisfied with the course and earn higher grades.

CPA assignments and a definitional grading system provide a strong preparatory base for active learning. It is recommended that additional research be conducted as new teaching technology is developed and applied in the classroom. In addition,

it is recommended that further research be conducted in the online educational environment.

Stated in the context of Bloom's Taxonomy, students gain *knowledge* and *comprehend* the information when reading it initially and then *apply* it through the CPA assignment. When they come to class, the information is then analyzed through small group active-learning teaching methods and it is then synthesized through broad class discussions. The concept is later *evaluated* when synthesized into a project and/or when preparing for exams.

Incorporating CPAs results in a learning environment that Generation Y students embrace, addresses their preference for experiential activities (Wessels & Steenkamp, 2009), while also addressing their preference for a trial and error approach (Oblinger, 2003) in a structured environment that they desire.

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