

The Effects of a Classroom Discussion Technique on Student Satisfaction: A Quasi-Experiment

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Abstract

Increasing student satisfaction has many benefits at all levels within higher education; yet the literature reveals few scientifically-tested teaching methods to increase satisfaction. We examine whether a classroom discussion technique increases student satisfaction. This low-tech method to increase classroom discussion may be applied in almost any course. The technique helps create highly personalized lectures relevant to students. Using a quasi-experimental design in two similar courses taught at a medium-sized university, results indicate that increased classroom discussion accomplished via the personalized lecture technique significantly increases student satisfaction. The technique, methods, results, and future research are discussed.

Introduction

Student satisfaction in the classroom is an inherently desirable goal and a benefit of teaching. Satisfaction has practical effects for students as well. While plenty of research exists on the many benefits of student satisfaction, there is less research that identifies and tests the effectiveness of methods instructors may use for increasing satisfaction. In our research, we explore a classroom discussion technique that requires little familiarity with technology and that may be applied to almost any course content. The technique involves two steps that help instructors to personalize lectures to the particular students in each course. We examine whether this technique increases student satisfaction.

Satisfaction

There has been a great deal of research examining the benefits of satisfaction in the college setting. For example, satisfaction has been linked to student performance among college students (Bean and Bradley 1986; Lock 1976; Organ 1977; Schwab and Cummings 1970). Donohue and Wong (1997) argue that satisfaction is highly correlated with achievement motivation among both traditional and non-traditional students. This may be why others have found an association between satisfaction and college student achievement (Centra and Rock 1971; Lavin 1985). Grade point average (GPA) has been linked to student satisfaction (Bentler and Speckart 1979; Fishbein and Ajzen 1975). Student satisfaction has also been examined as a factor contributing to student retention (Spady 1970; Tinto 1975, 1993; Aitken 1982; Astin 1993) and student attrition (Bean 1983; Spady 1970; Tinto 1975, 1993). Satisfaction and academic performance have also been viewed as intervening variables that affect student attrition (Bean 1980, 1983, 1985; Pascarella 1980; Spady 1970; Tinto 1975).

Apart from the academic benefits outlined above, satisfaction has also been correlated with students' progress in their intellectual and social development (Pace 1984). Scholars have argued that satisfaction is a key psychological-affective outcome, which in turn leads to a direct measure of success in college (Astin 1977; 1993). Student satisfaction in older students has been shown to be related to creating a learner-centered approach (Miglietti and Strange 1998). Many program evaluations include measures of student satisfaction because of knowledge relating to its practical benefits, though much of

the knowledge regarding satisfaction comes from earlier studies during the late 1960s and early 1970s (e.g., Betz, Klingensmith, and Menne 1970; Pervin 1967; Schmidt and Sedlacek 1972).

Satisfaction has also been linked to the institutional culture of the university. Cultures that value and build community are more likely to have higher student satisfaction rates (Kuh 2001-2002).

While contributing to satisfaction among students may be one desirable consequence of teaching, research on factors available in the classroom to increase satisfaction are limited. Some studies have explored how grade performance relates to satisfaction (Lui and Jung 1980; Siegel and Bowen 1971), but less information is available in terms of specific techniques instructors may use to increase student satisfaction. Even if it were found that better grades lead to higher satisfaction, it is not ethical to inflate student grades to attempt to achieve more satisfied students in one's class.

Lectures and Student Satisfaction

There are different instructional methods that are linked to variations in the level of student satisfaction (Kellum, Carr, and Dozier 2001; Ostiguy and Haffer 2002). Lecture styles may differ in how they facilitate learning. According to Bailey and Lagdana (1997), faculty performance and lectures play a large part in student satisfaction. For example, both an instructor's knowledge of the subject matter and teaching ability have been shown to affect satisfaction (Aitken 1982; Hearn 1985; Metzner and Bean 1987). In fact, course stimulation and faculty teaching ability have been shown to be stronger predictors of overall departmental satisfaction than social support (Hearn 1985). According to Liegler (1997), some factors external to the classroom also affect student satisfaction, such as the students' background or pre-enrollment characteristics, college facilities and services, academic integration, and social integration. The available literature on satisfaction rarely addresses endogenous classroom factors that impact student satisfaction.

Classroom Discussion

Increasing classroom discussion has popularity among both instructors and students, and is often viewed as a positive trait in a class format. This is because there are many benefits associated with increased classroom discussion. Goodman (1995) posits that discussion in the classroom helps teach

students about cultural diversity. Academic benefits are associated with the presence of discussion in the classroom. Burchfield and Sappington (1999) argue that discussion in the classroom is important enough that it should be portrayed to students as a critical element in success. VanDeWeghe (2005) argues that discussion plays a critical role in students' literacy development. Voelkl's (1995) work found that participation in discussion is closely linked to course grades, a variable related to student satisfaction. Others (e.g., Hutchinson & Beadle, 1992) have found that students who did not participate in discussions in class were at a disadvantage relative to those who did.

If student satisfaction has many benefits for college students, and if lecture styles may play a part in student satisfaction, then it is worthwhile to examine an existing lecture tool which may be adopted in any subject. If this tool increases student satisfaction, the value of that tool increases and it is worth studying and outlining for the academic community.

A low-tech teaching technique exists for increasing classroom discussion (Nath and Anderson 2006). This technique works by bringing students' unique and personal beliefs, attitudes, and experiences into the classroom for discussion. In this paper, we outline the classroom discussion technique and test whether its effects on discussion are associated with student satisfaction levels as well.

Method

Personalized Lecture Technique. The technique is adopted by Nath and Anderson (2006). It involves two steps and is used to increase discussion in the classroom. Instructors integrate student responses to an anonymous survey administered at the beginning of the course into relevant course lectures throughout the semester. The technique itself is low-tech, though it can just as easily be used in the more technologically advanced classroom as in the more traditional blackboard-only classroom. It does not require knowledge of PowerPoint or use of pointers or remote "clickers," although it can be argued that the effect may be similar to parts of what is achieved through the use of "clickers."

The first step in the technique is to give an anonymous survey to students within the first week of the semester. The survey should ask students questions regarding their opinions, attitudes, and experiences related to general and specific course material. The second step of the technique involves incorporating student responses to specific questions into relevant lectures over the course of the

semester. Students therefore can see where they stand in relation to other students in opinions related to a topic. This has two benefits: (1) it provides students with an opportunity to express any previous experience with the course material; and (2) the data drawn anonymously from these surveys links the students' own unique experiences to course material.

For example, in one political science class, the instructor surveyed his students on their opinions, attitudes, and experiences related to various topics in political science. When a particular topic such as values, voting, or media was scheduled to be the lecture of the day, the instructor presented student responses to these issues:

- Opinions on the topic of values: "Which of the following three values (democracy, liberty, equality) do you think is most important?"
- Attitudes towards voting issues: Do you agree that "only people who are informed about the issues should vote?"
- Experiences with media: "Where do you get most of your news from?"

As the instructor discussed the topic, he would pause to reveal student responses on the relevant questions and then open the floor up for discussion.

The Experiment

Using a quasi-experimental design, we examined the effects of increased discussion via personalized lectures on course satisfaction. We accomplished the treatment in the experiment by applying step one (conducting the survey) of the teaching technique in two similar sociology social problem courses at a Midwestern state university. We applied step two (revealing results of the survey) to only one class, making that class the treated class.

We measured discussion and student satisfaction by administering a second survey to both classes at the end of the semester. We defined *discussion level* as the degree to which students felt comfortable speaking up in the course as well as the degree of course discussion they experienced compared to other courses in which they were also enrolled. We defined *satisfaction* as the degree to which students had a positive affective orientation towards the class experience.

We hypothesized that the class with higher discussion would have significantly higher student satisfaction than the class without higher discussion.

Results

Measurement Reliability. Using a six-point Likert scale from 1=strongly disagree to 6=strongly agree, the following statements were used to assess discussion:

1. "I felt comfortable speaking up in this class."
2. "This course included very little classroom discussion" (reverse coded).
3. "Students spoke up in class and shared their views about the topics" ($\alpha=.50$).

Using the same Likert scale, students were asked to state their level of agreement with these four statements of satisfaction:

1. "I consider this class rather unpleasant" (reverse coded for analyses).
2. "I feel satisfied with this class."
3. "Most of the time, I have to force myself to go to this class" (reverse coded for analyses).
4. "I feel that I am happier in this class than most of my friends are in their classes" ($\alpha=.65$).

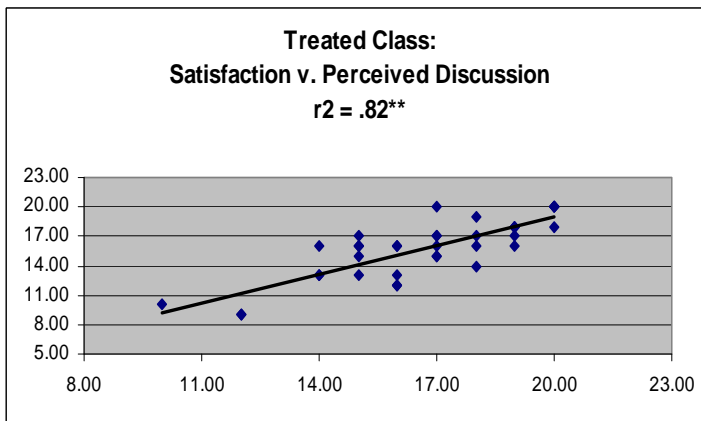
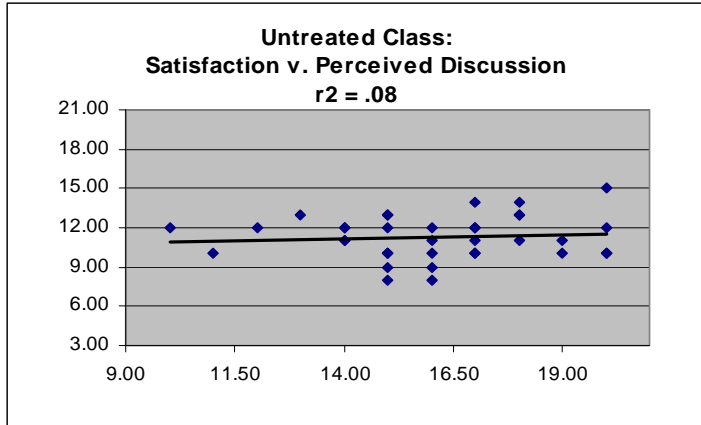
Regression. Regression analyses examined the relationship between discussion and student satisfaction within each course. Results supported our hypothesis. That is, students were significantly more satisfied with discussion in the class treated with the teaching technique ($B = .58, p < .01$) than students in the non-treatment course ($B = .13, p = .62$). In other words, the discussion technique, when used, raises the satisfaction level of students in that class. See Table 1 for detailed regression results, and Table 2 which depicts charts of the differing r^2 values for each class.

Table 1
Discussion on satisfaction separated by class

Independent Variable	Treated Class Satisfaction (N = 37)	Untreated Class Satisfaction (N = 36)
Constant	9.31 (2.20)	14.64 (2.91)
Discussion	.58** (.17)	.13 (.26)

Note: Standard errors are in parentheses; * $p < .05$; ** $p < .01$, *** $p < .001$.

Table 2
Visual line graphs of each class' r-square



Discussion and Conclusion

There is a substantial literature on factors that impact student satisfaction, but too much of this research explores factors that are exogenous to the classroom—and out of the instructor’s control. Instructors can have an impact on creating student satisfaction, and this study explored one method that can be used to accomplish this goal. This project was an attempt to examine a classroom discussion technique to see if it also increased student satisfaction. Regression analyses revealed that when this classroom discussion technique was used, the students in that class were significantly more satisfied than students in the class that did not use the technique. Creating personalized lectures through the incorporation of opinions, experiences, and attitudes of the particular students in the class in question shows that instructors have the tools to increase student satisfaction in almost any class.

This research also opens up a new research question related to the relationship between increased discussion in general (i.e., using some other technique) and student satisfaction. It may be that

students in our study were more satisfied because the discussion not only revolved around the course topic, but also focused on the actual students' particular opinions, attitudes, and experiences instead of focusing on generalizations.

There are limits to our research as well. Because of the quasi-nature of the experiment, there may have been other factors present to create the effect. Therefore, further research in the form of replication may be helpful. Replication in other subject areas, or in the same course but across a new semester, would be beneficial.

Another related area worth investigating relates to student retention. Elliot and Healy (2001) and Elliott (2002-3) note how instructional effectiveness directly impacts student satisfaction and retention. If the personalized lecture technique is measured as a more effective instructional method, this would help explain increases in student satisfaction. Another area for future research is to compare retention rates among two cohorts of students, one that has had numerous classes with the personalized lecture technique, and one that has not. This could be accomplished using students in learning communities within one or more universities.

In addition, further research could examine the effects of increased discussion by using this technique on other important dependent variables such as course commitment, perceived relevance of course material, and various measures of learning.

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