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OPPORTUNITY LOSS AND OPPORTUNITY COST: CONSEQUENCES OF NOT ATTENDING CLASS

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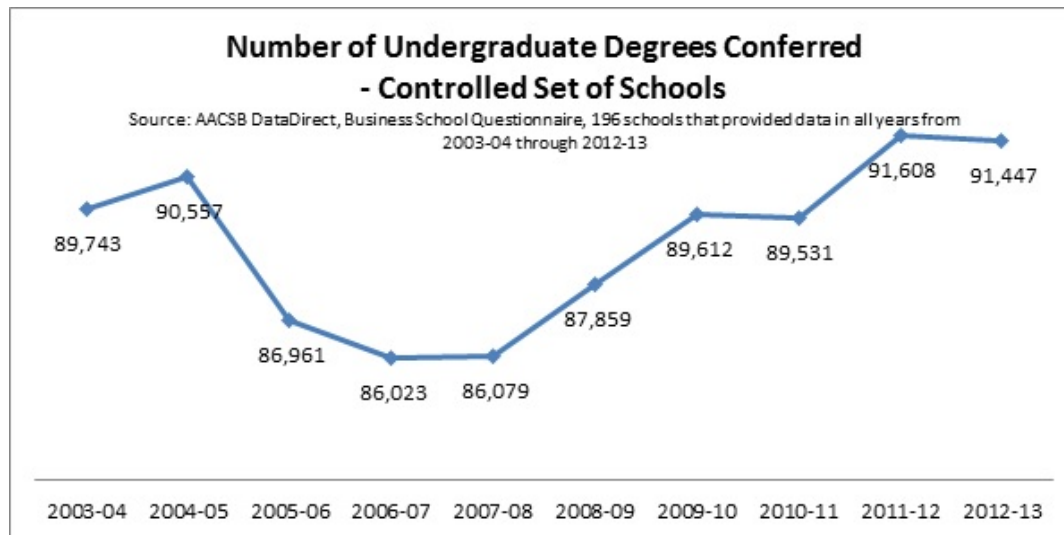
ABSTRACT

Business Schools are charged with equipping the next generation of marketing professionals with the skills and knowledge to benefit both the businesses they work in and the country at large. Regional accrediting bodies such as the Southern Association of Colleges and Schools (SACS) and international bodies like the Association to Advance Collegiate Schools of Business (AACSB) review teaching practices in an effort to improve educational effectiveness at the Business School level. This movement, known as Assurance of Learning, is practiced in Business Schools everywhere. This paper explores the effect of students' skipping classes in a capstone Marketing Strategy course on opportunity loss and opportunity cost. The results show avoiding opportunity costs of tuition and opportunity losses of learning is facilitated by students attending all of their classes. These results also suggest college professors should consider mandatory attendance in courses with high percentages of D, F, W grades that may frequently precede students dropping out of college.

INTRODUCTION

Business Schools play a significant role in higher education in America. Their purpose is to supply future employees to staff operating businesses. As undergraduates, students' experiences in Business School provide a foundation for future success whether they choose to continue their education by pursuing an MBA, or join an operating business. The Association to Advance Collegiate Schools of Business (AACSB) has provided data from member Schools concerning the number for degrees conferred at the undergraduate level (Brown, 2014). The decline then rise of undergraduate business degrees is shown below in 196 member Colleges across 10 years. These data appear in Figure 1 below.

Figure 1
Number of Undergraduate Degrees Conferred



The importance of undergraduate Business Schools to the US economy is shown by the fact that over these 10 years, these 196 schools conferred 889,420 undergraduate degrees in business. Furthermore, in academic year 2011–2012, 367,000 Bachelor degrees were conferred on business students representing 20.5% of all U.S. undergraduate degrees granted (NCES, 2015).

Recently the cost of obtaining a Bachelor’s degree has come into question as well as the extent of knowledge gained during four years of undergraduate education. For example, Fishman (2015) calculated the price tag in the form of tuition for over 150 universities in nine conferences around the country to see the amount of wasted tuition dollars when students do not attend classes. The tuition amounts came from the 2014-2015 school year. For state schools the calculation was based on the higher percentage of in-state versus out-of-state students. The calculations showed a range of lost tuition of \$15.75 at a state school to \$174.25 at an Ivy League school for missing a single class period.

With regards to return on investment in the form of learning and skills realized from tuition and fee expenditures, AACSB in 2013 enacted business accreditation standards which require setting of learning goals where “*learning goals describe the knowledge and skills students should develop in a program and set expectations for what students should do with the knowledge and skills after completing a program.*”

As part of assuring marketing major students reach the marketing major learning goals, they are required to pass a Marketing Strategy capstone course after completing and passing courses in Introduction to Business Communication, Marketing, Consumer Market Analysis, and Marketing Research. Here, passing is defined as a minimum overall grade of C.

Attendance is part of the grading requirements for all students in the sections of Marketing Strategy taught by the first author. Attendance constitutes 10% of the final grade and students

are reminded of the attendance requirement repeatedly during the course. Attendance is considered the students' responsibility as it would be in an internship or on the job. The attendance grade is calculated at the end of the semester as 100 grade points multiplied by the percentage of class periods in attendance.

The importance of attendance was shown in another analysis by the second author (Lowenstein, 2016) where an estimated average tuition loss of \$433 per semester class skipped was calculated. That study of a Legal Environment of Business course also showed a relationship between grades and student attendance. Poor attendance caused students to lose higher letter grades or even to fail the course altogether

OPPORTUNITY LOSS AND OPPORTUNITY COST

In business as in life, we have only three resources: time, people, and money (Drucker, 2002). Success depends on how these resources are managed. Much earlier in the history of our country, Benjamin Franklin noted that time is money, making the point that these resources are fungible and can be wasted.

Two related concepts are Opportunity Loss and Opportunity Cost. Opportunity Loss in decision theory is the resulting regret caused by the worsening of a position that has been locked into a course of action, such as not attending classes leading to insufficient learning and subsequent regret about a low grade. Opportunity Cost refers to the economic outcome of giving up an opportunity, such as lost tuition due to not attending classes.

METHODS

To study Opportunity Loss and Opportunity Cost, students from the Marketing Strategy capstone course taught by the first author were the participants in this study. As described earlier, this capstone course brings together all the core course learning done prior to the senior year to crafting and executing marketing strategy and doing effective case analysis. The course description, learning objectives, and learning outcomes are presented below:

Catalog Description

Marketing Strategy (3) (Prereq: Completion of CBAD 351 and 357.) Analysis of case problems dealing with the development of strategies and plans for marketing consumer and industrial products. Topics include marketing organization, product, price, promotion, distribution, industry, and sales forecasting and analysis of marketing costs.

Course Learning Objectives

The chief objective of Marketing Strategy is to prepare the student for his or her 'best and highest' marketing position after graduation by developing critical thinking, problem identification, and solving, as well as creative communication skills. Specific attention will be given to the following learning objectives:

1. Synthesizing students' evolving marketing skill set to aid decision-making in a dynamic global marketplace.
2. Content from such discipline-specific courses such as Consumer Analysis, Marketing Research, International Marketing, Retail Management, and Integrated Marketing Communications will be used in an applied setting.

Student Learning Outcomes

At the completion of this course, the student should be able to:

1. Confront the ethical decisions facing marketing strategists in a complex operating environment.
2. Engage in the process of devising and implementing Marketing Strategy in a dynamic global marketplace.
3. Use strategic planning models to organize marketing decision-making.
4. Distinguish segments of a marketplace and devise a targeted marketing effort to reach marketing goals.
5. Compare and contrast the decision-making process of competitors in the marketplace.
6. Illustrate marketing mix manipulation in a competitive marketplace (Product, Price, Promotion, Place, Partners, Packaging, and Passion).
7. Conduct themselves as informed marketing strategists in a dynamic global marketplace.

In order to reach the learning objectives and have positive student learning outcomes at the end of the course, attendance in class is necessary.

Calculating Attendance Scores

For purposes of this study, the Marketing Strategy capstone course has been taught with the same syllabus by the same instructor over five years. Attendance in the course has been recorded electronically using the online attendance system. An individual student's attendance was determined by the percentage of class periods the student was in attendance.

Calculating Grade Scores

Grade scores were based on 1,000 grade points that could be earned in various course activities.

Final grades were assigned using the following percentage of the TOTAL Points cut-offs in Table 1 below:

A	90% – 100%	B+	87% – 89.99%	B	80% – 86.99%
C+	77% – 79.99%	C	70% – 76.99%		
D+	67% – 69.99%	D	60% – 66.99%	F	0% – 59.99%

The course activities range from the GLO-BUS Strategy Game to Exams and the grade points available for students to earn appear below in Table 1.

Table 1
Course Activities and Grade points

Activity	Points
GLO-BUS Team Performance	200
GLO-BUS Review Presentation	100
GLO-BUS Individual Logins	50
GLO-BUS Peer Evaluation	50
GLO-BUS Written Executive Summary	100
Team Case Analysis Presentation	100
Team Case Peer Evaluation	100
Class Attendance	100
Discussion Board Participation	100
Exams	100
TOTAL	1,000

At the end of the semester, the Percentage of Attendance (PA) and the Percentage of Grade Points earned (PGP) were calculated and recorded each regular semester from Fall 2009 to Spring 2013. In addition, the student's gender (GEN) was recorded. Altogether data were gathered from 264 students, including 137 males and 127 females.

RESULTS

The descriptive statistics for PA and PGP calculated from the total sample, males and females separately are in Table 2 below.

Table 2
Descriptive Statistics

Measure		Mean	Std. Deviation	N
PGP	Males	82.72	6.394	137
	Females	84.00	7.594	127
	Total	83.34	7.013	264
PA	Males	77.79	14.942	137
	Females	77.22	16.948	127
	Total	77.51	15.911	264

The correlation between PA and PGP was .539 for the total sample and was statistically significant ($p < .0001$). For male students the correlation was .490 ($p < .0001$) and for female students it was .586 ($p < .001$). The correlations for males and females are not statistically

significantly different from each other ($p < .13$) allowing use of the total sample in further analysis.

Opportunity Cost of Unutilized Tuition Calculation

Using estimates from Lowenstein (2016), a semester has 29 class periods with an average tuition cost of \$433 per class period. In this study we find 22.49% of classes are not attended. The Opportunity Cost of Tuition for a single student in a semester is calculated in Table 3 below.

Table 3
Opportunity Cost of Tuition Per Student

Tuition Cost Per Class	\$433
Classes Per Semester	29
Percentage of Classes Unattended	22.49%
Opportunity Cost of Tuition Per Student	\$2,824

Missing classes at the average rate results in \$2,824 in tuition unutilized. The aggregate Opportunity Cost of Tuition for these 264 students in this single course over five years is \$748,360.

Opportunity Loss of Learning

Considering lost opportunities to learn by missing classes involves a different analysis. Using PUA or Percentage of Classes Unattended to predict PGP or Percentage of Grade Points earned in a linear regression analysis results in the following output.

Model	SS	df	MS	F	Significance
PUA	3761.036	1	3761.036	107.424	.0001
Residual	9172.901	262	35.011		
Total	12933.937	263			

The Standardized Beta for (PUA) is -.539 indicating a regression model for estimating Grade Points using Percentage of Classes Unattended as follows.

$$\text{Percentage of Grade Points} = -.539 * (\text{Percentage of Classes Unattended}) + \text{Error}$$

As the Percentage of Classes Unattended increases, learning, as reflected in the Percentage of Grade Points declines roughly a half a percentage point for each percentage point of classes that are not attended. Attending one more additional class each semester could change a final grade for students at the margin between grade levels.

CONCLUSIONS AND IMPLICATIONS

In the area of Economics, the National Center for Educational Statistics says the typical expenditure on higher education is annually slightly more than \$32 billion for instruction alone. Past estimates of students skipping classes (Romer, 1993) have been as high as 40%. Other studies (Jones and Jackson, 1990) show a strong relationship between performance in college and graduate salaries with one extra point in their overall grade point average, say from a 2.2 GPA to a 3.2 GPA, yielding an 8.5% higher salary in five years after graduation (James, Alsalam, Conaty, & To, 1989; Wise, 1975).

More recently, Dobkin, Gil and Marion (2010) showed a 36% increase in class attendance after mid-term through the addition a compulsory class attendance policy at mid-term led to a corresponding increase in final exam performance over mid-term exam performance. They concluded that mandatory attendance policies should be considered if the objective is to increase academic achievement.

The Pew Research Center has done extensive surveying of the Millennial Generation who are people born after 1980 and between the ages of 20 to 34 in 2015. Four of their questions asked of those with at least a bachelor's degree (n=790), what were their major regrets about their college experience. Other than choosing a different major (29%) or looking for work sooner (30%), studying harder (perhaps a surrogate for attending class) was second at 38% behind gaining more work experience (perhaps a surrogate for internships) at 50% with regrets. In addition, only 26% had none of these as regrets while 21% said they had regrets for three or all four of these items.

Results found in this Marketing Strategy capstone course show, in order to avoid Opportunity Costs of Tuition and Opportunity Losses of Learning, students need to attend all of their classes if at all possible. Also, these results suggest college professors should consider mandatory attendance at a minimum in courses with a high percentage of grades in the D, F, W categories which may precede students dropping out of college all together. Only future research in other degree programs can show if these conclusions are applicable to other business degree programs and beyond.

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