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Chapter XVI

Forum Performance in WBE: Causes and Effects

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ABSTRACT

This chapter combines research into student performance in finance courses and student performance in Web-based courses. The chapter explores how a priori characteristics of individual students can serve as predictors of success in a 100% Web-based course in finance. The statistical models developed in the chapter explain up to 31% of the variation in students' final grades. The models have significant explanatory power for variation in performance on individual grade-components such as quizzes, tests, and projects. The models have much less predictive power for student performance in the on-line discussion. Yet, there is a strong relationship between the performance in the on-line discussion and the other grade components. This finding suggests that developing on-line discussion skills prior to the start of the course will enhance student performance in other areas of Web-based courses such as introductory corporate finance.

INTRODUCTION

Over the past 30 years, researchers have generated a lengthy literature on the determinants of students' academic performance, and there has been a commensurate focus on student performance in introductory corporate finance classes (see Borde, Byrd, & Modani, 1998). Such studies examine student background and methods used by professors. With the advent of Web-based learning, this topic has a new dimension to explore. What are the determinants of student performance in an introductory finance class that is taught on the Web? The goal of this chapter is to share some observations that I have made with respect to the interrelationship of the a priori characteristics, the online participation, and the final grade of students in a Web-based introductory corporate finance course.

This chapter was motivated by observations I made in the Spring of 2001 while I taught three sections of a Web-based corporate finance course. I had been teaching 100% Web-based courses for two years up to that point, but in that semester, I observed an interesting phenomena. The section of students that had the lowest average grade for the first quiz was also much more active in the online discussion. That section with the lowest performance on the first quiz but higher online discussion participation began to have the highest average score in most other coursework subsequent to the first quiz. This suggested to me that ability and willingness to participate in the online discussion are important determinants in overall student success in a Web-based course. This chapter provides an analysis of the characteristics, performance, and success of the students I taught in the spring semester and the following fall semester of 2001.

To investigate how participation in the online discussion helps determine student success, first we need to examine the role of the a priori characteristics of the students in determining student success. Many other studies have investigated this topic using grade point average (GPA), gender, age, and other characteristics to predict ex ante student performance. The study here incorporates similar variables and also includes characteristics that directly relate to Web-based learning. Section four includes a complete description of the variables. The second focus of the study builds upon the unique aspect of Web-based learning by exploring the role the online discussion plays in the learning process. Did the online discussions facilitate learning? What is the relationship between student participation in the discussions and student performance elsewhere in the course?

Many of the results are not surprising. Students with a higher Graduate Management Aptitude Test (GMAT) score earned higher grades, for example, and the students who participated more in the discussions earned higher grades. Yet, as Web-based curriculums grow, we must begin to document such observations if we wish to investigate the less salient aspects of Web-based learning. For example, one of the less salient aspects documented here is the strong relationship between online discussion participation and performance on exams. I find the following interesting relationships between certain a priori characteristics and participation in the online discussions and student performance on projects and tests. GMAT score, gender, age, and whether the student is a regular Web-MBA student explains over 31% of the variation of the final course grades in this sample of 76 students. These determinants are poor predictors of online discussion participation, however, but there is a strong relationship between that participation and performance on the exams.

Part of this chapter summarizes student comments regarding how they felt the online discussion aided the learning process. Students in the sample generally appreciated the online discussion. Based on group descriptive measures, the evidence suggests that a class with a generally higher level of experience, comfort, and appreciation for Web-based learning will have a higher level of success, on average. The implications are obvious. Increasing the willingness and ability of students to participate in the online discussions will enhance the learning process. The results suggest that such efforts may have other important implications. As the review of the literature in the next section will note, the gender quality "male" is often a positive and significant determinant for student success in an introductory corporate finance course. The online discussion may prove to be a tool for closing this gender gap.

The chapter goes on to give a more complete discussion of the determinants of success that previous research has documented for finance classes and Web-based classes. The chapter then describes my Web-based finance course and how I used the online discussion.

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