

Class Schedule and Student Performance: Evidence From Introductory Corporate Finance Classes

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By analyzing a sample of 230 students enrolled in introductory corporate finance classes, this study examines whether differences in scheduling formats—Monday-Wednesday-Friday (MWF) with 50-minute lectures versus Tuesday-Thursday (TR) with 75-minute lectures—impact student performance when the course design is consistent. The findings, supported by nonparametric tests and ordinary least squares regressions, indicate that TR students perform slightly better than their MWF counterparts, although the difference is not statistically significant. Additionally, the results reveal that accounting and finance majors outperform students in other disciplines, particularly in 75-minute classes. These findings suggest that college administrators may consider eliminating Friday classes and consolidating courses into MW or TR schedules, at least for introductory corporate finance classes, without adversely affecting student performance.

Keywords: class schedule, class frequency, student performance

INTRODUCTION

The connection between class schedules and student performance has been a consistent focus in educational research. Although much emphasis is typically placed on teaching quality, course difficulty, and class size, less consideration has been given to how scheduling elements—such as the frequency of meetings, time of day, and length of sessions—influence academic outcomes. However, these aspects of course structure may play a crucial role in shaping student success.

Existing literature underscores the complexity of this issue. Dills and Hernández-Julián (2008) found that both the timing and frequency of classes influenced grades, with late afternoon classes on a two-day schedule yielding better performance than morning three-day schedules. Similarly, Loveland and Bland (2013) focused on balancing academic performance and student satisfaction, reporting higher satisfaction levels in once-a-week and three-days-per-week formats compared to biweekly classes. However, the findings remain inconclusive. Diette and Raghav (2018) reported minimal differences in outcomes between biweekly and triweekly schedules after accounting for confounding variables. Cotti et al. (2018) suggested that observed differences might partly stem from instructor effects rather than meeting frequency alone.

Adding to the complexity, cognitive fatigue, schedule density, and time of day also significantly impact learning outcomes. Williams and Shapiro (2018) found that cognitive fatigue from back-to-back classes can cause noticeable declines in performance, with students generally achieving better results in afternoon sessions. These findings suggest that optimizing schedules could serve as a cost-effective strategy for improving student achievement.

Course scheduling is critical, especially in business disciplines where quantitative skills are essential for academic and professional achievement. Research has explored how instructional time, class frequency, and contact duration influence student outcomes in business courses requiring analytical and quantitative abilities. For example, Clark and Webster (1995) discovered that adding an extra credit hour to a finance course benefited average and below-average students but had minimal effect on high-performing students. Similarly, Henebry (1997) found that students achieved better results in courses with more frequent meetings, highlighting the importance of regular engagement.

The role of session length and compressed course formats has also been examined. Rayburn and Rayburn (1999) stated the benefits of extended classroom contact time, while Ewer et al. (2002) and Carrington (2010) suggested that compressed schedules can offer flexibility without significantly compromising student performance. However, Joyce et al. (2015) found that compressed formats may disadvantage certain student groups, particularly those in the middle performance range. These mixed results indicate that while compressed schedules are valuable for resource management, their implementation should consider student diversity and learning needs.

Preferences for schedule formats also play a critical role in student outcomes. Reardon et al. (2008) found that students generally preferred shorter, more frequent classes and associated these formats with better learning and improved grades. Conversely, Sheridan et al. (2017) and Trout (2018) found that while long or intensive class periods can enhance engagement and performance, diminishing returns may occur if sessions are not effectively structured. Ensuring breaks and interactive activities within extended classes could mitigate fatigue and maintain student focus.

The significance of this study is to extend existing research by focusing on the interplay between class scheduling variables and student performance in introductory corporate finance courses. This study also relates to financial education research studies examining the relationship between in-class lectures and student performance (e.g., Chan, Shum, and Wright (1997), Chiu, Gershberg, Sannella, and Vasarhelyi (2014), and Andrietti and Velasco (2015)). The following sections outline the research methodology, present the results, and discuss the implications for practice.

DATA AND RESEARCH METHOD

This study was conducted at a four-year state university in the Appalachian region. The School of Business Administration, accredited by AACSB International (Association to Advance Collegiate Schools of Business), comprises two departments: Accounting, Finance, Information Systems, and Management and Marketing. The introductory corporate finance course, a core requirement for all business majors, includes prerequisites such as Principles of Financial Accounting, Principles of Managerial Accounting, Principles of Macroeconomics, and College Algebra. Key topics covered in the course include financial statements and analysis, time value of money, bond and stock valuation, capital budgeting, risk and return, cost of capital, working capital management, and international financial management.

The study analyzed data from 255 students enrolled in ten face-to-face sections of the introductory corporate finance course between 2010 and 2023. Five sections met twice weekly for 75-minute sessions, while the other five met three times weekly for 50-minute sessions. Twenty-five students who did not meet course requirements were excluded. The study eliminated variability from differing instructors or teaching methods since the same instructor taught all sections using the same textbook and course requirements.

Classes met either twice a week for 75 minutes (on Tuesdays and Thursdays) or three times a week for 50 minutes (on Mondays, Wednesdays, and Fridays) over sixteen-week semesters. Lectures were delivered using a traditional chalk-and-talk method with multimedia support for displaying lecture notes. The Blackboard course management system facilitated access to course materials, including the syllabus, lecture notes, solutions to textbook problems, and grade tracking. Research by Biktimirov and Klassen (2008) suggests that providing online course materials can improve student performance in introductory finance courses.

Student performance was assessed through homework assignments, quizzes, two non-cumulative exams, and a comprehensive final exam, all presented in multiple-choice. This approach aligns with Einig's

(2013) findings, which showed a positive correlation between the use of multiple-choice questions and student performance in undergraduate accounting courses. Additionally, all students were required to complete online homework assignments using the Blackboard course management system. Smolira (2008) found that students in an introductory finance class generally preferred online homework over traditional assignments, citing improved understanding of the material and increased preparation time. Similarly, Titard et al. (2014) observed a positive relationship between the use of online homework assignments and student performance in financial and managerial accounting courses.

To examine the difference in student performance between 75-minute and 50-minute classes, I consider the following empirical model:

$$\text{GRADE} = \alpha + \beta_1\text{GENDER} + \beta_2\text{FROM} + \beta_3\text{AF} + \beta_4\text{TR} + \varepsilon \quad (1)$$

where, GRADE is a continuous variable representing students' course grades. GENDER is a dummy variable, with a value of 1 for male students and 0 otherwise. FROM is a dummy variable, with a value of 1 for in-state students and 0 otherwise. AF is a dummy variable, with a value of 1 for students majoring in accounting/finance and 0 otherwise. TR is a dummy variable, with a value of 1 for courses taught in a 75-minute session twice a week and 0 for courses taught in a 50-minute session three times a week.

The variables in this study primarily relate to student effort, student characteristics, and course characteristics. Student effort is measured by the student's course grade, which is calculated based on homework assignments (25%), quizzes (20%), and exams (55%). Student characteristics, including gender, in-state/out-of-state status, and major, were obtained through the university's faculty advising system. These variables have been examined in studies such as Didia and Hasnat (1998), Borde, et al. (1998), and Terry (2002).

DESCRIPTIVE STATISTICS AND REGRESSION ANALYSIS

Table 1 reports the descriptive statistics for the sample. The mean course percentage in Introductory Corporate Finance is 73.6 or a low "C". The sample indicates a higher proportion of male students than female students. Almost seventy-one percent of the students are in-state students. Of the sample, thirty-seven percent of the students are majoring in accounting and finance. Sixty percent of the students attend Introductory Corporate Finance in a 75-minute lecture format held twice weekly.

**TABLE 1
DESCRIPTIVE STATISTICS**

Variable	# of Obs.	Mean	Std. Dev.	Min	Max
GRADE	230	0.736	0.132	0.204	0.979
GENDER	230	0.622	0.486	0	1
FROM	230	0.709	0.455	0	1
AF	230	0.370	0.484	0	1
TR	230	0.600	0.491	0	1

Note: GRADE is a continuous variable representing students' course grades. GENDER is a dummy variable where a male student is equal to 1 and 0 otherwise. FROM is a dummy variable where an in-state student is equal to 1 and 0 otherwise. AF is a dummy variable where a student majoring in accounting or finance is equal to 1 and 0 otherwise. TR is a dummy variable where a course taught in 75-minute sessions twice a week is equal to 1 and 0 for the course taught in 50-minute sessions three times a week.

Table 2 presents the descriptive statistics for the sample, divided by class scheduling format, along with the t-test results for differences in student performance and characteristics. The mean course grade for the 50-minute classes was 72.1%, while the mean for the 75-minute classes was 74.6%. Although students in the 75-minute classes scored 2.5% higher than those in the 50-minute classes, the difference is not

statistically significant. The 75-minute classes had a higher proportion of accounting/finance majors than the 50-minute classes, with the difference being statistically significant at the 5% level. Comparisons of gender and in-state/out-of-state status between the two groups revealed no statistically significant differences.

TABLE 2
DESCRIPTIVE STATISTICS BY CLASS SCHEDULE AND WITH TEST OF
EQUALITY OF MEANS

	50-Minute-Class			75-Minutes-Class			t statistic	p-value
	# of Obs.	Mean	Std. Dev.	# of Obs.	Mean	Std. Dev.		
GRADE	92	0.721	0.140	138	0.746	0.126	-1.419	0.157
GENDER	92	0.674	0.471	138	0.587	0.494	1.332	0.184
FROM	92	0.707	0.458	138	0.710	0.455	-0.059	0.953
AF	92	0.272	0.447	138	0.435	0.498	-2.534	0.012

Note: GRADE is a continuous variable representing students' course grades. GENDER is a dummy variable where a male student is equal to 1 and 0 otherwise. FROM is a dummy variable where an in-state student is equal to 1 and 0 otherwise. AF is a dummy variable where a student majoring in accounting or finance is equal to 1 and 0 otherwise.

The relationship between student performance and class scheduling formats is estimated by using ordinary least squares (OLS) regression with a sample size of 230 students. The results are reported in Table 3. Student motivation proxied by student major (AF) has a positive coefficient with significance at the 5% level, suggesting that accounting and finance students perform better than students with other majors. However, course scheduling formats do not significantly impact student performance. The OLS estimate for TR is positive but not statistically significant, suggesting that students in 75-minute classes held twice a week do not perform significantly better than those in 50-minute classes held three times a week.

TABLE 3
REGRESSION RESULTS

	Full Sample		50-Minute Subsample		75-Minute Subsample	
	Coefficient	t-stat	Coefficient	t-stat	coefficient	t-stat
Intercept	0.726***	29.317	0.703***	22.003	0.765***	25.322
GENDER	-0.020	-1.189	-0.024	-0.833	-0.021	-0.939
FROM	0.022	-0.125	0.022	0.675	-0.021	-0.800
AF	0.036**	2.041	0.067**	2.405	0.018	0.806
TR	0.018	1.002				
# of obs.	230		92		138	
F Statistic	1.82		2.24		0.80	
R-squared	3.09%		6.12%		1.54%	

Note: GRADE is a continuous variable representing students' course grades. GENDER is a dummy variable where a male student is equal to 1 and 0 otherwise. FROM is a dummy variable where an in-state student is equal to 1 and 0 otherwise. AF is a dummy variable where a student majoring in accounting or finance is equal to 1 and 0 otherwise. TR is a dummy variable where a course taught in 75-minute sessions twice a week is equal to 1 and 0 for the course taught in 50-minute sessions three times a week. *** shows coefficients significant at the 1% level, ** significant at the 5% level, and * significant at the 10% level.

Additional OLS regressions are conducted by disaggregating the sample based on class scheduling format to estimate the relationship between student performance and student characteristics. The results are presented in Table 3. The sample includes 92 students enrolled in 50-minute classes held three times a week

and 138 in 75-minute classes held twice weekly. The subsample regressions indicate that accounting and finance students perform better than students with other majors in the 50-minute classes held thrice weekly.

CONCLUSION

This research study investigates the impact of class schedules on student performance in introductory corporate finance classes. Previous studies examining the relationship between class schedules and performance in quantitative business subjects have yielded mixed results, due to variations in course designs and assessment methods. Unlike existing research, this study focuses on whether class schedules affect performance when both Monday-Wednesday-Friday (MWF) and Tuesday-Thursday (TR) students receive the same lecture duration and equal access to course materials and assessments through a course management system.

The findings, based on a nonparametric test of mean differences across scheduling formats with a sample of 230 students, suggest that students attending 75-minute lectures twice a week perform slightly better than those attending 50-minute lectures three times a week. However, the difference is not statistically significant. This result is corroborated by ordinary least squares regressions. These findings suggest that college administrators may consider eliminating Friday classes and consolidating courses into Monday-Wednesday (MW) or Tuesday-Thursday (TR) schedules, at least for introductory corporate finance classes, without adversely affecting student performance. This adjustment could provide additional benefits, including increased enrollment by offering flexible schedules, improved accommodation for part-time and commuter students, optimized classroom utilization, and lower operational costs. Faculty would gain more time for office hours, research, and meetings on Fridays, while students may be willing to adapt to afternoon classes to avoid Friday sessions.

Regression results also indicate that student major is a significant determinant of student performance. Accounting and finance students perform better than students with other majors, particularly 75-minute classes.

These findings are preliminary since the study's sample is drawn from a single university with one instructor. Expanding the sample to include data from multiple institutions could yield more robust results. Moreover, the methodology used in this study could be applied to other disciplines to explore the relationship between class schedules and student performance.

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