Can an Introductory Accounting Course Help Students Successfully Complete a Financial Accounting Course?

Gregory W Treadwell

USA

Abstract

Some college students find themselves failing required courses. These course failures were a problem at a regional south-central United States (U.S.) university where many students were failing a required Financial Accounting course. Barriers to enrolling in the Financial Accounting course only included a sophomore standing, so it was possible for students with non-existent or limited accounting knowledge to enroll. To reduce the number of student failures in the Financial Accounting course administrators created numerous help programs including an Introductory Accounting course. This study focuses on the effectiveness of using an elective Introductory Accounting course to help business students complete a required financial accounting course, successfully. The effectiveness was determined by comparing students' performance in Financial Accounting after taking the Introductory Accounting course (Experimental Group) with students that only took the Financial Accounting course (Control Group). Research data came from 471 students in the experimental group and the1388 in the control group. Unfortunately, the analysis produced results that suggested the Introductory Accounting course did not help students in Financial Accounting.

Keywords: Accounting education, Help courses, Introductory Accounting, student failures

Introduction

Students entering college without the skills to succeed, often find themselves lost and failing courses. The result of these struggles often includes low grades, course withdraws; and the need to spend additional money and time to complete a degree. Non-academic reasons for these struggles can include excessive socializing, obligations, work, depression, boredom, or others. In contrast, academic reasons that may cause students to struggle can include poor high school experiences, insufficient motivations, insufficient knowledge, or a lack of student capabilities (Laskey & Hetzel, 2011). The reality of these student failures suggests colleges should provide some form of help in overcoming these struggles.

Without a doubt, lost and failing can also describe some students that are enrolled in Financial Accounting courses. Often the rigor associated with the Financial Accounting course can coerce students to withdraw, change majors, or drop out of college. Therefore, the primary purpose of this study was to test the theory that an Introductory Accounting course could improve students' ability to complete a Financial Accounting course, successfully. For this study, the successful completion of Financial Accounting occurs when the

student earns an A, B, or C for the final grade. Then use the emerging data to recommend the continuation or demise of the Introductory Accounting course.

Background

When students choose to major in business, they are required to take Financial Accounting. That course enables students to develop crucial accounting knowledge (Lloyd & Abbey, 2009). To help students successfully navigate through Financial Accounting, the accounting faculty of a regional south-central United States university introduced various help programs over several years to reduce students' struggles associated with financial accounting.

Initially, the department created an accounting lab staffed with a qualified lab instructor that answered student questions and assisted them with solving exercises and problems. The lab students were also given limited access to the accounting solution manuals so they could check answers and build confidence.   The department also employed upper division accounting students to tutor Financial Accounting students. Unfortunately, students continued to struggle!

The accounting faculty then requested and received permission to develop and offer an Introductory Accounting help course. The faculty envisioned the course as a method for reducing student struggles in the subsequent Financial Accounting course. While both courses enabled business students to earn three credit hours, the Introductory Accoutning course only satisfied a general education elective. Consequently, students with at least three unfulfilled general elective credit hours could theoretically enroll in the Introductory Accounting course without increasing their overall college costs, total credit hours required, and the aggregate time spent in college.

The Introductory Accounting course emerged with a reduced rigor and content when compared to the traditional Financial Accounting course. It focused on accounting principles and bookkeeping practices commonly used in businesses. To further differentiate the Introductory Accounting course from financial accounting, only adjunct instructors taught the Introductory course. In that course, approximately 50% of the classroom time was for lectures, and the remaining 50% was a study session where students solved exercises and problems with instructor help. In contrast, the Financial Accounting course had an increased depth that affected both classroom lectures and homework assignments. Information was introduced more quickly which in turn enabled the instructor to cover four or five additional chapters. In addition, the Financial Accounting exams were more challenging.

Literature Review

While college is not for everyone (Shaw, 2014), everyone has the right to attend college. This right extends to at-risk students, which includes those students that need ongoing help. It is also embraced by colleges and universities that adopt open enrollment programs, which offer admission to all students provided they have a high school diploma or GED. In effect, any prospective student can enter college regardless of their high school GPA or without completing standardized tests. Unfortunately, many students enter college

unprepared or underprepared for the rigor.   As a result, one-third of college students need help (Spence, 2005) and without some form of assistance, many students could fail (Shaw, 2014).

Academic literature relating to college help continues to question whether student performance improves after taking a prescribed help course. One study has shown that students who attend help courses are less likely to persist [in college] than students who do not take the help course (Bettinger & Long, 2009). Arguably, this lack of persistance may not always be the failure of the help courses but an inability of students to cope with the rigor associated with college courses. Thus, curtailing [or not offering] student help courses could be the demise of students just because they need some form of help to succeed (Perkins-Gough, 2008).

Method

This study initially gathered and reviewed evidence from 471 students that enrolled in the Introductory Accounting course. Those students included 88 accounting majors, 256 business majors, and 127 students from non-business departments.

Table #1: Introductory Accounting Students' Degree Preferences
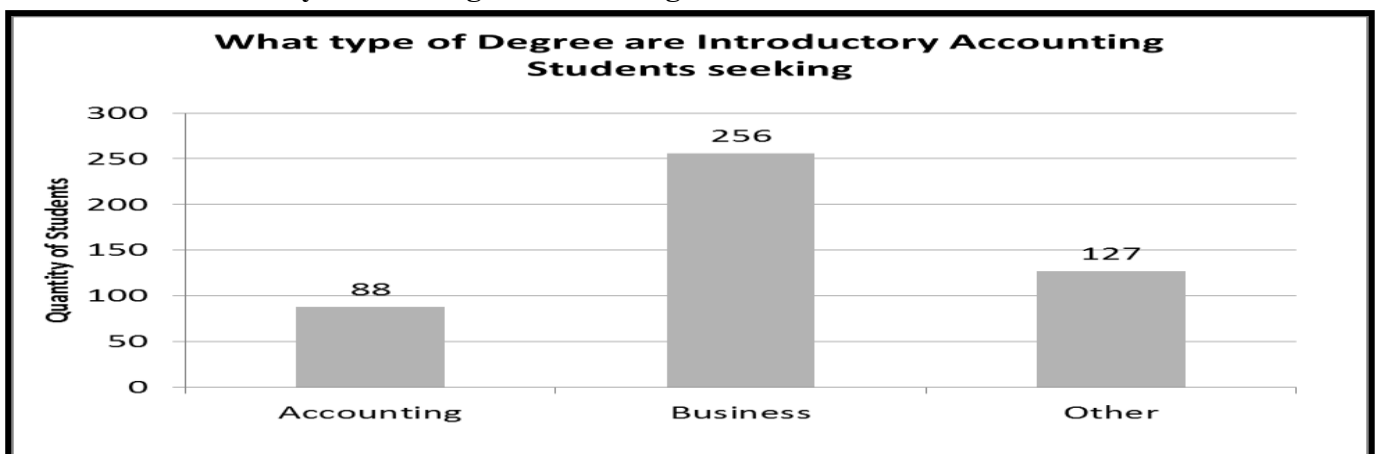
This table portrays the degree preferences of the Introductory Accounting Students.

Of these 471 students, 88 did not complete the Introductory Accounting course and 168 elected not to take the subsequent Financial Accounting course. However, 215 students (experimental group) did enroll in the Financial Accounting course. Of those 215 students 38 made an A, 49 earned a B, 39 received a C, and the remaining 89 students made lower grades or withdrew. In effect, approximately 59% of the 215 students completed Financial Accounting with an A, B, or C.

The data from 1388 students (control group) went directly into the Financial Accounting course indicated 273 students earned an A, 334 made a B, 277 received a C, and 460 made lower grades or withdrew. Thus, approximately 64% or 884 students from the control group completed Financial Accounting with and A, B, or C.

Table #2: Grade Distributions

Grade	Financial Students w/ Introductory Course	Financial Students w/o Introductory Course

	Quantity	Percentage	Quantity	Percentage
A	38	17.7%	273	19.7%
B	49	22.8%	334	24.1%
C	39	18.1%	277	20.0%
D	25	11.6%	102	7.3%
Other Grades	<u>64</u>	<u>29.8%</u>	<u>402</u>	<u>28.9%</u>
n=	**215**	100.0%	**1388**	100.0%

This table show the grade distributions of students in Financial Accounting with and without the Introductory Accounting course.

After comparing the success percentages from both groups, the percentages suggested the Introductory Accounting course was not helping students' performance in a subsequent Financial Accounting course. Therefore, the research question for this study asked:

> **RQ #1:** Does a significant difference exist between the passing grades of students taking Introductory Accounting before Financial Accounting (Experimental Group) and students taking Financial Accounting without Introductory Accounting (Control Group)?

Results

To support or refute the student's success percentages a t-test was calculated to determine if there was a significant difference between the two groups. That test was designed to determine whether students taking the Introductory Accounting course before taking the Financial Accounting course (the Experimental Group) performed differently than students that only took the Financial Accounting (the Control Group). For this test, the null hypotheses was *Ho: μ Experimental Group = μ Control Group* and the alternative hypothesis was *Ha: μ Experimental Group ≠ μ Control Group*. To determine the sample size a *Gpower analysis* was performed. That analysis recommended a sample size of 88 students from each of the groups.

Table #3: G*power Analysis

t tests - Means: Difference between two independent means (two groups)		
Analysis:	A priori: Compute required sample size	
Input:	Tail(s)	= One
	Effect size d	= 0.5
	α err prob	= 0.05
	Power (1-β err prob)	= 0.95
	Allocation ratio N2/N1	= 1
Output:	Noncentrality parameter δ	= 3.3166248
	Critical t	= 1.6536580
	Df	= 174
	Sample size group 1	= 88

Sample size group 2	=	88
Total sample size	=	176
Actual power	=	0.9514254

G*Power is a statistical tool that can be used to compute effect size of samples.

The results of the t-test indicated there was not a significant difference in students taking the Introductory Accounting course before taking Financial Accounting (M=3.10 SD=0.758) and students only taking the Financial Accounting (M=3.25 SD=0.698) condition t (173), p<.05.

Table #4: T-test for Two-Sample assuming Unequal Variances

	w/Intro		*w/o Intro*
Mean	3.102272727	3.25	
Variance	0.575626959	0.488505747	
Observations	88	88	
Hypothesized Mean Difference	0		
df	173		
	-		
t Stat	1.343396215		
P(T<=t) one-tail	0.090451619		
t Critical one-tail	1.653709184		
P(T<=t) two-tail	0.180903238		
t Critical two-tail	1.973771297		

This test involves a two-sample t-Test on data sets from two independent populations with unequal variances.

Since the t-statistic was less than the negative critical value, the null hypothesis was rejected. In effect, there was insufficient evidence to conclude the Introductory Accounting course helped students succeed in Financial Accounting.

Discussion

While determining whether the Introductory Accounting course helped students in the subsequent Financial Accounting course, other questions emerged.   Primarily, why did 127 non-business students enroll in the Introductory Accounting course? Plausible reasons could include the belief that students needed a general education elective course and (1) randomly chose the Introductory Accounting course, (2) took the course to satisfy a personal interest, or (3) took the Introductory Accounting because the student grapevine suggested the course was an easy A.

Secondarily, this study asked what classification the students enrolled in the Introductory Accounting had obtained. In response, of the 471 students that took the Introductory Accounting course, there were 262 freshmen, 76 sophmores, 83juniors, 44 seniors, and five students from other categories. Consequently, 262

freshmen students received an early introduction to the benefits associated with a business or accounting degree. Thus, an increase in the Department of Business enrollment may have been a direct result of the Introductory Accounting course.

Table #5: Classifications of Students taking Introductory Accounting
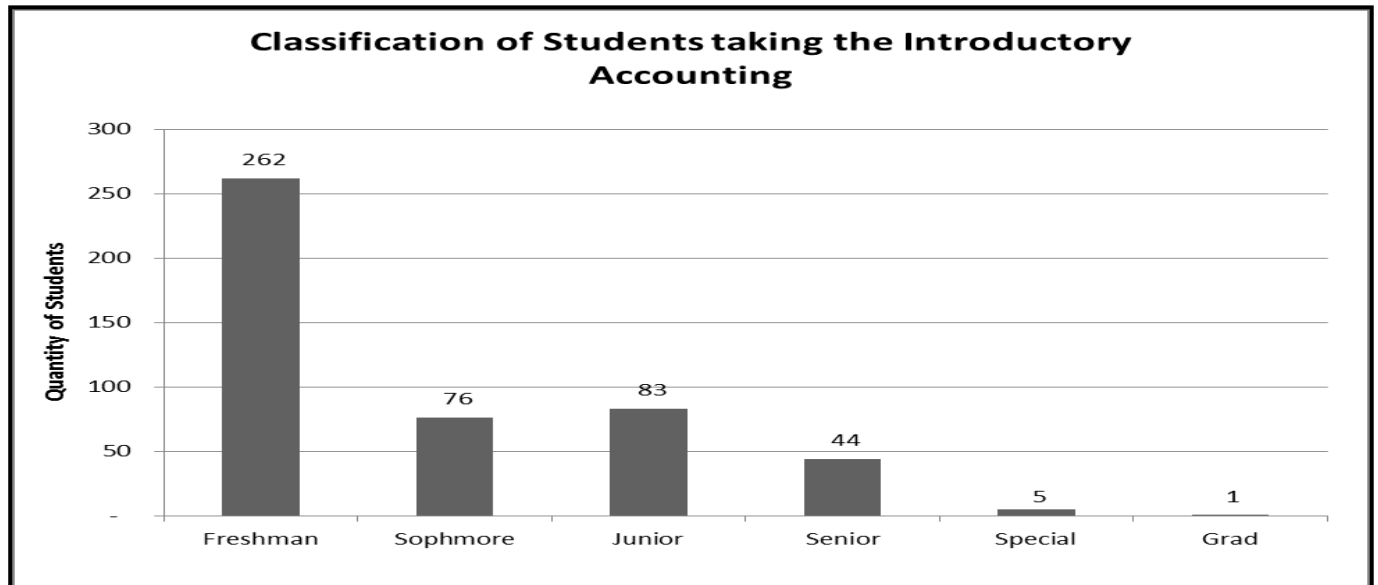
This chart indicates the classification of students that took the Introductory Accounting course.

After comparing the GPAs from the control and experimental groups, the comparison revealed only minor differences at each end of the GPA Scale. (See Table #6) At the low end of the GPA Scale, the Introductory Accounting course included students with zero GPAs, which suggested these students were in their first semester of college—not because they were failing. If the analysis were to omit the students with zero GPAs, the Introductory and Financial students in the 0.00 to 0.50 category, were similar. However, at the high end of the GPA scale, more of the students starting in Financial Accounting course had earned higher GPAs, which suggested higher performing students chose to skip the Introductory Accounting course.

Table #6: Student GPAs in the Introductory & Financial Accounting Courses
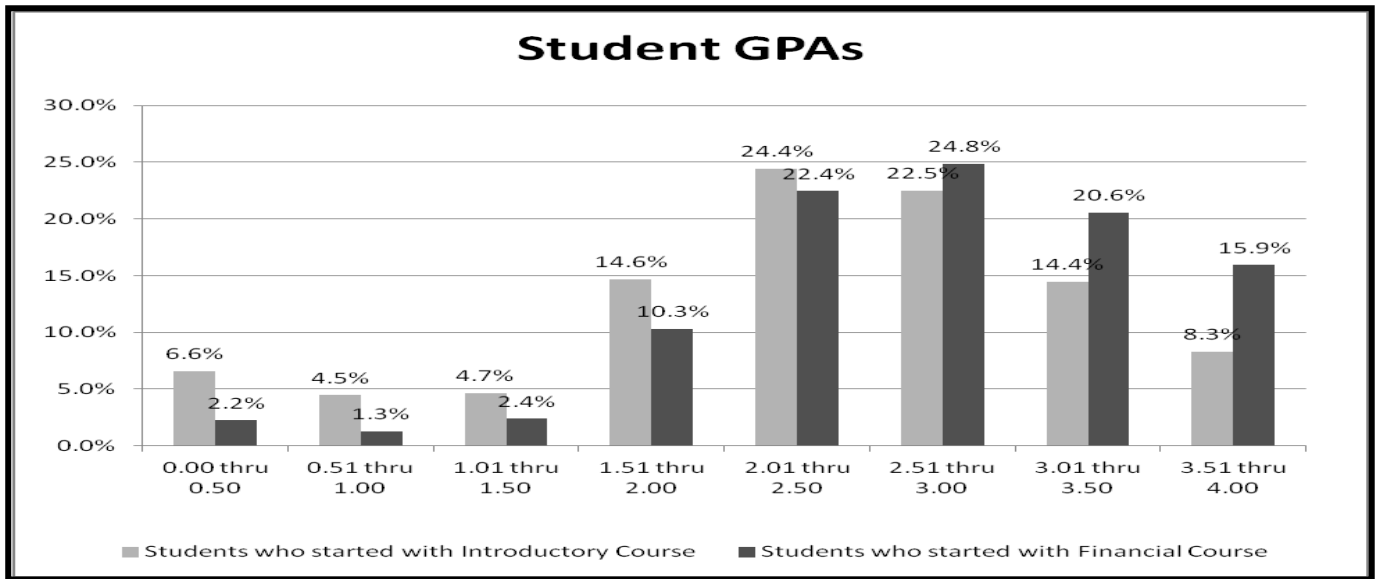
Finally, during the study concerns surfaced about the amount of "A's" given in the Introductory Accounting course. While it would be plausible to expect some of the Introductory Accounting students to earn A's, 41% of the students receiving A's appeared to be excessive. Explanations for the high level of A's could include a high number of exemplary students, but a more plausible reaction would encompass the belief that some form of grade inflation was occurring.

Table #7: Introductory Accounting Students' Grades in Financial Accounting
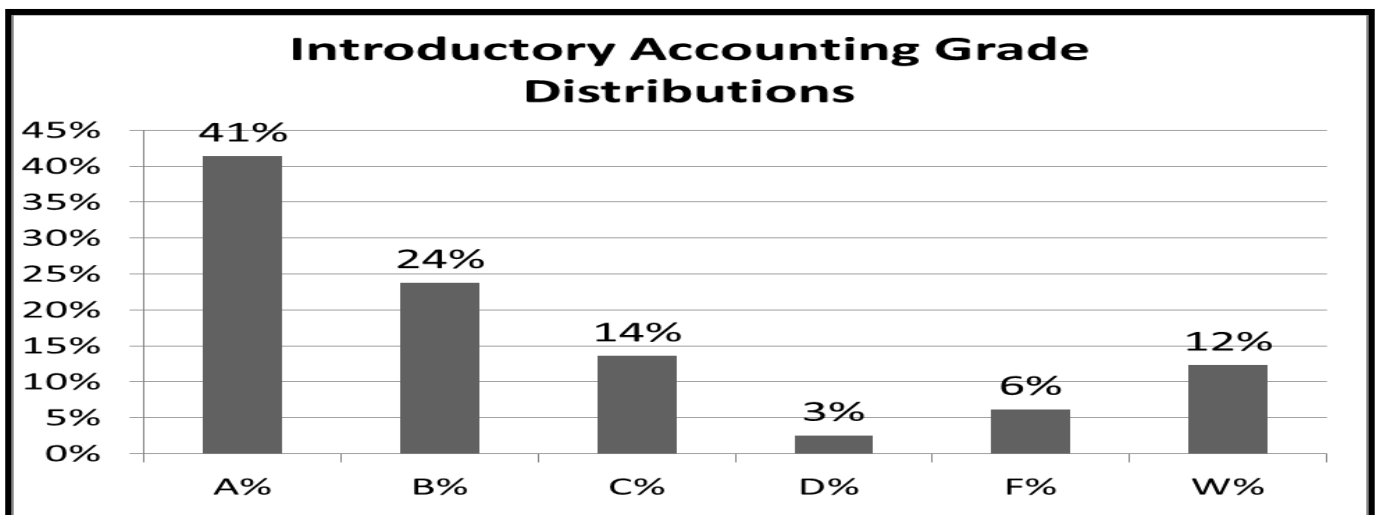
Conclusion

In conclusion, faculty and administrators might argue for eliminating the Introductory Accounting course since the course rigor appeared to be weak and because the Introductory Accounting students did not perform better in the subsequent Financial Accounting. However, before electing to discontinue the Introductory Accounting course administrators and faculty should consider that students attending college, especially where open enrollment conditions exist, might be deficient in one or more academic areas. To

offset these deficiencies, various forms of assistance could enable challenged students to obtain their educational goals, and indirectly increase department, school, and university enrollments.

Furthermore, the Introductory Accounting course appears to draw students from across campus. This serendipitous discovery could also enable the business or accounting departments to attract non-business students and increase business and accounting program enrollments. Thus, the recommendation is to increase the rigor of the Introductory Accounting course and to use the course to expand the business department enrollments. In addition, if the department elects to continue offering the Introductory Accounting course, they should discontinue using adjunct faculty to teach the course.

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