Relative Performance Of English Second Language Students In University Accounting Courses

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ABSTRACT

This paper explores the relative performances of Native English Speaking ("NES") students and English Second Language ("ESL") students in accounting courses at a large urban state university. Based upon a longitudinal study, we conclude that the relative performance between NES and ESL students depends upon the particular course being evaluated and its order in the sequence of courses to graduation. The further along in the sequence, the more likely the ESL students will significantly outperform the NES students. In Introductory Financial Accounting, the first course in the sequence, NES students significantly outperform ESL students. We attribute this to ESL students' difficulties with English, new learning/teaching styles, lack of necessary academic skills plus culture shock. In Managerial Accounting and Intermediate Financial Accounting I, the differences are not significant which we credit to the ESL students' work on their English vocabulary, the new learning/teaching styles, and the necessary academic skills to "catch up" to the NES students. Assuming that our conclusion is correct, however, the full effect of this effort on the part of the ESL students is not completely felt until Intermediate Financial Accounting II and Cost Accounting. In those two courses, ESL students significantly outperform NES students. We conclude that this represents the culmination of the efforts by the ESL students. In addition to our primary objective, we also investigated the use of the relative performances of the NES and ESL students as a possible assessment of a university's success, or lack of thereof, in meeting the needs of ESL students. We concluded that this was both feasible and a reasonable approach to assessment.

Keywords: ESL; accounting; English as a Second Language; college students

INTRODUCTION

Despite the number of English Second Language (ESL) students in business schools, there is a lack of research with respect to the performance of such students in business administration and related curricula such as accounting. In particular, there is little research with respect to the performance of ESL students relative to Native English Speaking (NES) students. Furthermore, longitudinal studies of the relative performance of NES and ESL students in business or accounting are virtually non-existent.

The primary objective of the research described in this paper is to explore the relative performances of NES and ESL students in introductory and upper division accounting classes. We then hypothecate and discuss the possible reasons for the differences. In addition, this paper considers the use of the relative performance of the two student groups as an assessment of universities' abilities to meet the needs of ESL students.

As noted above, one purpose of the research is to evaluate the possibility of using relative performance to assess universities' success in educating ESL students. Coincidental with this purpose is an evaluation of universities' success in educating international students, a subset of ESL students. The Institute of International Education (2010) estimates that there are approximately 145,000 international students majoring in business and

management in the United States. NAFA: Institute of International Educators (2010) estimates that international students contributed $18.8 billion to the U.S. economy in the 2009-2010 school year. In light of the current economic environment, concomitant with universities' active pursuit of international students, evidence of international students' relative performances in an American university should be useful in assessing outcomes of international student recruitment.

In total, then, this paper presents preliminary evidence of the performance of ESL students in lower and upper division accounting classes. In particular, the paper provides evidence of their performance relative to that of NES students. Furthermore, the performance of the ESL students relative to NES students is suggested as a meaningful assessment of a university's performance in educating ESL students.

LITERATURE REVIEW

As indicated earlier, there is little research with respect to the performance, relative or otherwise, of ESL students in business or accounting. In a small sample study that exemplifies much of the ESL/international student research, Bhattacharyya (2008) interviewed ten (10) Chinese accounting students attending an Australian university, asking them to describe their primary educational/learning problems. From these interviews, Bhattacharyya (2008) developed suggestions to enable academics to better meet the educational needs ESL students.

In one of the few papers that examined relative performance between NES and ESL students, Cooper (2004) compared the performance of Chinese and Australian accounting students over a two year period. The focus of the study, however, was the supposed difference in learning styles: "deep learning," associated with "learning with understanding" and positively correlated with academic performance versus "surface learning," associated with "rote learning" (Beattie & McInness (1997)" and considered stereotypically Asian. Cooper (2004) concluded that the Chinese students outperformed the Australian students while using either deep learning or surface learning styles.

Patkowski, Fox, and Smodlaka (1997) compared performance between NES and ESL students in terms of mean GPAs in several categories of "academic courses," including business and accounting. They concluded that ESL students generally perform "satisfactorily" compared to NES students. (Patkowski et al., 1997 p. 11). However, the category in which ESL students performed "least satisfactorily" was composed of six business and accounting courses. In fact, NES students outperformed ESL students in five of the six courses. Furthermore, the mean grades of the ESL students in those courses ranged from 1.87 to 1.00 (grades of "C" to "D"). Some of the differences appear to be significant but the research had sample problems that precluded anything more than simple descriptive statistics. To our knowledge, other than the Cooper (2004) and Patkowski et al. (1997) studies, there is no research focusing on the *relative* performance of NES and ESL students in accounting.

Most of the ESL research relevant to this study attempts to identify variables that appear to (negatively) affect the performance of ESL students and then make recommendations for mitigation of the negative effects. The primary variable that negatively affects the performance of ESL students is, of course, their general lack of proficiency in the English language and knowledge of English vocabulary. This deficit is pervasive and revealed in a variety of ways including a student's (in)ability to understand lectures, take tests, and use other academic skills. In a paper specifically aimed at assessing the nature and extent to which ESL students understand lectures, Mulligan and Kirkpatrick (2000) concluded that only 10% of the students were able to understand the content and intent of lectures (p. 316) . Furthermore, they concluded that almost 25% of the students failed to understand very much of the lectures at all. Teemant (2010), in a paper focusing on ESL student perspectives on testing, determined that the most identified problem in testing was the limited English vocabulary of the students. Students "felt lost in a flood of terminology—'big words' – in . . . accounting classes" (Teemant, 2010, p. 9). It was as though "the teacher . . . was speaking another language [not English]." (Teemant, 2010, p. 94). Bhattacharyya (2008) notes that 83% of the students interviewed in his study considered their difficulties in speaking English to be a major problem in their performance in college (p. 265).

With respect to testing practices and ESL students, Teemant (2010) found evidence of what the author describes as the "one-word phenomenon" (p. 95) . This is a student's inability to demonstrate content knowledge

due to the failure to recognize the "one word" necessary to understand the question or the "one word" necessary to display knowledge. An additional testing consideration included the form of the test (true-false, multiple choice, short answer/completion, restricted response and essay). However, recognizing their lack of this academic skill, the ESL students developed testing strategies to compensate for their difficulties in understanding or taking tests.

In addition to testing strategies, ESL students often found the need to develop a variety of academic skills that their previous educational experiences had not required. As an example, Chinese international students had difficulty taking notes during lectures because this was not part of their educational experience in China (Bhattacharyya, 2008, p. 268) . Furthermore, participation in classroom discussions, understanding what was being said and contributing to the discussion were contradictory to the Chinese teaching/learning environment in which students are "spoon-fed" the subject matter (Wong, 2004, p. 158). Although not exhaustive, the above represent potential variables that may, at least initially, affect the performance of ESL students relative to NES students. However, the literature suggests that ESL students develop strategies to overcome these difficulties so their effect is likely to diminish over time and reduce the disparity, if any, between the performances of NES and ESL students.

RESEARCH SETTING, DATA COLLECTION AND STATISTICAL CONSIDERATIONS

The setting for the research is a large, urban university (the "University") that is a campus of the California State University. The University, especially the College of Business, is extremely diverse. In 2007, 71% of the undergraduate business majors self-identified as coming from an ethic/cultural background other than white.

Accounting represents the second largest undergraduate major with nearly1200 majors during any one year. On average, the University graduates approximately 200 accounting majors each year. In 2009-2010, the University had 2100 international students. Of these, 40% (850) were business students. Of these 850 business students, almost 20% were accounting majors.

The data consists of the grades of 1,173 accounting graduates from the University in the introductory and required upper-division accounting courses from Fall Semester 2004 through Spring Semester 2009. The prerequisites for the accounting major are the standard introductory accounting courses, Introductory Financial Accounting and Introductory Managerial Accounting. The major itself consists of three additional required courses, Intermediate Financial Accounting I, Intermediate Financial Accounting II and Cost Accounting, and four upper-division elective courses.

Of the initial 1,173 students, 274 were eliminated because they took Intermediate Financial Accounting I at an institution other than the University. An additional 137 students were eliminated because they took one but not both introductory courses at the University. Of the remaining students, 64 were eliminated due to missing data associated with Introductory Financial Accounting, 57 were eliminated for missing data associated with Introductory Managerial Accounting, and 19 were eliminated for missing data associated with the upper division accounting courses. Of the remaining 622 students, 43 were removed due to ambiguous data as to whether they were ESL students or not, or for mixed data, students who took both ESL and NES English classes. NES and ESL students were classified according to performance on an English placement exam. The final sample consisted of the grades of 579 students of whom 297 were NES students and 282 were ESL students.

Our methodology of using accounting graduates creates a potential survivor bias. By focusing on data from students who have graduated, we exclude those students who took Intermediate Financial Accounting I at the University but did not graduate from the University. These students are likely to have changed majors, withdrawn from the University, or transferred to other schools. If these students are disproportionally represented with respect to their classification as NES or ESL, then the results will be affected. However, we concluded the benefits of using this data, which allowed us a longitudinal approach, outweighed the possibility of a significant survivor bias.

Since most of our analyses consist of comparisons of two groups, we conducted *t*-tests, which assume that the underlying distribution is normal. We tested and rejected this assumption. This is not, however, particularly problematic as the *t*-test is relatively robust in the sample sizes that we were able to use.

Due to the number of *t*-tests that we conducted (five) and the associated increase in the likelihood of committing a type I error, rejecting a null hypothesis that is actually true, we applied a Dunn-Sidak correction to the significance thresholds and critical *t*-values. Roughly, the result of this correction was to increase the 5% threshold level requirement to 2.569 from 1.969, and the 1% threshold level requirement to a value of 3.089 from 2.576. This made it less likely that we would find a significant difference between the performances of the NES and ESL students.

ANALYSIS OF RESULTS

A major factor to consider in the analysis of grades in the introductory courses is that the grades represent students attending a variety of community colleges, possibly foreign universities and the University. For example, the University received transfer students from seventy-one different California community colleges in 2009. The College of Business enrolled 626 international students, primarily from Mainland China, Hong Kong, Japan, Taiwan, India, and South Korea; all of which have their own ethnic/cultural approach to education. The comparison of grades across this many educational institutions is problematic as it presupposes consistent and comparable grade distributions across these feeder community colleges and the University.

PERFORMANCE IN INTRODUCTORY FINANCIAL ACCOUNTING

Table 1 presents the results of the analysis of the relative performance between NES and ESL students in the five required accounting classes. In Introductory Financial Accounting, the average grade of NES students was 3.197 while the average grade of ESL students was 3.021. The null hypothesis of no difference between the average grade of NES students and that of ESL students is rejected. NES students significantly outperform ESL students in Introductory Financial Accounting ($t = 2.720$; $p = 0.0100$).

Table 1 Performance Of NES And ESL Students In Accounting Courses					
Course	**INTRO FA**	**INTRO MA**	**INT FA I**	**INT FA II**	**COST**
NES Average Grade	3.197	3.116	2.656	2.497	2.562
ESL Average Grade	3.021	3.215	2.678	2.726	2.847
t Statistic	2.720*	-1.685	-0.364	-3.316**	-2.609*
Critical *t*	2.569	2.569	2.569	2.569	2.569
p Value	0.0100	0.0923	0.7157	0.0009	0.0093

* Significant @ 5%	Critical *t*(575) = 2.569	
** Significant @ 1%	Critical *t*(575) = 3.089	
INTRO FA	Introductory Financial Accounting	
INTRO MA	Introductory Managerial Accounting	
INT FA I	Intermediate Financial Accounting I	
INT FA II	Intermediate Financial Accounting II	
COST	Cost Accounting	

A priori, this is not a particularly surprising result. Accounting is often described as the "language of business." Therefore, Introductory Financial Accounting can be viewed as the first course in a new language. In addition, Collier (2000) notes that "most university [professors] have large and disciplinary jargon-filled language patterns" that make it even more difficult to learn the "language of business" (p. 21) . Assuming that the ESL students had not been formally exposed to accounting in their first language, general knowledge of accounting concepts and terminology, albeit in each student's primary language, should be somewhat equal between NES and

ESL students. Roughly, learning the material for NES students is a matter of translating new concepts and vocabulary into known or analogous concepts and language. ESL students require a double translation; learning the accounting material in English, translating the English concepts language to their primary language, and then translating these new concepts and language into related or analogous concepts in their own language.

Another possible cause for the difference in performance could be the result of "culture shock" experienced by ESL (international) students. Ryan and Hellmundt (2003) noted that the "prior learning experiences and academic traditions" of an ESL student "can significantly affect [performance] . . . in the new learning environment" (p. 2). These difficulties, in the students' own words, include cultural barriers, loneliness and different teaching and learning styles (Wong, 2004, p. 160).

PERFORMANCE IN INTRODUCTORY MANAGERIAL ACCOUNTING

With respect to relative performance in Introductory Managerial Accounting, the null hypothesis of no difference between the grades of NES students and ESL students is not rejected. The difference in performance between NES and ESL students is not statistically significant. This is somewhat surprising in that it represents a change from the relative performances in Introductory Financial Accounting. Of perhaps more interest is that the *sign* of the relative performance has changed. The mean performance of NES students is 3.116 while that of the ESL students is 3.215. That is, the ESL students, on average, had higher grades than the NES students. Even though this difference in the mean grades is not statistically significant, the reversal is worthy of note.

Taken at face value, these results suggest that the ESL students have, at a minimum, "caught up" with the NES students. The learning curve for the ESL students appears to be, at most, one semester. That's how long it takes for ESL students to learn a new technical subset of the vocabulary of their second (at a minimum) language, apply that knowledge in a classroom environment, and compete with students learning the same material in their native English. It also implies that once the ESL students have acquired much of the specialized vocabulary of accounting, they are able to perform at least as well as the NES students with only a minor (insignificant) difference between their average grade and that of the NES students. Coinciding with the acquisition of vocabulary, this change likely reflects the effort and success of the ESL students in developing the academic skills necessary for their new environment. It should be noted that this time frame, basically one semester, is consistent with Wong (2004, p. 164) who found that Asian international students were able to adapt to a new learning style within two to three months. This result is also consistent with ESL students shrugging off the effects of "culture shock."

The grades in the introductory accounting classes provide the first reasonable measure of whether the University and community colleges are capable of meeting their obligations to ESL and, in particular, international students. By the end of the first year of accounting, the average accounting GPA of ESL students (3.118) is not significantly different from that of the NES students (3.166.) This strongly suggests that the University is meeting its educational responsibilities as are the community colleges. Universities with similar results could use them as a strong selling point to attract future international students and support a continuation or enhancement of such a program.

To this point, the results can be explained as the result of (1) lack of English language skills, (2) differences in the methods of education among ESL students and (likely) (3) culture shock. These impediments to learning diminish after the first semester or so. By the end of the second semester, the difference between the two groups is not significant.

PERFORMANCE IN INTERMEDIATE FINANCIAL ACCOUNTING I

Table 1 provides the results for Intermediate Financial Accounting I (INT FA I), including the results of *t*-tests of the differences between the average grades of NES and ESL students in the course. The average grade for ESL students (2.678) is marginally "better" than the average grade for NES students (2.656). However, this difference is not significant.

We believe that there are several factors behind this result. First, Intermediate Financial Accounting I is

generally perceived as a major step up from the introductory courses in terms of instructor expectations, course requirements, and overall course difficulty. Supporting this contention is the fact that the average grade for each group declined significantly. Comparing the average GPA in the introductory courses to the mean grade in Intermediate Financial Accounting I, the decline for NES students was from 3.166 to 2.656. For ESL students, the decline was from 3.118 to 2.678.

In addition, the University's department of accounting has a policy that at least 10% of the grade in all upper division accounting classes, beginning with Intermediate Financial Accounting I, must be based upon oral or written communication assignments. This requirement is likely to favor the NES students over the ESL students, increasing the difference between the average grades of the two groups.

PERFORMANCE IN INTERMEDIATE FINANCIAL ACCOUNTING II AND COST ACCOUNTING

The results for Intermediate Financial Accounting II, which are also found in Table 1, are much more intriguing than those for Intermediate Financial Accounting I. The difference between the average grade of ESL students (2.726) and the average grade of NES students (2.497) is highly significant ($t = -3.316$; $p = 0.0009$). On average, ESL students perform significantly better than NES students in Intermediate Financial Accounting II.

We find this result less intuitive and more surprising than the previous results. It is also inconsistent with our analysis/explanation of prior results that tended to focus on English language fluency and vocabulary but also included differences in learning style, testing difficulties, and culture shock. Intermediate Accounting II encompasses topics representing a considerable increase in accounting terminology; leases, pensions, deferred taxes, and earnings per share for example. Based upon our previous analysis and the fact that the two groups were virtually equal in Intermediate Financial Accounting I, we would have expected NES students to have performed better, perhaps significantly better, than the ESL students. (Though, we note that these topics likely represent a significant increase in accounting terminology for NES students as well.)

The relative performance of the ESL students likely reflects students who have had at least three semesters to increase their accounting vocabulary, develop new testing strategies, adapt to new learning styles and environments, overcome culture shock, and learn enough general English vocabulary to avoid the "one word" phenomenon. In addition, the results may reflect international students who are highly motivated by costly nonresident tuition and fees, restrictions on employment and visa conditions that limit the time in which to complete their education.

Although the result for Intermediate Financial Accounting II could be a statistical anomaly, that likelihood is reduced by the results of the relative performances in Cost Accounting, also found in Table 1. Consistent with the results for Intermediate Financial Accounting II, ESL students perform significantly better than NES students in Cost Accounting ($t = -2.609$; $p = 0.0093$). The level of significance and the consistency of the result between Cost Accounting and Intermediate Financial Accounting II strongly suggest that these results are not statistical anomalies. We believe that they are a reliable indicator of a real difference between the performances of NES students and ESL students.

In addition, if these results can be generalized to international students, they represent an extremely powerful selling point in terms of a university attempting to recruit international students. Using these results, in conjunction with the earlier results, the University can demonstrate a reasonable pathway from the ESL students' initial under performance (relative to NES students) to performance significantly better than that of NES students.

CONCLUSIONS AND LIMITATIONS

Conclusions

The relative performances of NES students and ESL students in required lower and upper division accounting courses depend upon the accounting course being evaluated and the order of that course in the sequence to graduation. Alternatively, relative performance may be more appropriately viewed as a function of the amount of

time (semesters) that the ESL students have studied accounting and in which they have to "catch up" and surpass the NES students. In their first semester, NES students performed significantly better than ESL students. We attributed this to language deficiencies, particularly vocabulary on the part of the ESL students, and differences in teaching and learning styles. We also suggested that the difference could be partially attributed to "culture" shock that includes, among other variables cultural barriers, loneliness and homesickness. Furthermore, we noted that the ESL students in similar situations appeared to rapidly develop the vocabulary and academic skills necessary to compete with their NES counterparts.

The difference between the two student groups was not significant in Introductory Managerial Accounting implying a very fast assimilation into the University. Even more impressive was the fact that, even though not significantly different, the relative grades had switched, in that the average grade of the ESL students was higher than that of the NES students. Furthermore, the average GPA for the two semester sequence for the two groups was not significantly different. We believe that these changes reflect the result of ESL students continually developing new learning skills, expanding their fluency in English, and becoming more comfortable in their environment.

The results for Intermediate Financial Accounting I are similar to those of Introductory Managerial Accounting I. The difference in grades between the two groups of students is not significant. We attribute this to the difficulty of the course relative to the introductory courses and increased requirements for oral and written communication skills for both groups of students.

In each of the last two courses analyzed, Intermediate Financial Accounting II and Cost Accounting, the average grade for the ESL students was significantly higher than that of the NES students. We conclude that these results represent the culmination of the efforts by ESL students to increase their fluency in English, adapt to new learning styles, develop test taking skills, and overcome culture shock. For international students, the results also reflect their increased motivation stemming from visa requirements that limit the time which they have to finish their education, restrictions on employment, and significant economic considerations.

Another reason for this research was to investigate whether the relative grades of the NES and ESL students could be used to assess the quality of the education provided by universities. Our results imply that such a comparison is possible and reasonable. In particular, the University, which actively solicits international students, can use the relative performance of ESL students in this study to demonstrate that it has the ability to meet its educational obligations to ESL and, in particular, international students.

Limitations

There are several limitations in the design and implementation of this study. The results may not generalize to another university setting. The use of accounting graduates in order to construct a longitudinal study creates a potential survivor bias. The results don't include those students who did not complete their accounting degree at the University. If the NES or ESL students are disproportionately represented in the students that failed to complete their degree, the results may not be reliable. The results also do not control for demographic variables such as age, race and gender, or ability-based factors such as SAT scores and GPAs. Despite these limitations, however, we believe that the results are reliable. ESL students start out performing significantly worse than NES students but over the span of perhaps three semesters, develop the skills necessary to catch up and significantly outperform the NES students. Additional research is planned to further investigate these results.

BIOGRAPHIES

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