

Assessing the Preparedness Level of Incoming Principles of Accounting Students

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Abstract

Imel's study examines the relationship between English 111 grades and grades in Accounting 211 and 212.

Background

Principles of Accounting 211/212 are foundation courses at Southwest Virginia Community College required in the following programs: 1. Banking Certificate Program, 2. Financial Services/Bookkeeping Certificate Program, 3. Associate in Arts and Sciences Degree with a Major in Business Administration, 4. Associate in Applied Science Degree with a Major in Accounting, 5. Associate in Applied Science Degree with a Major in Information Systems Technology, and 6. Associate in Applied Science Degree with a Major in Management. Because of the preparatory nature of these courses, it is imperative that students excel and lay a proper base upon which to build to more challenging coursework in accounting and finance.

Principles of Accounting 211/212 are both entry-level courses with the 212 course having a higher degree of difficulty. These two courses explore the basics of accounting, including such topics as the accounting cycle and financial statement generation, inventory valuation, depreciation and other topics that would be beneficial to anyone seeking a degree in the business area.

In the Fall of 1999, the Coordinator of the SVCC Learning Assistance Center informed the accounting faculty that these courses had some of the highest unsuccessful grade rates (grades of W, D, F, I, R, or X) on campus and later research proved this assessment to be correct. The rates were found to be between 31 percent and 39 percent for the years beginning in the fall of 1989 and ending with the summer of 1999 (Charts 1 and 2).

CHART 1 Accounting 211
1989-1999

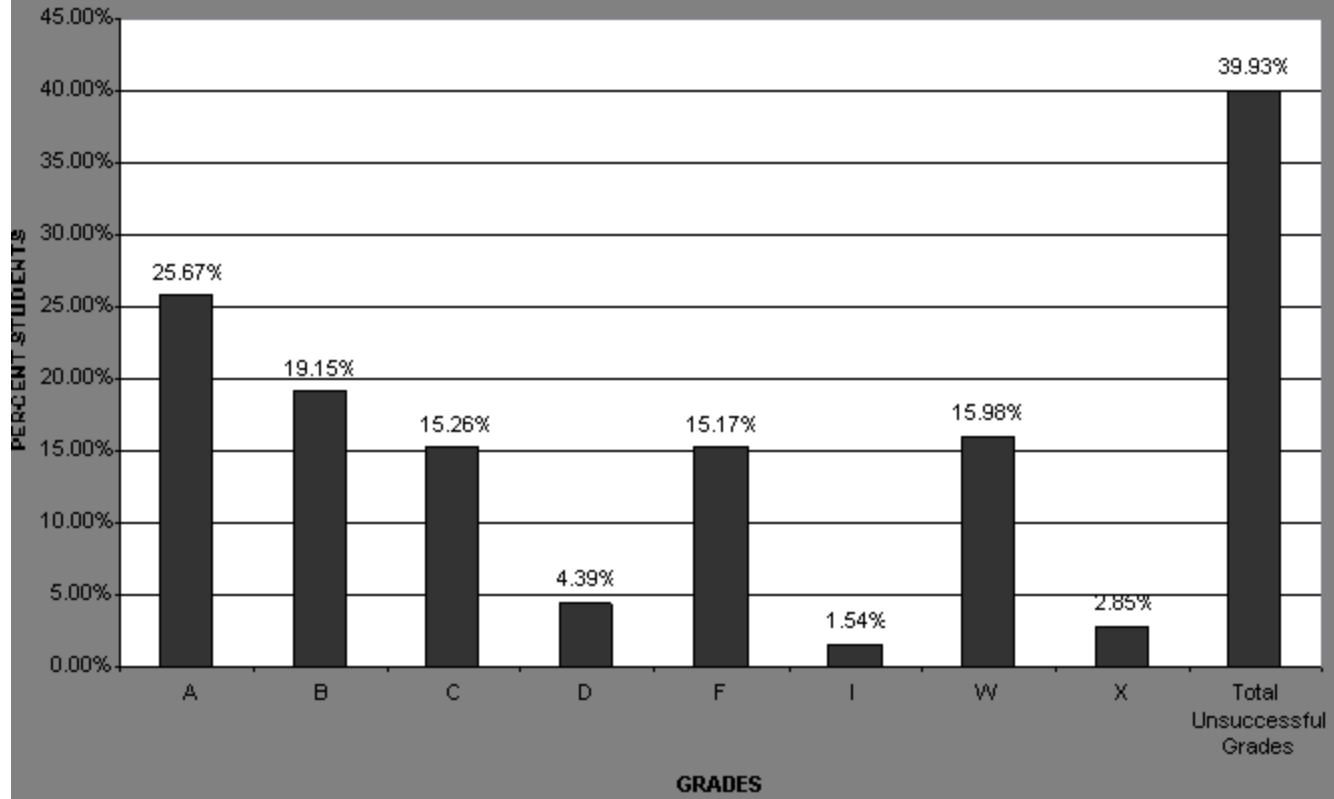
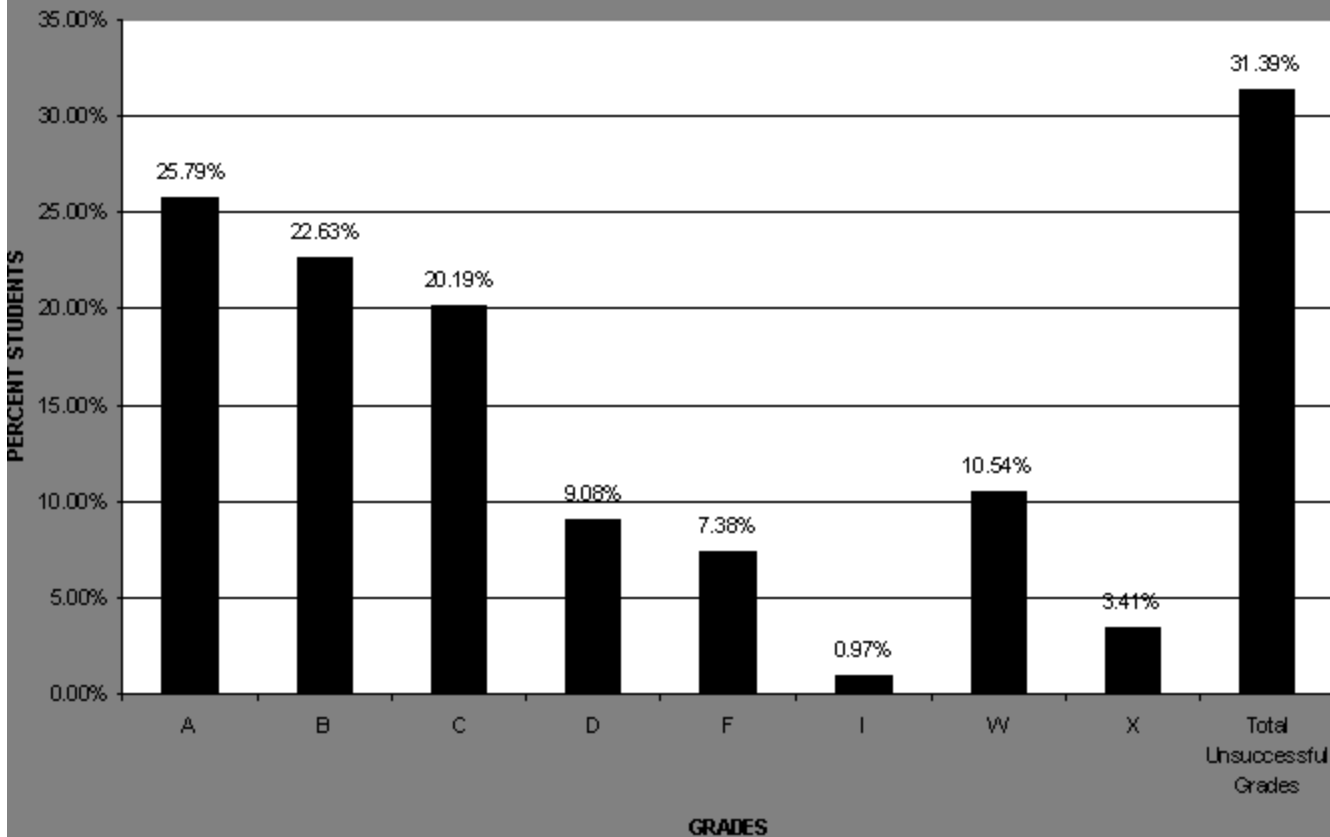


CHART 2 Accounting 212
1989-1999



The low success rate in these courses has prompted Southwest Virginia Community College to examine the options available to insure a higher degree of achievement. Remediation is one of these options, but in order to recommend remediation faculty must have a method to discern the level of preparedness.

Traditionally, these courses had been completely open access, which rejects restrictions limiting course access. In contrast, many foundation courses in other areas including Math and English have been structured open access since the inception of the school in 1968. ASSET, SAT, or ACT test scores are used to determine if students need developmental work before taking credit English and Math courses. This study sought to investigate possible indicators of preparedness for students enrolling in Accounting 211 and 212, much like what is done in Math and English.

Data Collection

This study assessed internal data supplied by Dr. Ed Smith, SVCC's Institutional Researcher, and Betty Sword, SVCC's Programmer at Information Services. I was supplied with the grades of all the Accounting 211 and 212 students for the period beginning Fall 1989 and ending in Summer of 1999, a grade comparison for all Accounting 211 students since summer 1993 who had previously taken English Composition 111 and the grades of Accounting 211 students for the same time period who had not taken English 111, and raw transcripts for all students who have enrolled in Accounting 211 in the last two years. The date selections of 1989-1999 and 1993 were based upon the College's database limits. I chose to review two years of the raw transcripts, with 535 students forming a statistically representative sample. Mr. Bill Fiess, one of our math instructors at SWCC, also helped me with my statistical data interpretation.

Methodology

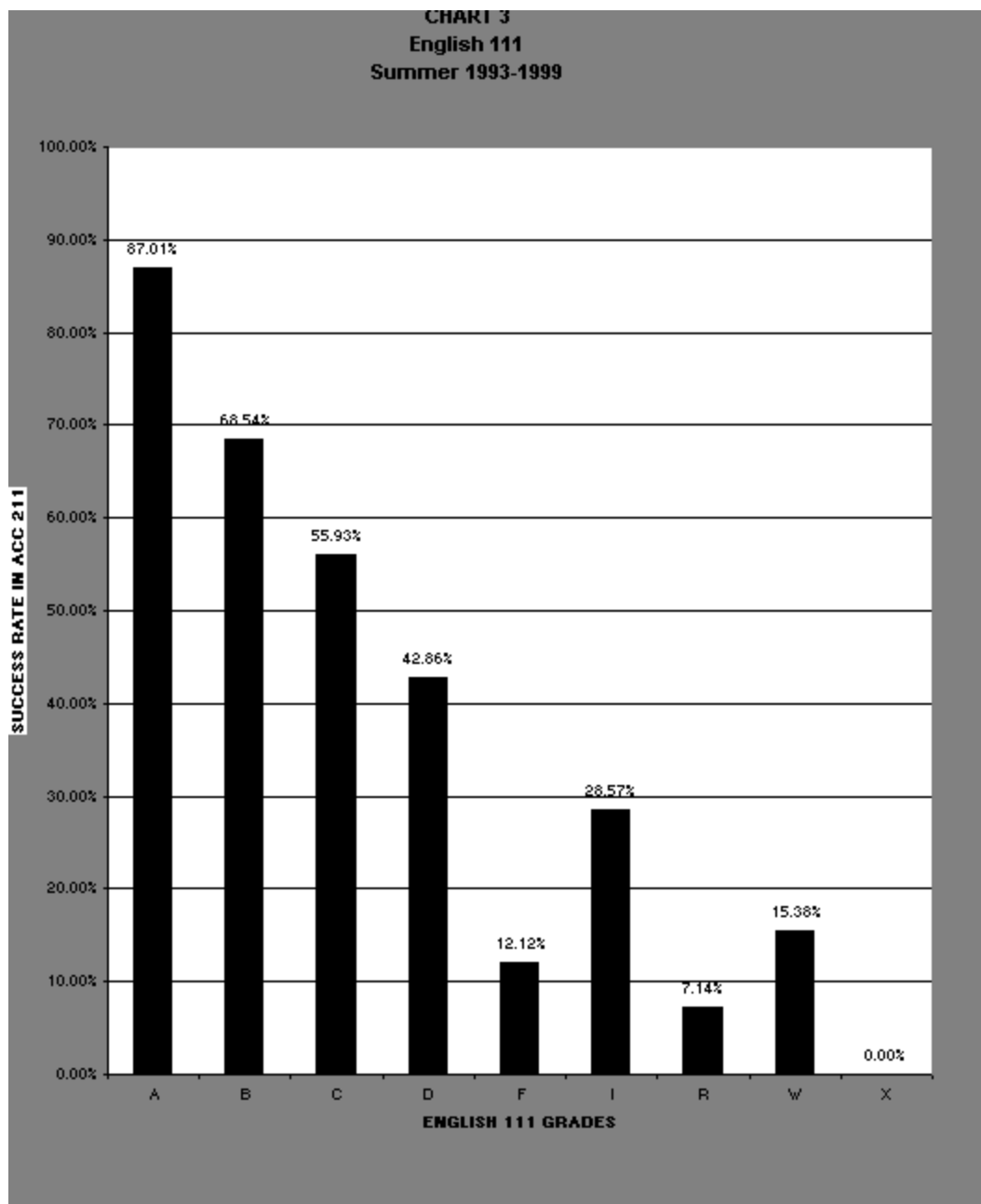
This study has three distinct sections. First, I sought to demonstrate that a high percentage of unsuccessful grades existed for these courses. As alluded to earlier, Charts 1 and 2 provide insight into the problem of unsuccessful grades in Accounting 211 and, to a lesser extent, in 212. Secondly, accounting is more of a comprehension/application discipline rather than a heavily math-oriented course as many novices believe it to be. In reality, if you can add, subtract, multiply, and divide, you possess all the math expertise required in these courses. It is for this reason that I compared English Composition 111 grades (a course where reading and comprehension skills are a must) to Accounting 211 grades. Thirdly, if I could prove a relationship between successful grades in English Composition 111 and successful grades in Accounting 211, then my last step would be to explore Asset Reading, or SAT Verbal, or ACT English scores in an effort to utilize one or more of these scores as an indicator for the level of preparedness and eventual success in Accounting 211. In order to compare these random samples, t-tests were used.

Results

After compiling grade data for on-campus courses over a ten-year period (curiously off-campus Principles of Accounting 211/212 courses did not have the same high unsuccessful rate), several facts emerged. First, almost twice as many students enrolled in Accounting 211 as did for 212 (2209 vs. 1233). Secondly, the overall average of unsuccessful grades for the entire period was higher in 211 than in 212, a supposedly tougher course (39.93 percent vs. 31.39 percent). Thirdly, perhaps the most intriguing statistic of all was the unsuccessful rate for 211 in the Spring Semester, which was 53.77 percent and much higher than the 35.70 percent experienced in the Fall semester and the 35.71 percent of the Summer Semester.

At first glance it would appear that these facts are contradictory, but upon further inspection it becomes clear that since Accounting 211/212 are a matched pair many of the students taking 211 are unsuccessful and either repeat it or drop out of the program. This would explain both the high number of unsuccessful 211 students and a lower number for 212 students as 211 is a prerequisite for 212; unless students are successful in 211, they never take 212. Accounting 211 serves as a concentrator or weeder class because only successful students move on to Accounting 212. Thus, even though 212 is considered tougher, fewer students have unsuccessful grades in 212 because they have been survivors of 211.

Recognizing that the data provided in Charts 1 and 2 indicate that these courses have a high unsuccessful grade rate, I investigated whether English 111 grades have a relationship to Accounting 211 grades. In this analysis the grades of a population of 596 Accounting 211 students who had previously taken English 111 were compared. This data consisted of all Accounting 211 students both on-campus and off-campus from the summer of 1993 until the present. The off-campus students were included in this sampling for two reasons. First, the data extraction program that SWCC has will not exclude them. Secondly, this analysis was utilized only to see if there were a relationship between the grades of the two subjects. The data that appears on Chart 3 shows a relationship between successful grades in English 111 and in Accounting 211. The English 111 students that made either an A, B, or C went on into Accounting 211 to have a successful rate of 87.01 percent, 68.54 percent, and 55.93 percent respectively (Chart 3).



These numbers, although slightly higher, were comparable to the 396 Accounting 211 students for the same time period who did not take English 111, showing an overall successful rate of 57.38 percent, which was similar to the 63.76 percent for all successful 211 students that had taken English 111.

The above data illustrates that success in Accounting 211 is directly related to success in English 111, which led me to think that the testing utilized for assessment of English preparedness might also be useful for assessing Accounting 211 preparedness. In order to adequately test this hypothesis, I accessed the raw student records for the last two years for any student that took Accounting 211 on-campus, with scores for ASSET reading portion, SAT verbal, and/or ACT English and also overall GPA. My goal was to analyze this population of 331 (This is fewer than the 535 students that I started with because they did not all fall within the criteria) students to see if there was a statistical difference in the test and GPA scores for the successful and unsuccessful students. In order to achieve this, I performed t-tests on my results for successful and unsuccessful students in the following areas: ASSET reading scores, SAT scores, and overall GPA scores.

Currently on our campus, students scoring 40 or below on the Asset reading portion, 430 or below on the SAT verbal portion, or 13 or below on the ACT are recommended for remedial courses in English before taking English 111. These scores produced a predictable boundary between unsuccessful and successful students in Accounting 211. The successful means were 42 for the Asset reading portion, 460 for the SAT verbal portion, and overall GPA of 3.07, while the unsuccessful student had 38, 397, and 1.68 respectively.

The results were conclusive for ASSET reading scores, SAT scores, and GPA. Such a difference as was observed would therefore be likely to occur by chance less than once in 20 times, so I conclude that a significant difference is proven. In fact, on a more technical level, the p-value of these comparisons was almost 0 in every case. This means that the differences between the scores of the successful and unsuccessful students are statistically significant and might be utilized as assessment tool of performance in the Principles of Accounting courses.

Conclusion

These scores will be used within our division as advising indicators; low scores will be used to alert students of their options. Students might begin with more basic Accounting courses such as AST 136 Office Record Keeping or ACC 111-112 rather than ACC 211-212. Other options for borderline scores or students who feel they are the exception would be to have them form study teams with other students while taking ACC 211-212, provide tutoring, and/or have students that have potential problems schedule meetings with the faculty member to review their progress.

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