

Does Performing Additional Work Improve a Student's Accounting Principles Grade? First Analysis.

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ABSTRACT

Most business students have to take accounting principles which tends to be a student's first contact with accounting. A common method of delivery includes lectures, homework, and exams. Studies have analyzed what factors determine the success of a student in an accounting principles course. This paper will examine if a student performing additional voluntary homework influenced the final grade in an accounting principles course.

INTRODUCTION

Many students find the first accounting course to be difficult. Although grading is dependent on the instructor, most introductory accounting courses do not have an over-abundance of the top grade (4.0). Students can find the concepts difficult plus most texts build a new concept from previous chapters. The information presented in a beginning chapter is needed to understand the next chapter. The cumulative nature of the material makes it difficult for a student who does not understand a beginning concept. If they need the information for subsequent material, they can get lost if they did not grasp the original concept.

It is very important for a student to understand the accounting concepts as opposed to memorize the information presented. If a student does not understand the logic of accounting, they will have difficulty with subsequent topics presented. Accounting has many steps in the accounting cycle. It is almost impossible to do well in an accounting course without understanding the double entry system and how the information flows. Rote memorization doesn't seem to work as there are too many steps in the process.

Teaching the first accounting course can be challenging as most students are not accounting majors and find the subject difficult. Because of the cumulative nature of the subject, a student who does not understand the information in the beginning chapters has difficulty with the remaining chapters. The author has experimented with various methods of presentation to motivate students to learn and to understand accounting concepts. During one class the author experimented with making additional homework available for study. This is described below.

DESCRIPTION OF EXPERIMENT

Several years ago the Accounting Department adopted the online homework that is provided with the text. All of the homework exercises and problems are completed by the student online and graded by the online homework service. The instructor assigns homework problems and determines due date, number of attempts, etc. The online homework grades the homework and provides a report on problems completed and percent correct by the students. The author gives minimal points on the homework

assignments as a reward for completing the homework. At the option of the instructor, exercises and problems can be made available to students with various degrees of answers and help.

One of the authors tests beginning accounting students with short test questions that demonstrate the student’s knowledge of the concept. Over 75% of the exam is in this format with many of the test questions similar to the exercises in the text. The test question will never be the exact exercise but many are almost identical with only the amounts different. The author tells the students this fact and suggests they do all of the exercises to study for the exam. When the online homework service became available the author let students have access to all of the exercises online. The available exercises have no due date, have correct answers available once the problem has been attempted, and have the maximum amount of hints available to complete the problem. The professor did not give any credit for completion of these exercises but the online homework service did keep track of the students who attempted the exercises and the percent correct. This information was used as a basis for this study.

It was hoped that a higher grade would be motivation to study and do extra homework, if necessary, to understand the concepts. Approximately 5 % of the total points were from homework completion and 95% from testing. Since this is such a high percentage, students needed to demonstrate their understanding of the material through testing. If the test questions are from exercises, it would be in a student’s best interest to make sure they know how to complete the exercises. Assigned homework problems were longer, had multiples concepts, and worth a few minimal points. The exercises were shorter, generally one concept, and had no points awarded. The hypothesis is that students would perform better on the exams if they completed the exercises.

DATA

Central Washington University is on a quarter system. During a quarter students were told that at least 75% of the test questions will be similar to the exercises at the back of the chapter. These exercises were available through the online homework. They would not be graded and correct answers were provided. At the end of the quarter the following data was obtained for each student:

- (a) Final grade in the principles course;
- (b) Amount of ungraded voluntary online homework completed successfully.

RESULTS

The above variable was analyzed with regression analysis to determine if the final grade was dependent on the amount of ungraded voluntary online homework completed successfully. Three students were removed from the sample as 2 had withdrawn and one had an “F” for grade due to dropping the class without withdrawing. The final sample size was 41. The result of that regression was:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	2.79904	0.157522	17.76918	2.69E-20
% of homework	1.496688	1.007322	1.485809	0.145369

In addition, the R² was .054.

FURTHER DISCUSSION

The above analysis indicates completing voluntary ungraded homework has no correlation to the final grade received in the beginning accounting principles course. This has brought up additional questions as to the reason which should be analyzed further before stating a definite conclusion.

- (a) Did the analysis examine the proper variable? The above regression analysis used the percentage of voluntary online homework that was correct. The mechanism for the student to obtain the correct answer to the voluntary homework required them to enter some answer before the program would give a correct answer. The student could have plugged in any number to get a correct answer. The determinate could have been if a student even attempted the voluntary homework instead of the percentage of voluntary homework that was correct. The analysis could be run again with voluntary homework attempted being a dummy variable to determine if there is a correlation between completing any voluntary homework and the final grade.
- (b) When did the student complete the voluntary homework? Was it early in the quarter to lay a foundation or late in the quarter out of desperation? Intuitively students who complete the voluntary homework early and throughout the quarter are laying a foundation for the concepts that will be used in future chapters. Students who do not complete any of the voluntary homework until the end of the quarter do not understand the concepts and most likely getting a poor grade. If the only time they complete the voluntary homework is at the end of the quarter it could indicate they are desperate to understand the concepts. Additional information as to the timing of the voluntary homework completion could be obtained to determine if there is a correlation between the final grade and when the voluntary homework was completed.
- (c) Did a student do the exercises on their own instead of online? Most of the exercises have check figures for the problems. A student could complete an exercise and obtain the check figure. They would not need to check it online and, therefore, would be no record of the completion for this study.

CONCLUSION

The above analysis indicates there is no correlation between completing the voluntary homework and the final grade received in the course. As discussed above, additional information should be obtained and analyzed to determine if this is a valid conclusion.

REFERENCES

- Ory, John c. Katherine E. Ryan (1993). Sage Publication. Newbury Park, CA 1993.
Tips for Improving Testing and Grading,
- Wilson, A., "Exogenous Determinants of Student Performance in First Finance Classes",
(Working paper, California State University, Long Beach), 2002
- Kelly, Melissa, "Extra Credit Strategies"
http://712educators.about.com/od/gradingsystems/a/extra_credit.htm