

**STUDENT ATTITUDES TOWARD ONLINE HOMEWORK
IN ACCOUNTING COURSES**

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ABSTRACT

The authors studied student attitudes toward online homework in community college second year accounting classes. Overall, students indicated that online homework was preferable to traditional paper based homework. In addition, students reported that online homework increased their understanding of the subject and that doing online homework assignments resulted in an increase in the amount of time devoted to doing homework. In addition to analyzing these results, we compare and contrast to other recent findings in the literature of web-based homework.

This paper should be of interest to any educators who are currently using or considering adding online homework to their course.

INTRODUCTION

Textbook publishers are promoting web-based homework systems such as McGraw-Hill's Homework Manager/CONNECT, Cengage Learning's CengageNow, Pearson's Myaccountinglab and Wiley's Wileyplus. Past studies have shown mixed results. Heizer, Render, and Watson (2009) found that using a web-based homework system in a Management class led to improved student learning. Another study of a Management class found that doing homework the traditional paper based method compared to using a web-based homework system led to no difference in student learning Palocsay and Stevens (2008).

Joseph Smolira of Belmont University performed a study of student perceptions of online homework in an Introductory Finance course. The author explains why student perceptions are important. Smolira states that a significant indicator of the benefit of any technology is the perception of that technology by the end user. The study found that students felt that online homework was preferable to traditional homework handed in to the instructor. In addition, students reported that online homework assignments increased their understanding of the material and the time spent preparing for class. Smolira's study differs from this study in two ways. First, it involved four year college students and graduate students rather than community college students. Second, it studied an introductory finance classes rather than accounting classes. For details see Smolira (2008).

Jones (2008) studied student perceptions of web-based homework in an introductory accounting class at a four year college. The study found that students agreed that web based homework does enhance learning. In addition, students prefer to do their homework online rather than using the traditional paper based method. The students really liked the immediate feedback feature of web-based homework. The students were also pleased with the multiple attempts feature. The author found that students who did not have a comfort level with computers preferred paper based homework instead. Most of the students had a comfort level with computers, only 9.6% of the students indicated that they were not comfortable with computers.

Collins, Deck, and McCrickard (2008) found that accounting students who used online homework had significantly higher final exam scores than the students who did their homework on paper.

Peng (2009) studied how a student's individual motivation and comfort level with computers impacted their perceptions of online homework. The study involved financial

accounting students at a four year college. The author found that students with low motivation and good computer skills increased their effort to do online homework. The increased use was attributed to the student perception that online homework was easier to do.

Haverty (2010) found no difference in the performance of students who used online homework and students who did their homework on paper. The study involved managerial accounting students at a four year college. Although the study did not show an increase in student learning with the use of online homework, it did show that the students really liked the online system. The findings included 88 positive responses and only 19 negative responses. The author reports an unplanned aspect of online homework. A number of students indicated that the online system was so helpful in doing the homework that it was unnecessary to read the book. In addition, the study showed that using online homework had no effect on student evaluations of faculty.

ADVANTAGES OF USING ONLINE HOMEWORK

The study used Homework Manager Plus by McGraw-Hill and Wileyplus by John Wiley. Both products state the benefits of their products include:

Duplicates the end-of-chapter material

Instant feedback/grading

Provides immediate help through a direct link with the interactive text.

24/7 access

Allows for multiple submissions.

Stores all results in an online gradebook which can be imported into a course management system such as Blackboard.

Allows the instructor to identify the students who are falling behind.

Algorithms permit different versions of the same problem for each student.

Both Wiley and McGraw-Hill point out that perhaps the most significant benefit is the immediate feedback feature. The student does not have to wait for the instructor to grade and return the assignment. The student can learn their mistakes/misconceptions immediately.

The publishers point out that instructors will save time since the computer does the grading. There is also the accountability factor. The student is responsible for submitting the homework in a timely manner. For each student, there is a detailed record of each assignment. No longer can a student slide the entire semester's homework under the instructor's door at the end of the semester.

DISAVANTAGES OF USING ONLINE HOMEWORK

Pascarella (2004) discusses a potential negative effect of learning with web-based instruction. The online homework systems typically only grade the final result without placing importance on the process used to arrive at the answer. The author warns that students may adopt

a trial-and-error strategy that focuses only with guessing the correct answer rather than knowing why the answer is correct.

Peng (2009) warns that instructors should not assume that a web based homework system in accounting will result in students practicing even more than usual. The author's study found that students with low motivation benefited more than students with high motivation. Moreover, the students with low motivation did more work for the wrong reason. They were using the system as a shortcut rather than to learn. The author calls for the designers of the online homework products to consider the above factors as well as the different cognitive abilities of students when designing newer versions.

Jones (2008) delineates several disadvantages of web-based homework:

- Consistent with Pascarella (2004) allowing multiple attempts/submissions encourages a student to use a trial and error approach to complete the assignment.
- The feedback may not be as detailed as paper grading.
- Automatic grading may be a timesaver for the instructor but may be considered impersonal by the student.
- The learning experience for students who have a discomfort with working with computers may be hindered.
- Metacognitive development may be encumbered by corrective yes/no feedback.

Jones (2008) also found some students complaining that the web-based format was too dissimilar from the exams to be of help.

Smolira, Peng, Jones and Haverty reported on student attitudes towards online homework in a four year college. This study focuses on community college students. The purpose of this study is to gain a better understanding of how student's learning is affected by using a web-based homework system in Accounting classes. The study is qualitative in nature. The study will provide a summary of data collected.

METHODOLOGY

In the Spring 2009 semester, students in two Intermediate Accounting Part 2 classes and students in two Cost Accounting classes participated in a study. All the students were enrolled at the Borough of Manhattan Community College of the City University of New York. At semester's end, a total of 116 students were surveyed with 102 students responding (a response rate of 88%). The Intermediate Accounting students used the text entitled Intermediate Accounting, 12th edition, by Kieso, Weygandt & Warfield, John Wiley publisher 2007 with the online homework product called Wileyplus. The Cost Accounting students used the text entitled Managerial Accounting 12E, by Garrison. Noreen & Brewer, McGraw-Hill publisher 2007 with the online homework product called Homework Manager Plus.

Online homework was 20% of the students' total grade. The assignments were the end of the chapter exercises and problems from the text. The instructor has the opportunity to set the parameters for the assignment such as to amount of time permitted, whether to allow multiple

attempts, whether to link the textbook for help, whether to provide actual answers after a certain number of attempts. Students were permitted to make multiple attempts at the assignment with the highest grade being counted. The students were given unlimited time for the assignment. The algorithm option was used. The algorithm option changes the numbers for each student version of the assignment. No assignments were accepted after the specified due date. Since the online homework was 20% of the total grade, it insured that the students would use the system. It should be noted that the above policy of permitting multiple attempts is quite liberal. The intention of the study was simply to get the students involved in a non-threatening way.

A survey instrument was used to gain information on student attitudes towards web-based homework. The survey questions are based on questions from Smolira's 2008 study.

SURVEY RESULTS

Overall, students thought that doing homework online was valuable and contributed to learning. In general, the online homework experience was overwhelmingly positive. The results of the survey are summarized in Table 1.

Survey results found the following:

- An overwhelming majority of the students (89%) indicated that online homework was helpful in improving their understanding of accounting. 32% found it extremely helpful and 57% found it somewhat helpful. Only 4% felt that online homework was of no help.
- Similarly 85% of the students believed that online homework was helpful in preparing for exams.
- 68% of the students indicated that they increased the amount of time spent studying for class. The increased amount of study time probably contributed to the above positive result of 85% of the students stating that it was helpful in preparing for exams.
- 78% of the students indicated that online homework was more valuable than traditional homework assignments. Only 11% felt that paper based assignments were more valuable.

CONCLUSION AND DISCUSSION

The results of our study of community college accounting students are consistent with the findings of Smolira, Jones and Haverty. Students really like the online homework systems. One reason why our study had such a favorable result was the generous homework policy employed. The homework was 20% of the grade. The optional settings were quite liberal. We allowed multiple attempts and counted the highest grade. Most instructors would not have such a liberal policy.

Educators should consider the warnings of Pascarella, Peng, Jones and Haverty. Some students are using the online system simply as the easiest way to do the minimum amount of work. They may not be reading the book and instead of thinking critically to answer the homework they have perfected a guessing technique. Students have complained that they are

able to do the homework but the exams are different. This can be attributed to the assistance the online system provides while the student is doing the assignment. Frequently, a format is provided or a dropdown menu with choices is offered. It is one thing to prepare a financial statement when a format is provided with a list of possible choices and another thing to prepare a financial statement with a blank piece of paper. The software developers should consider including problems which do not provide as much assistance and force the student to do the work with a minimum amount of help.

Our intention was not to test the students but to get them to do work outside of the classroom. Many community college students have a “high school” mentality. That is, they expect to learn everything while in class. Doing work outside of the classroom is the first step to lifelong learning. The online homework enables this to happen. Despite its shortcomings, online homework is worth a try.

TABLE 1. Abbreviated Results From the Questionnaire Administered to Students

**Likert Scale: 1=Did not help; 2=Slight hindrance; 3=No effect; 4=Somewhat helpful;
5= Extremely helpful**

<u>Question</u>	<u>Response Options</u>	<u>N= 102</u>	<u>Mean</u>
How helpful was WBH Manager in improving your understanding of accounting?	Extremely helpful	32	4.14
	Somewhat helpful	59	
	No effect	7	
	Slight hindrance	1	
	Did not help	3	
Was WBH more valuable than traditional homework assignments?	Lot more	37	4.02
	Somewhat more	41	
	No difference	12	
	Somewhat less	10	
	Lot less	1	
How easy was WBH to use?	Very easy	50	4.34
	Relatively easy	41	
	Easy	7	
	Somewhat difficult	4	
	Very difficult	0	
Did WBH increase the amount of time you spent studying for this class?	Lot more	25	3.89
	Somewhat more	43	
	No effect	32	
	Somewhat less	2	
	Lot less	0	
How helpful was WBH in preparing for exams?	Extremely	32	4.06
	Somewhat	53	
	A little	12	
	Minor help	1	
	No help	4	
Did you cram less because of WBH?	A lot less	44	4.11
	A little less	31	
	No	19	
	A little more	7	
	A lot more	0	

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