

INVESTIGATION OF THE IMPACT OF USE OF WILEYPLUS ON STUDENTS' LEARNING IN INTRODUCTORY ACCOUNTING COURSES

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ABSTRACT

This study has investigated the impact of use of WileyPLUS on students' learning in introductory accounting courses through survey of students at the end of the course. The results show a mixed impact, but mostly positive.

INTRODUCTION

The introductory accounting courses are important courses for business majors. These courses familiarize students with the process by which accounting information is prepared and used in making business decisions. Due to the importance of the introductory accounting courses, considerable efforts have been devoted to the enrichment of the content of introductory accounting courses (See, for example, Baldwin and Ingram 1991; David et al. 2003; Dreike et al. 1998; Mastilak 2012; Rankine and Stice 1994; and Saudagaran 1996).

In pursuit of enrichment of the learning environment in introductory accounting courses, the author adopted WileyPLUS in order to facilitate the process of collecting, grading, and providing feedback on students' homework. When homework is graded students have more incentive to work the assigned homework and engage in learning process.

WileyPLUS could be setup to allow for one or multiple attempts for working the homework problems. After each attempt the student is informed which part of a problem is answered correctly and which part is not, then allows for a new attempt if the answer is incorrect. The options available to the instructor are as follows:

- 1) Use the same values for all attempts under which numbers in the homework for each attempt stay the same, but each student gets different numbers.
- 2) Use new values for all attempts under which numbers in the problems change for each attempt and each student.
- 3) Use static values for all attempts under which numbers in the problems stay the same for every attempt and every student.

The author used option 2 in the above with three attempts allowed during his experiment of WileyPLUS in two of his introductory accounting courses during the summer of 2012. Students could have access to the solution to the homework after the third attempt.

In addition to collecting and grading homework capability, WileyPLUS has other useful tools for enhancing students' learning that are available to students on a "24 hours a day, 7 days a week" basis. Among those are tutorial videos explaining how to work selected problems, interactive

tutorials, power point slides, access to full online version of the textbook, online grade book accessible to students.

WileyPLUS is developed by John Wiley publishing company for selected textbooks. Access to WileyPLUS requires purchase of a code and registration. Students can purchase the access code directly from Wiley at \$95.00 or from bookstore at \$110 for use in two semesters (accounting one and accounting two). WileyPLUS provides technical support on a 24/7 basis to both the students and the instructors. When it deals with homework and self-evaluation quizzes, WileyPLUS try to facilitate the student's learning by telling the student "what to do", "how to do it", and whether the student is doing it right.

RESEARCH OBJECTIVE AND METHOD

The author used WileyPLUS in his Principles of Financial Accounting and Principles of Managerial Accounting courses during the summer of 2012. Students were required to work the assigned homework and submit their answers through WileyPLUS. At the end of semester, a survey was administered to investigate the impact of WileyPLUS on students' learning. Forty-seven (47) students completed the survey - 26 students in Financial Accounting and 21 students in Managerial Accounting.

RESEARCH RESULTS

The following section displays students' responses to the several of the questions in the survey instrument.

Q. How would you rate the impact of completing, submitting, grading, and receiving feedback on your homework by WileyPLUS on your learning in the course?

No Impact at All	13%
Somewhat Positive Impact	34%
Considerable Positive Impact	34%
Significant Positive Impact	11%
Very Significant Positive Impact	9%

Some of the cited reasons for positive impact were as follows:

- 1) The repetition that the student has to go through because of allowing multiple attempts for getting correct answers
- 2) The link to textbook within problems that takes the student to the part of the textbook that is related to the problem
- 3) Shows solutions to homework at the end
- 4) Immediate feedback when the student is wrong while working on the homework problem and allowing the student to learn from mistakes
- 5) It helped to retain what is learned by providing good practice problems

Q. Overall, how would you rate the operational aspects of WileyPLUS in completing, submitting, grading, and receiving feedback on your homework?

<u>Very Poor</u>	<u>Poor</u>	<u>Adequate</u>	<u>Good</u>	<u>Very Good</u>
9%	21%	26%	32%	13%

Some of the cited reasons for “Very Poor” and “Poor” ratings were as follows:

- 1) It makes the student to do problem all over again with new numbers even if student messes up only one part of the problem.
- 2) It does not show step-by-step how to get the right answer using step-by-step examples and practice problems.
- 3) When an answer is wrong no explanation is given. No feedback, you have absolutely no idea what or why you are wrong. By the time you figure it out, you have spent too much time on one problem.
- 4) Inputting answers was difficult, because if you were putting them in wrong, you had NO way of knowing until you have to use all your tries before given an example of how to submit and work the problem.

Q. Did you use any of the other resources available on WileyPLUS beside homework completion and submission part?

Yes: 74% No: 26%

Q. What Students Liked the Most about WileyPLUS? Responses in order of priority were as follows:

- 1) Having access to the textbook online
- 2) Ease and flexibility for submitting homework
- 3) Tutorial Videos
- 4) Interactive Tutorials
- 5) Link to textbook from homework (by clicking the link the student can view the section of the textbook that deals with topic in the problem)
- 6) Multiple attempts allowed for homework problems
- 7) Having access to grade book
- 8) Access to solution of homework problems after attempts
- 9) Having access to Power Point Slides
- 10) Availability of multimedia resources for each chapter
- 11) Availability of Practice questions
- 12) Availability of note/flash cards for review

Q. What Students Disliked the Most About WileyPLUS?

- 1) Changing the numbers in the problems for new attempts
- 2) Format for submitting answers for certain problems were confusing– rounding issues, ambiguity about how to submit answer, etc.

Q. Overall, how would you rate the resources available on WileyPLUS?

<u>Very Poor</u>	<u>Poor</u>	<u>Adequate</u>	<u>Good</u>	<u>Very Good</u>
0%	11%	32%	28%	30%

Q. Would you recommend the adoption of “WileyPLUS” for completing, submitting, and grading of homework for this course by University?

<u>Yes</u>	<u>No</u>	<u>Not Sure</u>
47%	38%	15%

Additional analysis of the data along with a display of features of WileyPLUS will be provided during the presentation at the conference.

LIMITATIONS

As with most research, the results of this study must be interpreted within the constraints particular to the study. For example, in this study, the author had allowed for three attempts for working the homework problems where the numbers in the problems were changing for each new attempt and each student. This decision appears having significant impact on the students’ responses. Furthermore, the result of this study is limited to one university with its particular student body.

CONCLUSION

This study has investigated the students’ perceptions in regard to the merits of WileyPLUS for students’ learning in two introductory accounting courses after using WileyPLUS for one semester during the summer of 2012. The results suggest a mixed experience and viewpoints, but mostly positive. Per students’ responses, WileyPLUS has many useful tools for learning such as Tutorial Videos and Interactive Tutorials. In addition, WileyPLUS allows instructors to collect homework online, grade, and report the results to students with minimal work on the instructor. At the same time, responses suggest a need for the improvement of the system in order to make it more user-friendly. The negative experience by some of the students was due to the instructor’s selection of multiple attempts option where the numbers in the problems were changing for each new attempt and each student. These types of problems could be avoided easily by the instructor if needed.

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