# On-line Methods for Improving Learning in the First Course of Financial Accounting

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## ABSTRACT

This paper is a preliminary assessment of on-line components added to the first undergraduate course in Financial Accounting. The teaching methods used were intended to achieve related objectives:  1) enhance the mastery of accounting, 2) increase student accountability and 3) develop students' ability to become successful learners.  The focus on these objectives is linked to the number of students nationally and at the author's university who perform poorly in accounting. The paper compares the student evaluations and overall grades achieved for three courses taught sequentially.  Each course added on-line components to those of the prior; the final, third, course was the hybrid.

## Introduction

Over the past few years the author has become concerned with the number of students in the first course of Financial Accounting who: 1) come to class unprepared, 2) never practice accounting (homework), and/or 3) do not purchase - or use - the textbook.  Alarmingly, many students seem not to include these critical components in their personal "frame of reference" for the learning of accounting, or at least, for the achievement of a passing grade in accounting.  The author believes a trend exists that encompasses even those with a reputation of being "good" students.  Students seem to act upon the belief (recognized or not) that presence during class periods and some studying right before a test is all that is necessary.  This trend exists notwithstanding professors' conducting discussions of what is necessary for understanding and mastering accounting.

Unfortunately, when "good" students become "not-so-good" students of accounting, they evidence both frustration and unawareness of how their meager result was obtained.  It seems to the author that the number of students making unproductive decisions regarding their learning responsibilities has increased dramatically in the last two to three years.  The author believes these decisions by students - given the nature of accounting - directly relates to the fact that as many as one-fourth or one-third of students in the first course of Financial Accounting drop out without finishing the course or stay and achieve poor results.

This difficulty in and attainment of poor results in the first course of Financial Accounting is an historic problem.  Yet, the author believes that an increase in this problem is dramatic and will continue to grow unless new methods for effective teaching and learning can be discovered.  These methods must address the increase in poor achievement that seems to result not so much from lack of awareness but to lack of belief that preparation and practice are essential for mastery of accounting.  Related to this problem is what also seems to the author to be a growing trend in students: a failure to recognize or believe that acceptance of responsibility for one's own learning and conduct founded on maturity and independence are essential attainments.  Students may not even be aware that they are not demonstrating these

behaviors. Sadly, an increasing number of students graduate from secondary schools and arrive at universities without having achieved an understanding of the need for or how to be accountable for their learning.

There is, however, a positive trend which offers a potential solution. Increasingly students come to the university with advanced technological skills. The trend is for students to be increasingly comfortable with and able to use technology to participate in their own education. Technology offers potential for the design of methods to develop student's achievement of both accountability and learning. This potential has certainly been illustrated over the past decade but not, perhaps, to the extent that is possible for the discipline of accounting.

## BACKGROUND

This paper considers the difference in student achievement and evaluation of learning when methods focused on an on-line environment were added to the first, undergraduate course in financial accounting. The majority of the students in this course were sophomores; this is relevant because the academic experience is designed to foster growth in acceptance of responsibility for and dedication to learning as students progress. The courses used the same text and all included class "face time." The courses were offered sequentially (Fall 2007, Spring 2008, and Summer 2008). With each new sequence, additional on-line components were added to methods used in the previous sequence. The final course in the sequence was a "hybrid" which, at the author's institution means that at least fifth-one percent of the class must be online. Thus the hybrid course had half the "face time" of the previous two courses. Also, one hundred percent of the grading in the hybrid was accomplished in on-line components.

The first course in the sequence used on-line components only to provide information including assignments and to administer reading quizzes. The second course added both on-line homework (fifteen percent of the grade) and practice tests. As mentioned above, for the third course, one hundred percent of the grading components were delivered on-line. These components included quizzes, tests, homework, and several essay assignments delivered through a discussion thread. All of the on-line components were administered in a way that required students to assume responsibility for knowing that the component was available and for completion before an expiration date. The dates were chosen to accomplish important criteria for learning accounting: sequential building of learning. Table 1 below compares the three courses which are identified as #1, 2 and 3 rather than by date of offering. This is done because the sequential building of the on-line components is more relevant than the dates the courses were offered.

| TABLE 1 | | | | | |
|---|---|---|---|---|---|
| **Course Comparison** | | | | | |
| Course # | On-line Components Percentage of Grade | Format | Time Period | No. of students completing evaluation | On-line Components |
| #1 | 11.6% | Traditional, class meetings twice per week for a semester. Student Evaluation of Learning administered by university. | Fall 2007 | 55 in 2 sections, total students in all of instructor's classes = 69 | On-line Course Management System used for information including assignment due dates, reading quizzes, and discussion thread |

| | | | | | |
|---|---|---|---|---|---|
| #2 | 14.9% | Same as #1 | Spring 2008 | 52 students over 2 sections - total of classes = 86 | Added 1) homework application that is time sensitive and graded, 2) practice tests |
| #3 | 100.0% | Hybrid; 4 week time period r/t traditional semester; in class time one half of #1 and 2; at least 51% of class required by university to be on-line. Student evaluation administered via Blackboard, voluntary, 11 students completed survey | Summer 2008 | 11 students, 1 section, no other classes taught | Added all grading on-line; included individual chapter tests. Online mid-semester and final both administered in computer lab, instructor present |
| | | | | | |
| *Note: Each successive course had the on-line elements of the previous course plus the identified additions. Same text for all. Number of students is the number completing the student evaluation of learning.* | | | | | |

The number of students taught by the instructor is included in Table 1 because of the author's belief that – when the instructor is the author – total number of students affects both teaching and student learning. It should also be mentioned that in the course identified as #2 the author was teaching three different subjects. This information is included because the author believes that - for the author's students - there is an effect on learning when more than two subjects are taught in one semester; particularly when these are delivered in the four class periods that were conducted.

The hybrid course, #3, was a summer course which met for four weeks, rather than the full semester as the other two courses in the comparison. As disclosed in the table, "face time" was included but at half the rate of courses #1 and 2 which were taught during a traditional semester at the author's institution (August to December and January through April). This hybrid's design was intended to complement, not replace, the traditional versions of the course as represented by #1 and #2. An intentional focus was placed on methods to enhance the learning of students who are repeating the course because of previous poor performance. In fact, eight of the fourteen students enrolled in the hybrid were retaking the course. This population of "repeaters" was considered a good population for the sequential nature of the on-line methods added in the courses to which this paper refers. It seemed appropriate to strengthen methods used in the previous courses (#1 and #2) particularly those designed to foster acceptance of responsibility for learning.


## DESIGN GOALS AND RESULTS

In all three courses on-line components were intended expressly to inform work habits, foster acceptance of responsibility, and enhance understanding of how to approach learning. The goal was to address deficits which, as discussed in the Introduction, the author believes negatively impact performance. As just mentioned, this was strengthened in the third course. Accordingly the purpose of design of delivery

of the on-line components was to require acceptance of responsibility for learning in a manner that (hopefully!) enhances learning.

For all on-line components, in all three courses, a specific open date and a specific expiration date existed. No exceptions were granted if a student missed the expiration date. All information regarding dates was placed on tabs in Blackboard; no reminders were given at any time. In conjunction with the addition of the on-line components of #2 (and then of course #3), this policy was discussed carefully at the beginning of the semester. This included a reminder of the importance for students to develop professional habits which includes accepting responsibility for meeting deadlines, and for intentionally pursuing their own development in regards to knowledge and learning methods.

Due to this emphasis on student learning and student responsibility for learning, a comparison of student evaluations seemed to offer value for an initial assessment of the on-line methods used. Table 2 compares the traditional and hybrid student assessment of learning, as represented by the student evaluations administered at course end. As Table 2 notes, the full evaluation instrument and scoring criteria are located in Figure 1, Appendix.

| | TABLE 2 | | | |
|---|---|---|---|---|
| | **Comparison of Student Evaluations** | | | |
| | | #1 | #2 | #3 |
| | | n=55 | n=52 | n=11 |
| 1 | The instructor presented the material in a clear and organized way (1=Hardly ever…5=Almost Always) | 3.836 | 3.327 | 5.000 |
| 2 | The instructor's interest in the course motivated students to learn | 3.982 | 3.462 | 4.909 |
| 3 | The instructor clearly presented the importance of the subject matter | 4.400 | 3.862 | 5.000 |
| 4 | The instructor clearly communicated expectations for student achievement | 4.240 | 3.942 | 4.909 |
| 5 | The instructor provided constructive feedback on students' work that helped students improve | 3.818 | 3.308 | 4.818 |
| 6 | The instructor was available to assist students | 4.400 | 4.019 | 4.818 |
| 7 | The instructor gave assignments appropriate to the class | 4.545 | 4.096 | 4.900 |
| 8 | The instructor graded students on what they were expected to learn | 4.509 | 4.135 | 5.000 |
| 9 | The instructor encouraged students to ask questions and express their knowledge | 4.800 | 4.058 | 4.800 |
| 10 | The instructor expected students to learn challenging or difficult material | 4.145 | 4.040 | 4.818 |
| 11 | How much did you learn in this class? | 3.564 | 3.500 | 4.636 |
| 12 | On average, how many hours per week did you spend outside of class preparing for this course? (1=none…5=more than 9) | 2.745 | 2.846 | 4.182 |
| 13 | What is your current grade in this course? (1=F….5=A)) | 3.400 | 3.627 | 3.727 |
| | Note: Figure 1, Appendix presents the evaluation instrument and scoring criteria | | | |

Rather than abstract selected questions on the student evaluation of learning instrument, the results for all thirteen questions are presented.  This is because of the perceived "halo effect."  Students who are very positive about their experience in a course tend to evaluate all aspects highly.  This occurred, in the author's opinion, in the students' evaluation of the third, hybrid, course.  For example, the score for question six is higher for the hybrid.  Yet, the instructor was not "more" available than for the other courses.  In fact, from the instructor's perspective, there was less availability. For instance, the hybrid in class sessions met half of time of courses #1 and #2.  In addition, office hours were fewer and the instructor was on campus significantly less time than during the regular semesters in which #1 and #2 were taught.

A comparison of student achievement – as represented by class grade average - also seemed to add value.  This value is constrained by this initial assessment of the success of the progression in on-line methods used.  Of course, there are many reasons other than an increase in learning that may influence an increase grades.  This paper, however, is a preliminary consideration of the success of the on-line methods. Table 3 presents student achievement in the three courses as represented by average of grades obtained.

| TABLE 3 | | | |
|---|---|---|---|
| **Grade Average** | | | |
| | | | |
| | *# Students in ACCT 240* | *Total # Students* | *Average* |
| #1 | 55 students, 2 sections | 69, 3 classes | 71.6% |
| #2 | 52 students, 2 sections | 86 students, 4 classes | 78.2% |
| #3 | 14 students | 14 students, 1 class | 81.3% |

As mentioned previously, the author believes that the number of students, both within a specific class, and in total number taught over all classes in one semester affects student learning.  Therefore, this information was included in the table.  If the author's belief is correct, the low number of students in the hybrid class acted to raise the evaluations.  In addition, the low number of students undoubtedly raised grades. The modifier "undoubtedly" is used because the author had more, substantive interaction with the fourteen students (#3) than with the students in courses #1 and #2.  In fact, the author was able to intervene with two of the fourteen students who, at differing points in the course, began to perform poorly.  One of these students admitted after the course was over that but for the intervention they would have dropped out.

There is existing research indicating that larger classes (and thus more students) may be more effective for learning.  However, some research indicates that class size on either end of the spectrum is more effective (less than about thirty, more than one hundred). In addition, the results reported here may be affected by the demographics of both the authors' university and students.  For example, the classrooms in the author's College of Business and Economics accommodate either twenty students or forty; one holds forty five and there is one large seating classroom.  These sizes were intended to fulfill the university's promise of small classes and faculty/student interaction.  There are other possible influences on both student evaluations and grades achieved that are beyond the scope of this paper.

**CONSIDERATIONS**

Reliability of these results is compromised and thus not appropriate for statistical purposes. Unfortunately the evaluation instruments were not administered similarly. For courses #1 and #2, the student evaluations were administered by the university administration in the traditional manner: the instructor never touches the instruments nor is present during administration, the instrument is a paper document completed during a class period. Regrettably, the university does not administer student evaluations for summer school classes. A specific request for this policy to be changed with evaluations for the hybrid class administered in the equivalent manner was not granted. Therefore, an on-line (Blackboard) survey with the same questions as the university instrument was created and administered. The university's paper instrument includes the ability to add instructor specific short-answer type questions. These were not added for #1 or #2 but were added to the on-line survey.

Thus this difference in the administration of the evaluations for the hybrid class compromises reliability. Not only was the method of administration different for #3 than for #1 and #2, the administration was unlike anything with which the students are familiar. In addition, students who had taken summer classes previously expected no evaluations to be administered. In the hybrid, #3, the population consisting of a significant majority of "repeaters" could suggest that many of the students have previously taken summer classes at the institution. Although it is beyond the scope of this paper to discuss the correlation of students who perform poorly in the first course of Financial Accounting to doing poorly in other courses, it deserves a cursory mention here. (In fact, there seems to be a consistent menu of courses in which the poor performance occurs.)

Although, the hybrid class was conducted at the end of the semester as were the evaluations in #1 and #2, the location of the survey offers another problem for comparability of results. Unfortunately, the survey was located within the class Blackboard. This undoubtedly compromised students' ability to trust in confidentiality despite specific assurance that all answers would be anonymous. This is relevant because a trend has been perceived over recent years; this is an increase in students' reluctance to trust the instructor. Thus the necessity for students to rely on the instructor's promise of anonymity may have impacted the results in Table 2. Although not all students in a course complete a student evaluation instrument – for many reasons - the manner of administration of the hybrid surveys adds an additional reason not to comply. Perhaps the three students in that class (#3) who did not complete the survey made their decision based concerns regarding privacy of answers.

Yet the survey responses are beneficial in regards to design and use of on-line methods. An example can be found in a student response to a short answer question added, as discussed previously, to the hybrid survey of student learning. Future planning of teaching methods will include reflection on the answer to whether participating in the hybrid was "a good decision for you and your learning style? Would you would recommend that just anyone take the class as a hybrid…or is it just good in certain circumstances?" Following is an interesting, although quite informal, contribution.

> Yes, this was a great decision for me to make. I took it in the classroom the first time and got a D and there wasn't (*sic*) a lot of things online to help….When we were in class we learned and took notes on the important things in the chapter. I think the less time in class (in the hybrid) was better because it was up to me to read and do my work instead of relying on 'O. I heard it in class so I will remember how to do it', which isn't true! I needed to figure things out myself and not rely on the fact that we did it in class.

The student's identification of the course in the regular semester as taken "in class," is interesting. Particularly since the hybrid class included "in class" sessions as well. Although the hybrid class sessions

occurred at half the rate of the "regular" classes, the same material was covered in all. Perhaps the statement is revealing of the student's estimation of where learning occurred. This relates, the author believes, to the above mentioned methods to foster student acceptance of responsibility for learning. Of particular success were the deadlines that were carefully set to enable each component to build on the previous component. Students met the deadlines successfully. The extent of this success had not been anticipated and was satisfying as it fostered the ability to learn in the manner necessary in the discipline of accounting.

These sequences of courses highlighted, for the author, the value of on-line methods for the discipline of accounting. This hybrid course was the first on-line (hybrid or fully on-line) course offered at the author's institution in the discipline of accounting. For many reasons, the accounting faculty have consistently declined to offer on-line accounting courses; this relates to the characteristics of accounting as well as technology support. The success of this hybrid leads the author to questions personal perceptions and assumptions regarding teaching and learning. When faculty get together, it is not unusual hear lamentations that: students today do not work, do not accept responsibility, and do not really know what hard work "looks like;" hard work is beyond their experience or understanding. The author is guilty of that same lamentation. However, the results reported in this paper and the experience with the hybrid students causes the author to wonder if perhaps teacher perception and style have a greater influence on this problem than realized. Perhaps students today work differently, in a way that is outside the instructor's experience or understanding.

## CONCLUSION

The goal of this project was to address deficits in mastering accounting, related deficits in student accountability, and develop students' ability to be successful learners. Although the results are not reliable for statistical purposes, the progression of on-line methods appeared to be successful in regards to student learning. Of course, consideration should be given to the many possible influences on the increases – as on-line components were added – reported in Tables 2 and 3. These tables represent an initial assessment; other methods are necessary. In this preliminary study, a critical component was the intentional focus on student acceptance of responsibility for learning. This aspect certainly led to a much more pleasant experience for the instructor while at the same time requiring students to adopt professional work habits.

The author's experience with the hybrid class and its components was significantly more satisfactory than had been anticipated. The level of satisfaction was such that for all classes, all subjects taught; this progression in on-line components will be continued. At this time, and for reasons mostly beyond the scope of this paper, on-line methods developed will fall within the constraints of class "face time" occurring at some amount. The teaching/learning of current students, or perhaps the students/faculty attracted by the author's university, seem to benefit from that classroom personal interaction. Yet it is interesting to consider whether the smaller amount of class meetings in the hybrid added value for the students (see the quote above).

Consideration of the trend in student and faculty technology aptitude indicates that the benefit of "face time" will probably decrease over time. And, of course, a semblance of "face time" (in this paper identified as class time) can be achieved with current technology applications; Wimba is an example. Yet, while other reasons for including "face time" are not discussed in this paper, it is worthwhile to note that a change in the level of technology availability and support would be necessary (at the author's institution) for a fully on-line course in accounting to be contemplated.

The most successful class, from the author's perspective, was the hybrid. As mentioned earlier, this was a surprise. The results displayed in Tables 2 and 3, the author's experience with the class, and student's informal remarks led to a conclusion that value exists for all of the author's courses. While the hybrid course was designed for students repeating the first course of Financial Accounting, the methods employed are applicable to all students. The emphasis on students accepting responsibility for learning and developing skills to learn successfully is critical for academic success whether or not combined with on-line methods. However, the trend in student technology aptitude indicate that combining this emphasis with technology offers value for teaching and learning.

| | FIGURE 1 | | | | |
|---|---|---|---|---|---|
| | **STUDENT ASSESSMENT OF INSTRUCTION WITH SCORING CRITERIA** | | | | |
| | | *Hardly ever* | *Occasion-ally* | *Often* | *Usually* | *Almost Always* |
| | *Scoring Criteria* | *1* | *2* | *3* | *4* | *5* |
| 1 | The instructor presented material in a clear and organized manner. | | | | | |
| 2 | The instructor's interest in the course motivated students to learn | | | | | |
| 3 | The instructor clearly presented the importance of the subject matter | | | | | |
| 4 | The instructor clearly communicated expectations for student achievement | | | | | |
| 5 | The instructor provided constructive feedback on students' work that helped students improve | | | | | |
| 6 | The instructor was available to assist students | | | | | |
| 7 | The instructor gave assignments appropriate to the class | | | | | |
| 8 | The instructor graded students on what they were expected to learn | | | | | |
| 9 | The instructor encouraged students to ask questions and express their knowledge | | | | | |
| 10 | The instructor expected students to learn challenging or difficult material | | | | | |
| | | *Much less than most classes* | *Less than most classes* | *About Average* | *More than most classes* | *Much more than most classes* |
| | *Scoring Criteria* | 1 | 2 | 3 | 4 | 5 |
| 11 | How much did you learn in this class? | | | | | |
| | | *None* | *1 to 3* | *4 to 6* | *7 to 9* | *More than 9* |
| | *Scoring Criteria* | 1 | 2 | 3 | 4 | 5 |
| 12 | On average, how many hours per week did you spend outside of class preparing for this course? | | | | | |
| | | *F* | *D* | *C* | *B* | *A* |
| | *Scoring Criteria* | 1 | 2 | 3 | 4 | 5 |
| 13 | What is your current grade in this course? | | | | | |
| | Note: Several short-answer questions were added for the hybrid evaluation administered on Blackboard | | | | | |