Learning Accounting Basic Concepts through Online Tutorials

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Abstract: At the University of Hawai‘i Maui College, accounting students must learn basic concepts in a Principles of Accounting course in order to be successful in more difficult, later courses. In addition, these students should learn how to use technology tools effectively and efficiently within their accounting courses. In order to assist in learning such concepts through technology, an online tutorial was created. The purpose of this study was to investigate whether the tutorial aided students in learning the concepts. The tutorial, created with Dreamweaver, incorporated multimedia and included pre-tests and post-tests for assessing each lesson. Some improvement was shown between the pre- and post-test. Along with test results, feedback from participants’ state that they learned a lot more about the concepts through reading the information and samples while doing the activities with answers for self-check. Overall, online tutorials appeared to assist students in learning basic accounting concepts.

Introduction

The Association to Advance Collegiate School of Business International (AACSB) and the American Institute of Certified Public Accountants (AICPA) require that business students who are entering the accounting profession acquire the necessary skills to use the technology tools effectively and efficiently through learning experiences, which includes the use of appropriate instructional technologies. Technology tools influence the operations of organizations and their management (Ahadiat 2008). Students who enroll in accounting courses at the University of Hawai‘i Maui College are required to learn the basic concepts in Accounting 124 (Principles of Accounting I) in order to be successful in the higher-level accounting courses.

Accounting 124 is the foundation that covers the basic concepts that accounting is built on. The basic concepts that students need to master are debits and credits, fundamental accounting equation, and t-accounts. Instructors explain each chapter thoroughly and discuss the answers to the accounting problems in the textbook. Students have still been struggling, feeling confused, and overwhelmed while taking Accounting 124.
In order to ease being overwhelmed and confused, an instructional module was created. Therefore, the purpose of the instructional design (ID) project was to develop a pilot online tutorial website before its implementation in the Accounting 124: Principles of Accounting I course at University of Hawai‘i Maui College which would help first-time accounting students in accounting to understand the basic accounting information from the Introduction of Accounting and basic concepts. The basic accounting concepts covered was asset, liability, owner’s equity, revenue, expense accounts, debits, credits, the fundamental accounting equation, and t-accounts. This study had a group of 5 to 10 people to pilot the online tutorial website. The goal had the participants go through the tutorials and give feedback on what worked, what didn’t work, suggestions for improvement, any questions they had that were not answered from the information, and whether they felt that the tutorial helped them learn the accounting concepts.

**Background**

Students enrolled at the University of Hawaii Maui College are students who are graduates from high school to working adults in their 70’s. Many students come from the digital age where they were born with access to a computer and Internet. Due to students growing up with technology all around, students have lost the ability to be independent learners. Students don’t have the skills to be successful in college courses. Lucas and Mladenovic (2009) found that students may have ‘misunderstandings’ and ‘misconceptions’ about the curriculum and the evaluation in the accounting course. Concannon, Flynn, and Campbell, M. (2005) found students’ perceptions of e-learning in a large undergraduate accounting class environment to lead to improvements to the curriculum which enable students to engage interactively with the content being learned.

Professors are now taking their face-to-face and putting it half online meaning that students would have to login a Moodle system where the professor has all the course information in one place for the students. Students could login to Laulima (Moodle system used by University of Hawai‘i) find the syllabus, schedules, instructor information, assignments, quizzes, and so forth. Students can access Laulima anywhere there is a computer with Internet access. Therefore, a website was the most appropriate tool to deliver this online tutorial. The website can be placed into the Laulima course for students to access the information or the professor may choose to have the website outside the Laulima course.

The online tutorial allows students to work on the tutorials on their own time and is not rushed with time restraints as being in a class for 75 minutes. Students can take their time doing each lesson and can always go back to information that they may have not mastered the concept. Some students learn best when they have a stress-free environment with less distractions. Other students learn best in their comforts of being at home instead of a busy computer lab. Some students like doing their course work at Starbucks or a place where they are able to get coffee and Internet Access. No matter where students are doing their course work they are able to access it online with no time restraints.
Methods

The purpose of pilot study was to evaluate the effectiveness of the tutorial before its implementation in the Accounting 124: Principles of Accounting I course at University of Hawai’i Maui College. The lesson (modules) were an interactive self-paced approach to guide participants through each accounting basic concept with a pre-test, samples, activities, and post-test to master the concepts which were built with many different technologies. Adobe’s Dreamweaver program was used to create the website. The Jing program was used to capture screen shots. The Survey Monkey website was used for Demographic Survey and Tutorial Evaluation Questionnaire. The ProProfs website was used to create the pre-tests and post-tests for each lesson.

The participants for this pilot project were ages 18-79, accounting students and/or non-accounting students, ETEC students, and accounting professors. This diverse group of participants gave a range of views from students to professors to instructional design points of views which are great for a pilot study before implementing in the course. For the purpose of this project, the researcher identified some basic skills that the participant must have prior to starting the modules:

- Basic computer skills, motor and cognitive.
- Basic adding and subtracting math skills.
- Basic reading skills and comprehension.

The module was constructed into four lessons which covered the basic accounting concepts. Lesson 1: Assets, Liability, and Owner’s Equity goals were to learn what are assets, liability, and owner’s equity accounts and how to record a group of business transactions, in column form, involving changes in assets, liabilities, and owner’s equity. Lesson 2: Revenue and Expense Accounts goals were to learn what are revenue and expense accounts and how to record a group of business transactions, in column form, involving all five elements of the fundamental accounting equation. Lesson 3: Balances of T Accounts goals learn how to determine balances of T accounts having entries recorded on both sides of the accounts and present the fundamental accounting equation using the T account form, and label the plus and minus sides. Lesson 4: T Accounts in Business Transactions goal was to learn how to record directly in T accounts a group of business transactions involving changes in asset, liability, owner’s equity, revenue, and expense accounts for a service business. These lessons took participants through each accounting basic concept. The concept of using an interactive and self-paced module was to help aide participants/students in learning the concepts in place of one-on-one tutoring. The module was built as an interactive website that includes graphics, multimedia pre-and post-tests, readings with samples, and activities to do with answers to check work. The researcher conducted a tutorial evaluation questionnaire for participants to provide feedback on what was useful on the tutorials, suggestions they had on the tutorial, and on any other feedback to help improve the tutorials.

This pilot study project was developed and tested with participants who received the email to participant in the study. Participants accessed the tutorial on the website to participate in the study.
In February of 2011, quantitative data was collected through pre-tests and post-tests for the lessons from the participants. Qualitative data collected for the purpose of effectiveness and efficiency was completed by using an online quiz creator created by the ProProfs.com Quiz Maker website. A demographic survey included were questions about participants’ computer skills, taking online tutorials, taking classes online, and taking classes in general. Quantitative data collected for the purpose of effectiveness and efficiency was completed by using online survey created by SurveyMonkey.com.

**Results**

Ten participants took the demographic survey that was comprised of four questions. Figures, illustrating the results of each question are located in the appendix section.

In **Figure 1**, the question was “When it comes to using a computer, which statement describes you best?” The results were 45.5% considered themselves to be very knowledgeable and troubleshooting a computer, 9.1% in addition to using software and Internet applications they could do basic computer troubleshooting when needed, 18.2% knew how to use many different software and Internet applications on a computer, 27.3% knew how to use a computer enough to word process and access the Internet, and there were 0% that didn’t have much experience at all using a computer.

In **Figure 2**, the question was “When it comes to using online tutorials, which statement describes you best?” The results were 72.7% had used online tutorials before, 18.2% had used online tutorials all the time, and 9.1% had not used online tutorials.

In **Figure 3**, the question was “How many courses have you taken where 50% or more of the class was conducted online?” The results were the same of 27.3% for one to two, three to five, and more than five, and 18.2% had not taken a class online.

In **Figure 4**, the question was “When it comes to taking classes, which statement describes you best?” The results were 45.5% preferred to be in a face-to-face class with the teacher, 45.5% preferred to have a class with both a face-to-face contact and online setting, and 9.1% preferred to be in an online class with no face-to-face contact to teacher.

The ten participants took a pre-test and post-test for each lesson. **Figure 5** shows the average percentage results for each lesson test.
Figure 5. Average Percentages for Pre-Tests and Post-Tests

In Lesson 1, the pre-test average percentage result was 64% and the post-test was 78%. There was a 24% increase in the post-test meaning that lesson one tutorial was effective in helping participants learning the accounting concepts.

In Lesson 2, the pre-test average percentage result was 80% and the post-test was 88%. There was an 8% increase in the post-test meaning that lesson two tutorial was effective in helping participants learning the accounting concepts.

In Lesson 3, the pre-test average percentage result was 69% and the post-test was 85%. There was a 16% increase in the post-test meaning that lesson three tutorial was effective in helping participants learning the accounting concepts.

In Lesson 4, the pre-test average percentage result was 55% and the post-test was 64%. There was a 9% increase in the post-test meaning that lesson four tutorial was effective in helping participants learning the accounting concepts.

In the tutorial evaluation questionnaire, there were only nine participants who gave feedback on the tutorial. There were two questions asked for additional comments.

What was most useful about the tutorials? Some participants found examples and the practice exercises to be very helpful along with the accounting vocabulary and the visual samples. One participant found the directions were clear and understandable. Another participant liked the pre-test because he/she was able to see where he/she was at before starting the lesson.

What suggestions do you have for improving the tutorials? Some suggestions for lessons were to make lessons less wordy, put definitions in another color with larger fonts, and make finding the tutorial lessons easier. Some suggestions for the activities were to
allow input into activities and provide a variety in the answers. One participant suggested using a different program for the surveys because they had a hard time getting back to the tutorial once they started the surveys.

Some additional comments were many participants have learned a lot from the tutorials. One participant stated that “I have learned a lot from the tutorial. I did not come in with a background in Accounting and now I feel more knowledgeable on the subject.” Another suggestion was to explain lesson four with more detail because it was a little confusing.

Conclusion

The results show that an online tutorial to help accounting students learn the accounting basic concepts was effective and resulted in positive comments. The results of the tests shows an improvement from the pre-test to the post-tests for each lesson. Along with test results, feedback from participants’ state that they learned a lot more about the concepts through reading the information and samples while doing the activities with answers for self-check. Overall, online tutorials appeared to assist students in learning basic accounting concepts. Therefore, professors should consider developing online tutorials to help their students be successful in learning the basic accounting concepts.

Professors who are considering developing online tutorials should seek out a team of people. In the team, there should be other professors in the same field who want to use the tutorial and technology development. There should be one or a group of instructional designers in the group. The instructional designers would create the tutorial by using their knowledge about all the different technology programs out there to help service the professors’ needs and with what they want to accomplish with the tutorials. There needs to be assessment on the target audience when creating the online tutorial. The team will have to test the tutorial on a small group to see evaluate how the tutorial works and what needs to be modified based on the outcome. The tutorials are never finalized because the changes student needs along with the technologies and curriculum that needs to be updated. Even after using it in the course, there needs to be evaluations on the tutorials where students are allow to give feedback on what worked, what needs improvement and suggestions to make the tutorial better. Many students are digital natives, meaning that they receive information comfortably through technology. Shouldn’t professors develop online tutorials using the technologies that many students are familiar with to learn?

References


Appendix
Figure 1. When it comes to using a computer, which statement describes you best?
**Figure 2.** When it comes to using online tutorials, which statement describes you best?
Figure 3. How many courses have you taken were 50% or more of the class was conducted online?
Figure 4. When it comes to taking classes, which statement describes you best?