

The Effectiveness of Podcasting on Achievement in Principles of Accounting

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Abstract

Podcasting is a relatively new and yet unproven technology, especially when pertaining to higher education. The goal of this research was to address the issue of the educational significance of podcasting review sessions in Principles of Accounting I, by systematically conducting quantitative research to build a case for its efficacy. The purpose of this study was to determine if podcasted review sessions aided students' examination achievement. Although the results were not statistically significant, data collected, in the form of student questionnaires, indicated greater student engagement in the experimental groups than in the control group. Another experimental result yielded that students in the experimental groups did achieve higher exam averages than those in the control group. Findings also indicated that students from the digital generation enjoyed the mobile nature of podcasts. These results should serve as a catalyst for those in education to adopt podcasting as a viable instructional medium.

Introduction

As the age of information infiltrates every aspect of our lives, teachers are seeking alternatives to connecting with their students in ways other than in the traditional classroom. One way to make this connection is to infuse educational technology into the curriculum. The use of educational technology in post-secondary education continues to grow (Bates & Poole, 2003). Not only do students want relevant information, they want it at their convenience. Teachers who use multiple media in their classrooms which incorporates sounds, words, and pictures can assist their students to expedite the learning process and better retain the material (Moreno & Mayer, 2002). Podcasting offers a way for teachers to connect with their students, even when they are not in the classroom.

Podcasting is a relatively new and yet unproven technology, especially when pertaining to education. A podcast is a way of distributing multimedia files, whether it is audio or audio/video over the internet using Really Simple Syndication (RSS), a standard web feed format, so that one can play it back on a computer or an MP3 player. The term podcast is derived from combining Apple's iPod (Pod) media device with the term broadcasting (cast) (Bennington, 2007). Students today are digital natives and often carry a multitude of communication devices (Haugen, 2007). They demand instant gratification and frequently are auditory learners (Haugen, 2007). Because of these phenomena, podcasting seems to be an appropriate way to better reach students.

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Since podcasting is a relatively new medium in the arena of education, much has been written on the creation and dissemination of information through the medium; however, there has been little quantitative research to attest to the educational relevance of podcasting. Teachers and students alike are looking for new ways in which technology can be integrated into their classrooms. Podcasting is one simple way to incorporate educational technology in a non-threatening way to both students and faculty.

Students who are currently entering the world of higher education have a different set of expectations than did students in the past (Baird & Fisher, 2006). They thrive on multitasking and expect that the technology devices that they use in their everyday lives be a part of their educational process (Baird & Fisher, 2006, Skiba, 2006). As a consequence of these expectations, French (2006) states that podcasts can assist in giving students wireless access to information where and when they desire to attain it.

Lum (2006) said that 80% of incoming freshmen in the 2005-2006 college year had at least one type of device that was able to receive podcasts. According to the Pew Internet and American Life Project (2007), 93% of teenagers use the internet. Additionally, 64% of those teenagers who are online have participated in at least one type of content-creating activity on the internet (Pew Internet and American Life Project, 2007). Students are not only retrieving information and entertainment from the web, they are now beginning to create it.

Podcasting has become so ingrained in popular culture that the New Oxford American Dictionary gave the entry the word of the year honor for 2005. The definition provided by this dictionary is “a digital recording of a radio broadcast or similar program, made available on the Internet for downloading to a personal audio player” (Oxford University Press Online, n.d., para. 1). This trend in popularity has only grown in recent years and has spread to include news organizations and education.

One of the main reasons for the popularity of podcasts is the ease of creating and disseminating information. One only needs to be able to speak into a microphone and have minimal computer skills to be able to create a podcast (Potter, 2006). A student, with minimal effort, has the ability to download this file onto their computer or portable MP3 device (Skiba, 2006). The student, in turn, has access to this information any time of day or night. Using this simple process, educators can add depth to their lectures, create an audio study guide, or provide feedback to their students. These examples are only a few ideas of how podcasting is used.

Problem Statement

The problem the researcher focused on was, “Will review session podcasts enable Principles of Accounting I students to perform better on examinations?” There are no studies that have yet quantitatively proven podcasting as being effective as an educational tool. There are many of those who have experimented with podcasting in one form or another, but none who have yet to prove its relevance to the educational arena. Anecdotal evidence abounds throughout the literature; however, a gap exists between those who have used podcasting in its various forms and have praised its merits and those that have actual proof of its effectiveness. By attempting to prove that podcasting has statistical educational merit, it is this author’s hope to present a call to arms to those in higher education to consider podcasting to enhance their students’ performance.

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Methodology

This study was a quantitative, quasi-experimental study which had the aim of identifying the effectiveness of podcasting review sessions on the examination scores of Principles of Accounting I students at Thiel College. The goal of this research was to address the issue of the usefulness of podcasting review sessions in education by systematically conducting quantitative research to build a case for its efficacy in higher education. In conducting this research, it was conceivable that the results would transfer to other levels of education, thus proving that podcasting has a viable future in the academic realm.

This study consisted of three experimental groups and one control group. A total of 112 students were involved in this study. The experimental groups consisted of 79 students who received podcast review sessions before each of their three chapter examinations and final examination. The results of an initial chapter examination served as a means of determining the equivalency of the groups. The podcasts were uploaded and made available for each student on the Blackboard Course Management System.

The control group consisted of 33 students. This group did not have any access to the podcasts. The control group had the same instruction as the experimental groups, so the study would not be compromised. This group was chosen at random, to ensure experimental control.

The use of Blackboard enabled the researcher to track the viewing and access of the students to the podcasts, adding relevance to the study. Student scores on examinations were collected and computed via SPSS to determine their statistical significance. In addition to the quantitative testing data, a brief survey was administered to the students in the experimental groups, in order to gauge their opinions as to the relevance and benefits of the podcast review sessions.

To determine if differences existed among the groups on examination scores, four one-way ANOVAs were conducted to determine statistical significance at $p < .05$. The independent variable was the podcast, while the examination scores served as the dependent variable. All students in the control and experimental groups took each test.

The Study

All students in this experiment have their own laptop computer, provided by Thiel College's laptop initiative, and were subscribed to and used Blackboard Academic Management Courseware. Many of the students also had their own personal MP3 players. The students in the experimental groups were prompted to log onto Blackboard, using their college supplied usernames and passwords, and either listen to or download the podcast to listen to at a later time. Each of the podcasts was available to the students five days prior to the exams, and the listening of the podcast was to take place prior to the exams.

There were three chapter exams which had podcasts available for students to listen to in preparation for each exam. Each of these chapter exams consisted of 50 multiple-choice questions worth two points each, thus the number of points awarded for each chapter exam was 100. The students were allowed one hour and 25 minutes to complete the chapter exams. The final exam was cumulative in nature and also consisted of 50 multiple-choice questions worth two points each. All students were allowed two hours to complete the final exam.

Podcasted Accounting Review Sessions

The podcast review sessions included audio reviews of each of the chapters that were included on each test. The first test podcast was 17 minutes and 29 seconds in length. The podcast for test two was nine minutes and 58 seconds in duration. The podcast review for test three ran 19 minutes and three seconds in length, and the podcast for the final examination ran much longer, since it was cumulative. The duration of the podcast for the final was 29 minutes and 37 seconds.

Research Questions and Results

RQ1: The first research question that this study focused on was, “Is there any educational and/or statistical merit to offering review podcasts to Principles of Accounting I students?” A one-way ANOVA was performed for each test with access to podcast serving as the independent variable. The results showed there were no statistical differences ($p > .05$) between those students receiving the review podcasts and those who did not receive the review podcasts.

RQ2: The second research question that was asked in this experiment was, “Will review podcasts improve test scores for students in Principles of Accounting I courses?” To measure this question, mean test scores were calculated from control (no podcast) and experimental groups (receiving the podcast) for each of the four tests. Based on the same four exams that were evaluated in RQ1, the results show that the experimental group outperformed the control group on each of the tests. Table 1 illustrates the mean scores for the control group and the overall means of the three experimental groups.

Table 1

Mean Test Scores of the 3 Experimental and Control Groups

	Exam 1	Exam 2	Exam 3	Final Exam
Podcast	80.85	72.26	66.08	78.08
No Podcast	77.23	70.65	65.74	76.06

RQ3: The final research question posed in this study was, “Do students feel the podcasted review sessions were beneficial as an aid to learning accounting?” Data was collected via survey to answer this research question. Each member of the experimental groups was given the survey. Out of 78 surveys distributed, 94% were usable. The survey consisted of seven questions. Five of the questions were set on a Likert scale ranging from one to five as follows: one, strongly disagree; two, disagree; three, neither agree or disagree; four, agree, and five, strongly agree. The last two questions were qualitative in nature and open ended. The data for each question is presented separately in order to address RQ3.

Questionnaire Results

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Table 2 outlines the questions, responses, and mean scores of the first five Likert scale questions from the questionnaire. Table 3 and Table 4 show the common themes that arose from questions six and seven.

Table 2

Results of Likert Questions of Student Survey

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Mean
	5	4	3	2	1	
I found the review podcasts helpful when studying.	24	36	12	1	0	4.14
The podcasts were easily accessible.	40	32	0	0	1	4.51
I think that more podcasts should be available.	31	32	9	1	0	4.27
I would rather take a class in which podcasts were offered than a class in which podcasts were not available.	25	32	16	0	0	4.12
The podcasts helped me to earn a better grade on the tests.	19	33	19	2	0	3.94

Table 3

Themes Derived From Question Six Responses

What suggestions do you have to make the podcasts more effective? Explain.

- The podcasts should go further in depth.
- The podcasts should include a visual aspect such as a PowerPoint presentation.
- The speaker should speak slower.

Table 4

Themes Derived From Question Seven Responses

Should the podcasts be continued in this course? Why or why not?

- The podcasts help in reviewing notes.
 - The podcasts were a great summary of material covered in class.
 - Students had the ability to review material that they missed in class.
 - The podcasts were helpful in studying the material.
 - The podcasts helped in narrowing what to study.
 - We had the ability to listen to the podcasts more than once.
 - The podcasts provided clarification of misunderstood topics.
 - The podcasts helped students who were auditory learners.
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Conclusions

The purpose of this quasi-experiment was to evaluate the effectiveness of podcasted review sessions on students' grades in Principles of Accounting I. The general reason for conducting this research was a simple, yet motivating one. The author has long been a proponent of using new types of pedagogy to reach his students. Educational technology is one way in which a teacher can add to his or her instructional repertoire. It was decided that podcasting is a medium that students are familiar with, have access to, and use on a regular basis. Lum (2008) wrote in 2005, 80% of freshmen had one or more devices that could download podcasts. That is rather impressive considering that podcasting had only been prevalent since 2004 (Searls, 2005). Many of those students Lum spoke of are now juniors in college and have become quite savvy in the use of podcasting technology and in social networking.

The explosion of social networking has turned the internet from a place where one could retrieve information to one of sharing information. Boulos and Wheeler (2007) named this phenomena Web 2.0. Students are now using the web as a form of networking and socialization. With sites like Facebook, Myspace, YouTube, and countless other networking sites, anyone can contribute information, videos, or ideas that countless others can retrieve. Creating podcasts, vodcasts, internet videos, and blogs is now a simple process that anyone can do. Dede (2004) asserted that due, in part, to these interactive networking sites, students want constant engagement and want to be active learners.

Teachers in higher education need to be aware of this shift from passive to active learners, but they are often stuck in traditional passive teaching pedagogies. Bryant and Hunton (2000) predicted that technological advances will drive a new instructional paradigm. Kelly et al. (2007) even goes so far as to say that traditional classroom lectures should be replaced with other types of pedagogy which is more student centered. When Adadait (2008) conducted a study as to what types of technology accounting educators use, the majority of the respondents replied that they use email, internet searches, and presentation software. Obviously, there is a disconnect between what our students are asking for and what educators are offering in the realm of technology. Even organizations such as AACSB, AICPA, AAA, and AECC are pleading with accounting educators to infuse more technology into their courses.

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As the technology becomes more accessible and the equipment easier to use, educators should take it upon themselves to try to include different types of pedagogy into their classrooms. Peluchette and Rust (2005) surveyed teachers in higher education as to why they did not use technology in their classrooms. Some of the reasons reported to them were no institutional incentives to including technology, no available equipment, no policies in place, and no time to learn and incorporate the technology. Spodark (2003) offered that institutions and tenure committees put too much weight on researching and publishing and that developing innovative ways to teach does not influence these committees in the granting of tenure and promotions. Although there is a lack of extrinsic motivation of teachers to incorporate technology, podcasting offers a quick and easy way to ignite a spark in and out of the classroom.

Podcasting is an educational tool that has great potential in the world of teaching and learning. There are a myriad of ways in which one can use podcasts to enhance the educational process. Although the differences between the experimental and control groups were not significant, there was a small difference. In addition, the results of the survey show that the students found the podcasts to be helpful in achieving their course goals. Also, there was an increase in engagement and participation due to the podcasts. Students started to request them.

As an educator, it is easy to get excited about the potential impact that podcasting is having in postsecondary education. The educational needs and wants of students continue to change, and it is the responsibility of academicians to meet the desires and expectations of students. Podcasting provides an easy, effective, and economical way to reach students beyond the classroom walls. This study determined that podcasting is a relevant medium for delivering instruction, based on the positive feedback given by the students for whom the podcasts were developed. The essence of education is engaging students and making connections. One way that educators can accomplish this is by effectively integrating podcasts into the instructional process.

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