

Running head: Podcasting and Vodcasting as Instructional Tools

Student and Faculty Attitude and Perception towards the Implementation of Podcasting,
Screencasting and Vodcasting as Instructional Tools: An Exploratory Study

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Abstract

Although the use of Podcasting and Vodcasting as instructional technology is in its infancy as a research area, it has, to date, generated a lot of interest and discussion among researchers in the field of educational technology. Indeed, the pedagogy and andragogy that guide their successful implementation in the classroom and the learner perception of the technology is still not well documented. This research intends to contribute in this area and to lay the ground work for future research collaborations in this growing research field.

The purpose of this exploratory study is to develop and pilot-test two qualitative research instruments to measure student and faculty attitudes towards the integration of podcasting and vodcasting technology to support teaching and learning in the classroom. The research will also seek to document faculty perception of the utility of the technology for classroom instruction and the emerging best practices that guide pedagogical implementation.

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CHAPTER I
INTRODUCTION

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Research Questions:

The purpose of this exploratory research study is to (a) investigate students' and faculty attitude toward the implementation of podcasting, screencasting and vodcasting as instructional design and delivery tools and (b) document current best practices in implementing the technology to support teaching and learning. The study is designed to address the following research sub-questions

1. What are the emerging best practices for integrating vodcasting and podcasting technology in the classroom?

2. What are the student attitudes toward the effectiveness of vodcasting and podcasting to support their learning?
3. What are the student attitudes toward the convenience afforded by podcasting and vodcasting in support of their learning experiences?
4. What are the student preferred modalities for instructional delivery (i.e. , through mobile devices such as iPod or desktop podcasting software such as iTunes or iBlogger)?

Definition of Terms:

Podcasting is the distribution of audio or video files, such as radio programs or music videos, over the Internet using either RSS or Atom syndication for listening on mobile devices and personal computers.

Vodcasting is an emerging term used for the online delivery of video on demand content via Atom or RSS enclosures. The term is an evolution specialized for video, coming from the generally audio-based podcast and referring to Video On Demand (VOD)

screencasting is a digital recording of computer screen output, often containing audio narration

iPod is a brand of portable digital media player designed and marketed by Apple Computer.

iTunes is a proprietary digital media player application, developed by Apple Computer, for playing and organizing digital music and video files.

iBlogger is a desktop podcasting software

RSS (abbreviation for *Rich Site Summary* or *Real-time Simple Syndication*) is a family of web feed formats, specified in XML and used for Web syndication to podcast, screencast and vodcast available via the World Wide Web.

Mobile Learning or M-learning is a generic term given to the delivery of training by means of mobile devices such as iPod, PDAs, cellular phone, digital audio players and related technologies.

CHAPTER II

LITERATURE REVIEW

The first part of this review will examine current developments relative to podcasting, screencasting and vodcasting as emerging technology to support education and instructional delivery. The second part of the review will discuss current trends in mobile learning with primary emphasis on research and emerging pedagogies and best practices for implementing Mobile Learning.

What is podcasting/vodcasting?

The term *podcasting*, first appeared in 2004 (Wikipedia.org) and is a portmanteau, combining terms iPod (<http://www.apple.com/iPod>) and broadcasting. According to Wikipedia, “podcasting's essence is about creating content for an audience that wants to listen when they want, where they want, and how they want.” Podcasting normally refers to an audio file and *vodcasting* to a video file; although the term video-podcasting is not uncommon. An important distinguishing feature of podcasting is that the content is meant to be played on a mobile device of some sort.

What differentiates podcasting from other forms of multimedia delivery is the use of RSS feeds. RSS stands for Really Simple Syndication and is a method by which end users can subscribe to a content producer much in the way one would subscribe to a magazine. The main ingredient of a feed consists of an XML file which contains metadata about the media file that is being broadcasted. A link to the URL of the media is also provided. A user subscribes to the content provider through an aggregation service which pulls the new content from the producer. The fundamental concept for RSS dates back to a draft by Louis in 2000. However, popular usage of the technology did not take hold until 2003.

Through the use of a program like iTunes or iPodder, Firefox and other aggregators, an individual can subscribe to content and have that content automatically downloaded from the internet. The iTunes program has the added benefit of also being able to transfer the content to an iPod automatically. This enables the user to listen to, or watch, the content at their discretion, anywhere and anytime.

Why is RSS becoming popular now?

The appearance of a technology is often dependent upon a variety of forces that come together at a particular point in time. Many factors contributed to the development of podcasting. A few of those factors are listed below:

- Wide availability of affordable desktop authoring programs for audio and video creation
- Increased availability of affordable high speed broadband internet connection to the general citizenship; i.e. outside the academic and government environments
- Increased citizenship which is computer and internet literate
- Lower price-point on computer hardware and supporting peripheral devices
- The introduction of the iPod and other portable media players
- The creation of the RSS specification

The Mobile Learning Trend

Anywhere/ anytime learning is the essence of what is called *Mobile Learning*. Mobile Learning resides under the general heading of Electronic Learning or E-Learning. While usage numbers for Mobile Learning are hard to track because of the technology's infancy, statistics on e-learning are readily available. According to a report sponsored by the Alfred P. Sloan

Foundation (Ruth, 2006), e-learning is increasing at a rate of 25% per year with enrollment at 2 million students in the United States in 2004.

The report revealed that “three-fourths of academic leaders at public colleges and universities believe that online learning quality equals or surpasses face-to-face instruction. In addition, it was found that the larger the school, the more positive the belief in the quality of online learning compared to face-to-face instruction.”

The demand for podcasting content is growing in step with the growing demand for other mobile content. Doc Searls, a renowned technology columnist, reported on his blog in September of 2004 that only 24 hits resulted when conducting a Google search using the word “podcasting” (Searls, 2004). On March 17, 2006, this author found that the same word produced 300,000,000 results using the Google search engine.

Apple Computer, the manufacturer of the iPod device, continues to expand the content available for the iPod, thereby securing its place as an entertainment delivery system. In addition to playing music, the iPod, and similar devices, now have access to music videos, television shows, vintage TV shows, full-length movies, and of course, podcasts and vodcasts. PodNova, a free podcast search engine and end-user client, tracked 35,000 podcasts as of 3/23/2006. That number is up from 4,008 on June 8, 2005 according to godcast (2005).

The Wireless Mobile Landscape

According to Wagner (2005), the U.S. is behind the curve in its adoption of the use of Wireless telephony for education. Technologies such as mobile networks, instant messaging, and cell phones are increasingly being used for message and media distribution in other countries due to the low cost of cell phones and the availability of affordable data transfer services. Wagner

believes that it is just a matter of time before the technology becomes common place in the U.S.(pg 44).

A possible indicator of the future for mobile learning content is the number of games downloaded to mobile phones. According to Robert Tercek, co-chairman of GDS Mobine, during a March 8, 2005 talk given at the Game Developers Conference held in San Francisco, 6 million people download games to their phones each month and 18 million American play wireless games (pg.52).

While the U.S. is behind other countries in our access to wireless mobile content, the demand is there and will only increase as the networks are become more available and affordable. As Wagner points out, “successful mobile learning programs will require new digital communication skills, new pedagogies, and new practices. Luckily, as we anticipate the arrival of 3G and 4G technologies, we have time to prepare for the oncoming wave of learning innovation.”

Current Research in Mobile Technology and Learning

Mobile Learning research and practice in the U.S. is still in its infancy and the major players in this research area are few but growing. Available studies have focused primarily on the use of Personal Digital Assistants (PDAs) in the Information Technology (IT) and medical environments. Research by Galt (2005) observed the acceptance and usage of PDAs by physicians in the field. Bertling (2003) investigated student attitudes toward PDA use in the medical curriculum. Another study investigated the implementation of PDAs in the IT Curriculum (Rawlinson, 2006).

A search on Google News on 3/24/2006 using the criterion “educational podcasts” resulted in 265 news articles relating to podcasting being used in education. Podcasts are being created to teach everything from foreign languages to computer skills and children’s programming. Institutions like Georgia State College and University (Bluestein, 2006), Duke University (Belanger, 2005), Sanford University, and the Tennessee Regents Online Program are conducting active research involving podcasting in the classroom.

The Pedagogy of Mobile Learning

As Nichols stated in his Theory for E-Learning (2003), “only pedagogical advantages will provide a lasting rationale for implementing e-learning approaches.” If there is no educational benefit, a delivery system, medium, or the latest technological gismo will fade into history. If, however, a method is found to add benefit, it will continue to thrive. Strides are continuing to be made to determine how to best use e-learning – scaffolding its weaknesses and building upon its strengths. Therefore, the question begs to be asked, does podcasting contain a pedagogical benefit?

According to Gardner Campbell it does. Gardner (2005) believes “there is considerable value in ‘the explaining voice’, the voice that performs understanding.” Campbell argues that, done right, a podcast or vodcast can reveal the underlying heart of higher education. Frank Burgos, the editorial page editor of the Philadelphia Daily News, supports that notion. Burgos (pg.42) says that some newspapers are producing their own podcasts because, if done the right way, they can add a human element to the newspaper.

It could be argued that ease of publication and distribution is a pedagogical benefit. The RSS function is where the power of podcasting lies (pg. 38). Campbell writes, “the listener can subscribe to his or her favorite podcasts, which will then be downloaded automatically to the

computer at a time of the listener's choosing, usually overnight as the listener is sleeping." It can then be played, at a convenient time, the following day.

The Galt study and this study have something in common, both seek to unveil attitudes toward their selected delivery mechanism. In the Galt study, physician attitudes to the PDA were investigated. In this study, the investigation centers around student attitudes to podcasting.

Galt's research was based on an adaptation of the Theory of Reasoned Action (TRA) which "postulates that actual performance of a task or function (behavior) is based on an individual's behavioral intention; which in turn is determined by attitude (Galt, pg.94). The Technology Acceptance Model, the adapted model, was developed to specifically explain computer usage. It is this attitude, both on the part of student and faculty acceptance, which this study hopes to explore.

CHAPTER III

METHODOLOGY

III. Methodology

This study will use a mixed-methodology design including qualitative, dominant methodology, and quantitative, less dominant methodology, approaches to address the research questions. This section will discuss the study target population and sample, the materials used to collect the data and the research procedures.

Target Population and Sample

The study population involves undergraduate students and faculty from two-year and three-year institutions in the United States that are currently using podcasting , screencasting and/or vodcasting in their curriculum. This is an exploratory study that is predominantly qualitative in nature. Therefore, a non-probability sampling using purposive sampling design will be used.. Since the study is investigating student and faculty attitudes and documenting faculty best practices, the sample is restricted to those that are currently using the technology. The study plans to selectively identify 100 student volunteers to complete the student survey (appendix A) and ten faculty members to complete the structural interview (appendix B)

Materials

The study will utilize two instruments designed by the researchers to collect data. This includes (1) a student survey questionnaire that elicits qualitative as well as quantitative information and (2) a structures interview.

The student survey consists of a 15-question questionnaire including checklist, rating scale and open-ended/discussion items. The survey questions were piloted for question clarity and readability with colleagues with 10 classmates enrolled in the Jones International University (JIU) Online program and taking EDU 522 Research and the Learning Organization, during the February 2006 Academic calendar. The Instrument (appendix A) was corrected after the Pilot and will be further validated by 3 educational researchers knowledgeable in this field prior to collecting data. The faculty structural interview (appendix B) consists of 5 open-ended questions. The instrument will be validated by 3 educational researchers knowledgeable in this field of instructional technology prior to collecting data.

Procedure

As indicated, the study will utilize two web-enabled instruments to collect data. Prospective participants will be provided with a web address to access, complete and submit the student questionnaire and faculty structured interview. Research participants will be assured that their identity and confidentiality will be protected.

Questionnaire raw data will be downloaded from the web and transferred into the Statistical Package for the Social Studies (SPSS) software. Data analysis will utilize descriptive statistics.

Faculty interview data will be downloaded from the web, transcribed and analyzed using the latent content analysis process (Tashakkori & Teddlie, 1998).

Limitations

Since this study is purely exploratory and targets only faculty who are qualified as first adopters of podcasting, screencasting and vodcasting technology, one may not be able to generalize the findings. Because of the purposive sampling of students taking courses in which podcasting, screencasting and vodcasting technology is used, one may not be able to generalize the findings to the population of students attending two-year and three-year institutions.

Delimitations

The study will be confined to limited sample of undergraduate students and faculty from two-year and three-year colleges. The study will be exclusively confined to students taking courses in which podcasting and/or screencasting and/or vodcasting are used methods of instructional delivery. The study will be exclusively confined to instructors currently delivering instruction using podcasting and/or screencasting and/or vodcasting as methods of instructional delivery.

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APPENDIX A

STUDENT SURVEY QUESTIONNAIRE

This survey is being administered as part of a research study investigating student and instructor attitude towards the implementation of Podcasting, Vodcasting and Screencasting as instructional tools. Please take a **few minutes to fill out this 15-items questionnaire** to share your attitudes towards the technology and your learning experiences using Podcasting and Vodcasting.

Question 1

Do you have access to an iPod or other MP3 player for your courses that use Podcasting, Vodcasting or Screencasting technology as instructional delivery mode?

Yes

No

If your answer is no, please go to **Question 5**

Question 2

Do you use your iPod or other MP3 player to access course Podcast , Vodcast or Screencast

Yes

No

Question 3

Do you use your computer in conjunction with Podcasting software such as iTunes, iPoder or iBlogger to access course Podcast, Vodcast or Screencast?

Yes

No

If Yes which technology

Question 4

If you answer Yes to Q2 and Q3, Which is your preferred modality for accessing course Podcast, Vodcast or Screencast?

- a. prefer using my iPod to access Podcast
- b. prefer using my computer in conjunction with Podcasting software
- c. I do not have any preference

Please explain your preference?

Question 5

What medium do you use to access course Podcast, Vodcast or Screencast (for instance iTunes, etc.)

Question 6

Would you suggest courses that use Podcasting and/or Vodcasting to other students

Yes

No

Question 7

Do you prefer courses using Podcasting and/or Vodcasting as compared to courses that do not use the technology?

Yes, (Please explain why?)

No, (Please explain why)

Question 8

Do you feel it necessary to attend face-to-face lectures for course that USE Podcasting and/or Vodcasting technology?

Yes

No

Question 9

Do you feel it necessary to attend face-to-face lectures for course that DO NOT USE Podcasting and/or Vodcasting technology?

Yes

No

Question 10

For each of the features listed below, please indicate whether you have used your iPod or other MP3 player for an academic purpose, for personal use only, for both academic and personal uses, or not at all.

	Academic Only	Personal Use only	Both	Do not Use
Music				
Audiobooks				
Calendar				
Contact (Address Book)				
Notes				
Games				
Hard Drive (for non-music files)				
Your own recording				

Question 11

In what situations have you found the iPod most useful

	Not Useful	Somewhat Useful	Very Useful
On the bus			
Working out			
In my residence			
While walking around campus			
In class			
In dining areas			
Other Explain:			

Question 12

How in your opinion, should your instructor use Podcasting and/or Vodcasting technology to beneficially support your classroom instruction?

Please explain:

Question 13

What would be your best advises to other students for effectively using Podcasting and/or Vodcasting technology to support instruction?

Please explain:

Question 14

Have you taken classes where you thought ipods could or should have been used? Please explain.

Please explain:

Question 15

Any other information you would like to share about Podcasting, Vodcasting or Screencasting?

We thank you for the courtesy of your assistance and your meaningful contribution to this research study. Please indicate, by marking the check box below, if you wish to receive a summary of the research findings.

No, I do not wish to receive a summary.

Yes, Please send me a summary via e-mail (-----).