Values vs. Costs: Predicting Podcast Adoption among Non-adopters

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Abstract
An increasing array of podcasting content is being produced, ranging from news and entertainment to education and hobby. Some college students are joining early podcast adopters as their professors employ podcasting in the educational experience, particularly in online courses. Although podcasting might be an effective and low-cost means of address individual learning styles and enhance academic performance, it is not widely adopted and well supported in most educational institutions. This study explores the adoption of podcasting technology from the perspective of US college students. Based on the theoretical framework of Uses and Gratifications and the Technology Acceptance Model, it examines the perceived values and costs of using podcasting and found that perceived usefulness and quality of podcast content together significantly predict podcast adoption among young college students.
Values vs. Costs: Predicting Podcast Adoption among Non-adopters

Podcasting is an automated technology that allows individuals to subscribe and listen to audio feeds. Although an MP3 player is not necessary to listen to podcast, a large part of the earliest podcast adopters were those who already owned MP3 players, thus creating an extended use of the portal audio device. Within a few months after the emergence of the technology in late 2004, at least 6 million American adults, or 29 percent of those who owned MP3 players, had tried podcast (Pew Internet, 2005). Apple’s introduction of video podcast content enhanced podcasting and rendered it into a multimedia delivery technology (Flanagan & Calandra, 2005), which successfully accommodated audience expectation for visual perception. It took very little time for podcasters of diverse background to jump on the technology bandwagon: news organizations offer news podcast feeds frequently, major networks provide podcast of high-in-demand shows, college professors record lectures and discussion and disseminate the files through podcasting, amateurs produce shows in their garage, sometimes for the sole purpose of getting their own voice heard. The wide range of podcast content available attracts both mainstream and niche audiences. By late 2006, approximately 12% of adult Internet users had downloaded something using podcasting (Pew Internet, 2006).

While the audience is still early adopters (Pew Internet, 2006), young college students, who are digital natives, account for an important segment of the early adopter population. More college students are joining the podcasting audience as their professors employ podcasting in the educational experience, particularly in online courses. Experimental research has found that podcast of class lectures and supplementary materials
significantly enhance student performance (Pitts, 2007). Because such podcast content is usually provided free of charge, and downloading only involves a computer with Internet access, podcasting may be a cost-effective way to deliver instruction to augment current class instruction and accommodate individual learning styles. For students with MP3 players, podcasting provides an additional value of time-shifting learning, which works even more effectively with commuter students. The purpose of this study is to investigate the factors that predict podcast adoption in an educational environment. The data were collected at a US university with a larger commuter student population. The findings will have implications for educators and institutions interested in employing podcasting to enhance educational experience.

Literature Review

Motives for Technology Use

The Uses and Gratifications perspective has been fruitful for gaining insight into the use of new media technologies (Palmgreen, 1984; Rafaeli, 1986), especially media formats that enable various degrees of user control, from video recorders to commercial Web sites. Originally intended to explain people’s use of traditional media, the underlying belief of the approach is an audience that is aware of their personal needs and actively employ communication channels to fulfill those needs (Katz, Blumler, & Gurevitch, 1974). Prior research has revealed that people use the media or technology for a wide variety of gratifications. For example, people use home video recorders for choice, time, and mobility (Levy & Fink, 1984), use electronic bulletin boards for recreation, diversion, entertainment, communications, and learning what others think (Rafaeli, 1986), use the
World Wide Web for social escapism, security and privacy concern, information, interactive control, socialization, and economic motives (Korgaonkar & Wolin, 1999), use commercial Web sites for search, cognitive, new and unique, social, and entertainment purposes (Stafford & Stafford, 2001), use the Internet for virtual community, information seeking, aesthetic experience, monetary compensation, diversion, personal status, and relationship maintenance (Song, Larose, Eastin, & Lin, 2004), and use MP3 players for control, companionship, entertainment, status, and concentration (Zeng & Yang, 2007).

Research on Uses and Gratifications suggest that people use a medium or technology because they believe such use can bring them certain values. However, sometimes such expected values may be outweighed by inherent costs of using the technology. The costs of use comprise both a monetary aspect and a technological aspect. Monetary cost refers to the price involved in using the technology, such as the price for purchasing a necessary device and/or content. Technological cost refers to the complexity of or effort involved in learning and using a technology. Therefore, uses and gratifications perspective is helpful but insufficient in explaining the adoption of information technology, particularly when it involves an IT application that is complicated or/and costly.

Usefulness and Ease of Use

The Technology Acceptance Model (TAM) addresses the balance of values and costs (mostly technological cost) of using a technology by proposing that people form a positive attitude towards the technology when they perceive it to be useful and easy to use. The positive attitude will in turn impact their adoption and use of the technology (Davis, 1989). Designed to explain individuals’ acceptance decisions on a large variety of technologies in
diverse context (Hu, Clark, & Ma, 2003), the model has been tested and expanded in studies of adoption and usage of technology applications (e.g., Hong, Thong, Wong, & Tam, 2002; Lederer, Maupin, Sena, & Zhuang, 2000; Plouffe, Hulland, & Vandenbosch, 2001; Venkatesh, Morris, Davis, & Davis, 2003). It has been proven successful in explaining system use (Legris, Ingham, & Collerette, 2003), with technology attributes being important predictors of technology acceptance decisions (Chang & Cheug, 2001).

A frequent criticism against the original TAM, however, is that it focuses exclusively on characteristics of the technology itself without taking into account of external variables. For example, perceived ease of use might be overly emphasized when an individual has limited knowledge about or experience with the technology (Hu, Chau, & Sheng, 2002). Other external variables that may contribute to the explanation of technology acceptance include users’ intrinsic motives (Moon & Kim, 2001), outcome expectations (Compeau, Higgins, & Huff, 1999), and societal pressure and facility support from others (Teo, Lee, & Chai, 2008).

Values and Costs of Podcasting

Gratifications and perceived usefulness are forms of values one believes that she will obtain through using a technology. An exploratory study on podcasting among early adopters mostly in higher education suggests that gratifications of using podcasting include education, control, status, entertainment, and time-shifting (Zeng, 2007). These gratifications reflect users’ perceived values of podcasting in terms of perceived usefulness of the content (education or entertainment), user control, social recognition as an early adopter, and flexibility to access the content. Because podcasting allows delivery of
content produced by amateurs as well as professionals, a question arises about the
information quality in terms of credibility, diversity, depth, professional production, etc.
Information quality, which has been found positively related to perceived usefulness of
revisited Web sites (Lederer, et al, 2000), may be another important variable in predicting
adoption of podcasting.

Costs of podcasting refer to the monetary cost as well as technological cost. Because
the only device that is required to access podcast is a computer with Internet access, and
most podcast content is available for free, monetary cost should not play a negative role for
prospective adopters with Internet access, unless they want to take advantage of the time-
shifting and place-shifting potential of podcast by using a portal audio device. However,
for a university with a large commuter population, Internet access is not always a given.
Moreover, there is a widespread misconception about podcasting that “you need an iPod to
access podcast.” Because Apple iPod products still remain relatively expensive,
individuals with this misconception may see monetary cost as a threat to their adoption of
podcasting. The technological cost is the complexity of the technology, or perceived ease
of use under the TAM, as well as the depreciation of the technology, or the likelihood of
the technology to become obsolete. Complexity of podcasting may be perceived differently
among individuals with varying levels of technological competency. While many college
students find it very intuitive and user-friendly to subscribe to podcast, some may see it as
a daunting task.

Research Questions and Hypotheses
This study intends to investigate the factors behind the decision of adopting the podcasting technology among college students who are non-adopters. Podcasting is rapidly gaining popularity among users with fast Internet access as more US residents access the Internet through broadband. Based on the framework of Uses and Gratifications and Technology Acceptance Model, individuals expect to obtain certain values out of their potential use of a technology. On the other hand, the complexity of the technology and monetary cost may create negative impact on their adoption decisions. Moreover, nowadays technology advances at a rapid speed, which creates considerable depreciation within a short period of time. Therefore, this study first asks:

RQ1: What do non-adopters perceive as values of using podcasting?

RQ2: For non-adopters, what are the costs of using podcasting?

Perceived values are what an individual expects to benefit from using podcasting, which will create gratifications. What an individual “gets” will serve as incentives to her adoption of podcasting. On the other hand, costs are what one “gives” and are obstacles in the decision-making process. It is of human nature that cost will negatively relates to acceptance. Therefore the following two hypotheses are proposed:

H1: The perceived values of podcasting will positively relate to its adoption likelihood;

H2: The perceived costs of podcasting will negatively relate to its adoption likelihood;

In order to provide an overall view of the role of values and costs in an individual’s decision about whether or not to adopt podcasting, the third research question asks:

RQ3: Which perceived values and costs of podcasting will best predict its adoption?
Finally, individuals who are more likely to adopt podcasting are the ones who believe that values outweigh costs in using podcasting. Therefore, they will also be the ones who want to see a wider adoption of podcasting in their educational experience. Hence the third research questions:

H3: Those who are more likely to adopt podcasting themselves tend to expect podcasting to be used in their college education.

Methods

*Participants and Procedure*

Participants in this study are students enrolled at a southern US university with a student population of approximately 10,000. An online survey was hosted on Survey Monkey, a commercial survey hosting company. E-mail invitations containing the survey link were first sent out to all students enrolled during Fall 2007 using a roster provided by the registrar’s office. Two reminder e-mail messages were sent during the following two weeks after the initial invitation to those who had not completed. The survey was available for four weeks. As an incentive, respondents could choose to enter a drawing to win one of six cash prizes.

*Instrument*

*Perceived values.* U&G and TAM studies suggested a wide range of factors that may be considered values of using technology, including perceived usefulness, user control, and information quality.

Perceived usefulness (PU) is the degree to which an individual believes that using podcasting will be beneficial to her personal well-being (Phillips, Calantone, & Lee, 1994). This includes perceived usefulness for informational and entertainment purposes. For
example, podcasting may have a variety of information available on different topics, offer relevant information one needs, expand one’s knowledge, and providing entertainment.

User control refers to the amount of control one perceives that she has over what to get, when, where, and how to get and listen to the content. It also refers to the automatic downloading feature of obtaining the content and storage of the content. All these provide a great extent of flexibility for podcast users.

Information quality refers to whether an individual believes that podcast content is credible, up-to-date, in-depth, broad in topics, professionally produced, provides various perspectives.

*Perceived cost.* Perceived ease of use refers to the degree to which an individual believes that using podcasting will be effortless (Davis, Bagozzi, Warshaw, 1989). Although many IT applications may be perceived as useful, some are too complicated to use while others may feature a flat learning curve. Other things being equal, applications that are less complicated and therefore require less effort to use are more likely to be adopted by a larger number of people. Ease of using podcasting includes ease of accessing, storing, and sharing content that an individual wants. Depreciation of technological value is measured as the likelihood that podcasting will be obsolete, and depreciation of monetary value is measured as the possibility that podcast content will be cheaper in the future.

All items on perceived values and costs are stated using a 5-point Likert scale, where 1 is strongly disagree and 5 strongly agree.

*Dependent variable.* Participants were asked how likely they were going to adopt podcasting using a 5-point scale, where 1 is very unlikely and 5 very likely. They also reported to which degree they wanted to see podcasting more widely used for teaching at their university.
Data analysis

The items on values and costs were analyzed using factor analysis with varimax rotation in SPSS 14.0. An eigen-value of 1.0 was used to retrieve the factors. Items with a primary loading of .60 and above but a secondary loading of no more than .40 were retained in the primarily loaded factor. The mean of the values for the items retained in each factor was calculated. The means were then analyzed using bivariate correlation and multiple regression with stepwise entering.

Findings

The original e-mail list contained 10,898 names. After excluding the 537 messages that were not deliverable for various reasons, and another 42 names that opted out of the Survey Monkey survey system, 10,319 names were included in the final e-mail sample. Upon three e-mail solicitations, 1,378 students completed the survey within a four-week time window, yielding a response rate of 13 percent. This study focuses on the 614 respondents who had not tried podcasting by the time of the survey, representing 44.6 percent of all the respondents in the survey.

As displayed in Table 1, fewer than half of the non-adopters said that they owned an MP3 player. The average respondent used an MP3 player for 18 minutes and was a heavy Internet user who spent more than two hours on the Internet on a daily basis. Although the respondents had never used podcasting prior to participating in this survey, they reported that they had heard about podcasting from the Internet (28.3%), traditional media (16.4%), school (21.7%), work (2.3%) and friends (14.2%).

Table 1: Adoption and usage of technology
To answer research questions 1 and 2, statements about perceived values and costs of using podcasting were factor analyzed using varimax rotation. The eigenvalue of 1.0 was used as the threshold of retrieving factors. Seven factors were retrieved, explaining 69.44 percent of the total variance.

The first factor is a value factor and is characterized as “flexibility.” It reflects the control variable from the literature but focuses mostly on different aspects of how podcasting allows personal flexibility: “podcasting allows flexible access through an MP3 player or a computer,” “allows program access at any time,” “allows using an MP3 player to its fuller extent,” “allows program storage,” “allows program access anywhere,” and “allows automatic download of content one wants.” The eigenvalue of this factor is 12.353 and it explained 15.7 percent of the total variance. All six items are highly reliable with an alpha level of .92 (Table 2).

The second factor is a cost factor, which reflects “ease of access” to podcast content. Six statements have a high primary loading on this factor, including “access to radio/TV programs,” “access to programs one can’t access otherwise,” “access to content not available from other media,” “keeping up with one’s favorite programs,” and “personalizing information.” The eigenvalue of this factor is 2.919 and it accounts for 15.18 percent of the total variance. These six items are highly reliable with an alpha level of .90.
The third factor is a value factor, which reflects “quality of podcast content.” Five items loaded on factor, which state that podcast information is “more up-to-date than what I get from other media,” “credible,” “professionally produced,” “broad in topics,” and “provides a lot of perspectives.” The engenvalue of this factor is 2.123 and it accounts for 11.94 percent of the total variance. The reliability of all five items is .85.

The fourth factor is also a value factor, representing “perceived usefulness” of podcasting.” The perceived usefulness includes that podcasting “has a variety of information available,” “expands my knowledge,” “provides entertainment,” and “offers relevant information I need.” The engenvalue of this factor is 1.646 and it accounts for 8.42 percent of the total variance. The reliability of all six items is .86.

The fifth factor is a cost factor that addresses the “ease of use” of podcasting. Three aspects are reflected in this factor, including ease of “storing,” “sharing,” an “accessing.” The engenvalue of this factor is 1.450 and it accounts for 7.04 percent of the total variance. The reliability of all six items is .82.

The sixth factor is a value factor, which reflects “personal relevance” of podcast content. The two items loaded on this factor are podcast offers “useful information for my daily life” and “helpful information for my study.” The engenvalue of this factor is 1.301 and it accounts for 6.13 percent of the total variance. The reliability between the two items is .82.

The last factor is a cost factor reflecting the “depreciation” of monetary cost and technology. One item states that “podcast content will be cheaper” and the other “podcasting technology will not be obsolete” in the future. The eigenvalue is 1.123 and the
factor accounts for 5.03 percent of the total. However, those two items has an
unsatisfactory alpha level of .53.

Table 2: Value and Cost factors Podcasting Use (N = 614)

<table>
<thead>
<tr>
<th></th>
<th>mean</th>
<th>SD</th>
<th>loading</th>
<th>eigenvalue</th>
<th>variance</th>
<th>alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Value 1: Flexibility</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>podcasting allows flexible access through an MP3 player or a computer</td>
<td>3.41</td>
<td>.63</td>
<td>.774</td>
<td>12.352</td>
<td>15.70</td>
<td>.92</td>
</tr>
<tr>
<td>podcasting allows program access at any time</td>
<td>3.31</td>
<td>.61</td>
<td>.760</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>podcasting allows using an MP3 player to its fuller extent</td>
<td>3.31</td>
<td>.64</td>
<td>.740</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>podcasting allows program storage</td>
<td>3.31</td>
<td>.62</td>
<td>.737</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>podcasting allows program access anywhere</td>
<td>3.26</td>
<td>.64</td>
<td>.729</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>podcasting allows automatic download of content one wants</td>
<td>3.27</td>
<td>.62</td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cost 1: Ease of Access</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>access to radio programs</td>
<td>3.33</td>
<td>.63</td>
<td>.766</td>
<td>2.919</td>
<td>15.18</td>
<td>.90</td>
</tr>
<tr>
<td>access to TV programs</td>
<td>3.32</td>
<td>.64</td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>access to the programs one can’t access otherwise</td>
<td>3.23</td>
<td>.67</td>
<td>.715</td>
<td></td>
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</tr>
<tr>
<td>access to content not available from other media</td>
<td>3.27</td>
<td>.65</td>
<td>.710</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>podcast allows keeping up with one’s favorite programs</td>
<td>3.37</td>
<td>.64</td>
<td>.709</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>one to personalize the information one gets</td>
<td>3.38</td>
<td>.65</td>
<td>.658</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Value 2: Quality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>podcast info is more up-to-date than what I get from other media</td>
<td>3.09</td>
<td>.72</td>
<td>.815</td>
<td>2.123</td>
<td>11.94</td>
<td>.85</td>
</tr>
<tr>
<td>podcast info is credible</td>
<td>3.14</td>
<td>.68</td>
<td>.809</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>podcast info is professionally produced</td>
<td>3.11</td>
<td>.64</td>
<td>.799</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>podcast info provides a lot of perspectives</td>
<td>3.18</td>
<td>.71</td>
<td>.780</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>podcast info is broad in topics</td>
<td>3.27</td>
<td>.71</td>
<td>.700</td>
<td></td>
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<tr>
<td><strong>Value 3: Usefulness</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>podcast has a variety of information available</td>
<td>3.37</td>
<td>.65</td>
<td>.817</td>
<td>1.646</td>
<td>8.42</td>
<td>.86</td>
</tr>
</tbody>
</table>
podcast expands my knowledge  3.26  .65  .775
podcast provides entertainment.  3.51  .69  .746
podcast offers relevant information I need  3.14  .62  .677

Cost 2: Ease of Use  

easy to store podcast content  3.20  .59  .793
easy to share podcast content with others  3.17  .57  .783
easy to access podcast content  3.07  .62  .735

Value 4: Personal Relevance  

podcast seldom offers useful information for my daily life.  2.91  .63  .882
podcast seldom offers helpful information for my study.  2.96  .61  .862

Cost 3: Depreciation  

podcast content will be cheaper in the future  3.34  .69  .739
podcasting technology will not be obsolete in the near future  3.24  .67  .642

Total variance explained: 69.44%

The mean values for the factors with reliability higher than .80 were calculated by averaging the item values in each factor, creating four value variables (flexibility, information quality, perceived usefulness, and personal relevance) and two cost variables (ease of access and ease of use). These predictor variables were used to test the first two hypotheses and answer research question 3.

To test the Hypotheses 1 and 2, all six predictor variables were first subject to a correlation test using Pearson Product Moment correlation coefficients. All of the predictor variables of value and cost are significantly correlated with the dependent variable, likelihood of podcast adoption (Table 3).

Table 3: Pearson Product Moment Correlation Coefficients

<table>
<thead>
<tr>
<th>IVs and DV</th>
<th>Value1</th>
<th>Value2</th>
<th>Value3</th>
<th>Value4</th>
<th>Cost1</th>
<th>Cost2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
Hypothesis 1 proposes that the perceived values of podcasting will positively relate to its adoption likelihood. As displayed in Table 3, all four value variables are significantly correlated with the adoption likelihood. “Personal relevance” negatively relates to adoption because the original statements were stated in a negative tone as “seldom…” Therefore, hypothesis 1 is supported.

Hypothesis 2 proposes that cost values will be negatively related to adoption likelihood. As shown in Table 3, both “ease of use” and “ease of access” are significantly correlated with adoption likelihood. In other words, the easier one perceives it is to use podcasting or access podcast content, the more likely she will adopt podcasting. Therefore, hypothesis 2 is also supported.

To answer research question 3, the overall model for prediction of likelihood of podcast adoption was tested through a multiple regression analysis using step-wise entering. As displayed in Table 4, perceived usefulness and quality of podcast content are unique contributors to and together explain 12 percent of the variation in the likelihood of

<table>
<thead>
<tr>
<th>DV: Adoption Likelihood</th>
<th>.21*</th>
<th>.28*</th>
<th>.28*</th>
<th>-.11*</th>
<th>.18*</th>
<th>.14*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value1: Flexibility</td>
<td>.41*</td>
<td>.47*</td>
<td>-.09*</td>
<td>.73*</td>
<td>.50*</td>
<td></td>
</tr>
<tr>
<td>Value2: Quality</td>
<td></td>
<td>.48*</td>
<td>-.04</td>
<td>.41*</td>
<td>.33*</td>
<td></td>
</tr>
<tr>
<td>Value3: Usefulness</td>
<td></td>
<td></td>
<td>-.06</td>
<td>.52*</td>
<td>.35*</td>
<td></td>
</tr>
<tr>
<td>Value4: Helpfulness</td>
<td></td>
<td></td>
<td></td>
<td>-.11*</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Cost1: Ease of Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.47*</td>
<td></td>
</tr>
<tr>
<td>Cost2: Ease of Use</td>
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</tbody>
</table>

* p. < 0.05.
podcast adoption ($F(2, 504) = 36.079, p. < .05$. Differentiation level varies from the sample size due to missing data on some of the items in the questionnaire).

Table 4: Multiple Regression of Values and Costs on Podcast Adoption

<table>
<thead>
<tr>
<th>IVs</th>
<th>β</th>
<th>t</th>
<th>p.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Usefulness</td>
<td>.235</td>
<td>4.91</td>
<td>.000</td>
</tr>
<tr>
<td>Information Quality</td>
<td>.174</td>
<td>3.64</td>
<td>.000</td>
</tr>
<tr>
<td>R = .36, $R^2 = .13$, Adjusted $R^2 = .12$, $F(2, 504) = 36.079$, $p. = .000$</td>
<td></td>
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</table>

Hypothesis 3 proposes that those who are more likely to adopt podcasting tend to expect that podcasting will be adopted in their college education. Analysis yields a correlation co-efficient of .156 ($p. < .05$), pointing to a significant positive relationship between the two variables, therefore supporting hypothesis 3.

Discussion, Limitations, and Implications

This exploratory study attempted to explain how likely non-adopter college students will adopt podcasting and to which degree they embrace podcasting as a teaching tool for themselves. The investigation identified four value factors and three cost factors that are related to users’ perception of podcasting. The value factors reflect the flexibility the technology provides, quality, perceived usefulness, and personal relevance of podcast content. The cost factors reflect the ease of access, ease of use, and depreciation. As predicted, the value factors are positively predictors of how likely an individual will adopt podcasting and the cost factors are negative predictors of adoption likelihood. When all factors are taken into account, however, only two value factors, perceived usefulness and information quality, are significant unique predictors of adoption likelihood. Both factors
represent aspects of podcast content, rather than the technology itself. One possible explanation is that because podcasting is no more than a means of information dissemination and is free and easy to learn, potential users tend to pay more attention to whether they can benefit from the content and whether the content represents high quality. An alternative explanation is that non-adopters may not know the technology well enough to make informed judgment. More than a third of the participants in this study disagreed or strongly disagreed with the statement that they had “a good understanding of the podcasting technology. Therefore, the optional answers in the open-ended question might shed some light on how those non-adopters really think about using podcasting in general and for educational purposes.

Those participants who were more likely to adopt podcasting were more likely to expect that podcasting be used more widely as a teaching tool at their educational institution. Not surprisingly, those were also the individuals who have a fairly good understanding of the values of the technology. For example, one participant wrote:

I work at a factory full time and also take between 9-12 hours a semester while driving from … to … [about 30 minutes single trip – note by authors] to attend college. Therefore I think podcasting would be very helpful if it was used more at XYZ University. This way I could listen to class lecture on the way to and from school, to help me absorb information.

Some participants were open to adopting podcasting as a teaching tool, but with concern on the cost of the technology and content, which sometimes is a misconception. Sample comments included: “As long as tuition does not raise much more, Podcasting will
help up the grade of each student.” “Only if you supply the MP3 player, and I do not mean by raising fees!” “Teachers who decide to use this type technology should make the necessary equipment available to students.” “I hope this will be free!”

However, some participants were highly concerned about a heavy reliance on technology in their higher education experience. For example, one wrote, “Pay teachers to be there, not computers.” Another student wrote, “Electronic communication is far inferior to person.” For those individuals, what they seemed to value most is the face-to-face interaction with the professor and other students in a traditional classroom setting.

Another issue that should be considered to promote the adoption of podcasting is that some people are not yet highly satisfied with the quality of currently popular technology. One commented, “Mp3 players need to become more advanced and Internet more reliable (it is down often or very slow) before this [podcasting – note by authors] should be used.”

There seemed to be an urgent need to educate students on what podcasting is and how to use it for beneficial purposes. A sizeable number of respondents admitted that they had no idea what podcasting is. However, some expressed an immediate interest in the technology and they would like to learn about it. One wrote: “This survey was really educating! I’d like to know more about podcasting.”

One of the limitations of this study is that the data were collected at a selected U.S. four-year college. Therefore, caution is needed when interpreting the findings and applying them to other populations. In addition, the study only focused on the perceived values and costs of podcasting. Inclusion of other variables such as personalities and other psychological traits yield a better prediction of the likelihood of podcast adoption.
However, the findings may provide some implications to educators who want to consider employing podcasting as a supplementary tool for traditional or distant education. The study can also be used as a reference for decision makers at educational institutions who have interest in expanding distant education. For a university with a large population of commuting students such as the one where the data were collected, podcasting may be an effective tool with very low cost to help improve students’ academic performance by engaging them in active learning on their way between home and school.
References


