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College Students' Motivations for Using Podcasts

Mun-Young Chung, *Pennsylvania State University*
Hyang-Sook Kim, *Towson University*

Abstract

Despite potential benefits of podcasts for college education, little research has examined students' psychological drives for using podcasts. To explore the relationship between the use of podcasts and college students' appreciation of them, this study investigated students' motivations, attitudes and behaviors with regard to podcasts use including their learning environment. Based on a survey with 636 college students, this study found that six dimensions of motivations were prominent for podcasts use: (1) voyeurism/social interaction/companionship, (2) entertainment/relaxation/arousal, (3) education/information, (4) pastime/escape, (5) habit, and (6) convenience. In particular, motivations catering to relationship consolidation, excitement and educational achievement better explained the actual use of podcasts as well as students' appreciation than other motivations identified. In addition, students' attachment to the medium is a strong predictor of their podcasts use and gratification. Students also used podcasts to satisfy their fashion motivation. Theoretical and practical implications of using podcasts for digital literacy in college education were discussed.

Keywords: *uses and gratifications, podcast, motivation, attitudes, behavior, college students*

"Podcast," a word created by combining iPod and broadcast, is a medium that incorporates a collection of audio or video files to which individuals freely subscribe via the Internet (Notess 2005). When users set up a podcast client program in their digital devices (e.g., personal computer, tablet, smartphone), the program automatically receives and saves the newest podcast files on the device. Most automatic transmissions of podcast files are available for free. In addition, audiences can enjoy easy access to updated podcast files from anywhere through their portable devices. Such flexibility and convenience of use make the podcast an effective educational tool (Evans 2008).

Higher education has increasingly adopted podcasts for lectures (e.g., iTunes U), which has positively affected college students' performance on exams (McKinney, Dyck, and Luber 2009). As a result, university educators have become interested in examining the potentials of podcast use and have developed podcast feeds (Silva 2006). Students simply download podcast files that include additional lectures, course orientations, or a useful technique when they have missed a class, need to catch up in a course, or prepare for tests (Chick 2007). ITunes U included 787 open diverse classes from U.S. and international universities and colleges as of June 2014 (iTunes). According to the Pew Research Center (2010), the current college-aged generation is more highly proficient than older generations in new media technology use, including podcasts and mobile devices that play podcast stations. This new media-friendly generation, called Millennials, is typically defined as individuals born after 1980, making them the first generation to come of age in the new millennium.

Given the growth of the podcast user market and its application to the educational setting for Millennials, it is critical to raise the question of how to adequately address the need for media literacy in the context of new media technology. Lankshear and Knobel (2006, pp. 60–62) suggested that new media literacy would need appropriate definitions to keep track of the evolving nature of new media technology contained in unique formats. Cloud-sourcing such as Wikis and other social networking applications on mobile devices, as evident in Web 2.0 examples, are obviously distinct from Internet search engines and personal websites classified as Web 1.0. Depending on the unique characteristics of each type of new media technology, media literacy educators may need to guide users to properly adopt and utilize technology towards specific benefits instead of simply providing them with how-to manuals. Thus, while the introduction of the podcast and the fostering of the podcast culture among college students seems to provide promising potential for higher education, research is needed to help media literacy educators accurately define the digital literacy competencies for podcasts specifically and help navigate podcast adoption in the context of higher education.

Despite a radical increase of podcast use in higher education (Flanagan and Calandra 2005), few studies have questioned exactly why students use podcasts and how likely they are to appreciate their use in the educational environment. Most previous approaches have shed light on the technological perspectives of podcasts (Laing, Wootton, and Irons 2006; Notess 2005) and examined the media market situations (e.g., Silva 2006). Thus, in order to better understand the nature of the podcast use for college-age population, the present study focuses on discovering (a) what leads college students to use podcasts and (b) the relationship between motivations for podcast use and attitudes toward podcasts and users' behaviors among college students. Applying uses and gratifications theory to college students' use of podcasts, the present study aims to provide educators and administrators in higher education as well as content providers with useful information that may support the innovative design of educational podcasts.

Uses and Gratifications Theory

The uses and gratifications theory explains activities and personal awareness among individuals during their media consumption (Katz, Blumler, and Gurevitch 1974). Researchers have found that audiences choose various media to satisfy their social and psychological needs and earn more satisfaction according to their medium choices and consumption. In particular, audiences select their medium and content based on not only their preexisting beliefs, but also feelings at the moment of the selection, which eventually constitute various needs (Palmgreen and Rayburn 1979; Rayburn, Palmgreen, and Acker 1984). Apparently, each medium has its own function as it relates to those audience needs (Katz, Blumler, and Gurevitch 1974; Rubin 1983). In general, individuals exhibit diverse needs, including gaining information, entertaining, interacting with others, and expressing personal identity (Ang 1995). However, most uses and gratifications research during the era of traditional mass media has overlooked individual extensions for individual media, and researchers have further noted that the effect of personal gratification sought would be commensurately diminished (Palmgreen and Rayburn 1979). Such criticism on the uses and gratifications research has been resolved in recent studies that foregrounded unique motivations and subsequent gratifications for specific new media technology such as the Internet (Stafford, Stafford, and Schkade 2004), mp3 players (Zeng 2011), and YouTube (Haridakis and Hanson 2009).

Motivations in Uses and Gratifications

Most uses and gratifications research focuses on finding the main motivations for specific media. Rubin (1983) first suggested various motivations for watching television, such as relaxation, companionship, habit, passing time, entertainment, social interaction, arousal, and escape. He argued that each motivation could help explain one's attitudes and behavior of watching television not in an independent fashion, but rather

simultaneously. Furthermore, such motivations are not identical across various media experiences. For instance, British children exhibited seven motivational factors to watch television: "to learn, pass time, and forget, and for arousal, relaxation, and companionship, and as a habit" (Rubin 1983, pp. 76–77). However, certain media provided more gratification than other media (Lichtenstein and Rosenfeld 1983), and a particular motivation (i.e., to learn) was most accessible for a particular gratification (i.e., perceived realism) among this target group of the audiences for this medium—namely, television (Greenberg 1974).

In the realm of communication technology, researchers have also examined different levels of gratification that result from different media experiences, such as the telephone (Dimmick, Patterson, and Sikand 1996), e-mail (Dimmick, Kline, and Stafford 2000), cellular phone (Leung and Wei 2000) and instant messenger programs (Dimmick et al. 2007). In addition, Leung (2001) found that college students using messenger programs identified relaxation, entertainment, and fashion as primary instrumental motives, which were ultimately linked to their actual behavior for the use. These studies also indicated that similar gratifications from a new medium (i.e., e-mail) may replace those from an old one (i.e., telephone) (Dimmick, Kline, & Stafford, 2000). Cell phone use in particular caters to users' motivations including immediacy, mobility and instrumentality (Leung & Wei, 2000).

Likewise, users of the Internet and other new technological devices have similar or dissimilar motivations to those for traditional media experiences (Ferguson and Perse 2000; Pappacharissi and Rubin 2000). Ferguson, Greer, and Reardon (2007) found that college students use mp3 players not to dissipate boredom, but to get excited, enjoy an entertaining and relaxing time, and avoid feelings of isolation. Zeng (2011), on the other hand, discovered unique motivations for using mp3 players, such as control and concentration, which were rarely associated with motivations and gratifications from the traditional media or other types of new media technology, such as the Internet. Stafford and colleagues (2004) found 15 motivations that satisfied three different categories of Internet gratifications—namely, Internet process, Internet content, and Internet social gratifications. Some of the motivations and associated gratifications stood out as being unique compared to those of the traditional media, such as television and radio, in that they would require proper understanding of and skills related to the Internet, such as locating target resources through search engines and surfing behavior or interacting with people via various features available only via the Internet.

YouTube can bring users a new type of motivation that focuses heavily on social interaction (Haridikis and Hanson 2009). Viewing videos could be an experience similar to watching programs on television. However, YouTube has a unique characteristic as well (i.e., user-generated content sharing) as a new media technology in the domain of Web 2.0. Microblogging (e.g., Twitter) also facilitates information sharing and social interactions, which are key motivations distinct from not only the traditional media, but also other types of new media (Chen 2011). In this sense, research needs to further probe various media use motivations by specifying each medium use from traditional to new media. Thus, by considering the podcast as a separate medium specification in the new media as well as the educational purpose of its use, this study proposes the following research question to explore motivations for podcast use:

> RQ1: What are salient motivations for podcast use among college students, and how are motivations related to each other?

Attitudes toward Podcast Use

In light of uses and gratifications research, Rubin (1979) found further positive relationships between television viewing motivations and two attitudes toward television consumption—perceived affinity toward television use and perceived realism toward television content—using both children and adolescent samples. According to Rubin (1979), perceived affinity refers to the user's attachment to the medium whereas perceived realism refers to an individual's perception on the realistic level of content that caters to the medium user's

motivations. In particular, some motivation factors (i.e., learning, pastime and habit, companionship, forgetting, arousal, and relaxation) for watching television showed a significant positive correlation with the perceived affinity with television and perceived realism toward its content. The research conducted with adult samples demonstrated similar findings, such that television watching motivations showed significant positive correlations with the attitudes—namely, affinity and realism (Rubin 1983). Specifically, watching television for pastime, habit, information, entertainment, and companionship showed a positive relationship with television affinity. However, television realism was only linked to two television watching motivations: information and entertainment. Previous literature has included little investigation into this theoretical link between the uses and gratifications for communication technology, particularly in the context of podcast use for educational purposes.

Thus, one can assume that two prominent attitude dimensions—namely, perceived realism and perceived affinity—would exhibit positive relationships with motivations for podcast use. Yet given the lack of previous research for this particular type of medium experience, the following research question was formulated:

> RQ2: What is the relationship between podcast use motivations and podcast users' attitudes toward podcasts with respect to perceived affinity and realism?

Gratification and Actual Behavior in Podcast Use

Lastly, motivations for a particular medium eventually affect an individual's gratification and media consumption behavior. Presumably, different levels and magnitudes of motivations could offer people gratifications in the use of different media in various fashions. With regard to user behavior as a result of uses and gratifications, previous studies have suggested measuring the amount of medium consumption to understand individuals' media consumption behavior (Lichtenstein and Rosenfeld 1983; Rubin et al. 1986; Pappacharissi and Rubin 2000). For instance, Rubin (1983) found that the viewing level showed positive relationships with entertainment, pastime and habit, companionship, and information motivation. However, the television viewing level showed a negative relationship with escape motivation. The result implied that people who were motivated to use media for their leisure and relaxation, interpersonal relationship, and information seeking would watch television more whereas people who sought novel and adventurous experiences did not spend time watching television. This pattern of the connection between audience motivations and actual consumption behavior is intuitive in that television viewing is one of the most typical indoor activities and possesses full or limited capacities that cater to each group of the motivations.

Users' new media experiences and actual time spent on media consumption will vary depending on particular motivations sought for the type of medium. Korgaonkar and Wolin (1999) discovered that early website users expressed various motivations for using the Internet, including social escapism, security and privacy concern, information, interactive control, socialization, and economic motivation. However, these motivations showed different patterns of correlations with business or non-business purposes for using the Internet. Papacharissi and Rubin (2000) suggested that people would use the Internet for their convenient and technical support purposes. At the same time, they argued that people would get used to the medium itself as a part of their lives and as a likely substitute for face-to-face interactions.

Pointing to the technological aspects of podcasts, Sundar suggests that unique attributes of various new media technology would lead to conspicuous affordances that each specific medium can offer media users. Theoretically, such technological affordances of new media would trigger user heuristics that are readily retrieved from the user's prior experience. For instance, the relatively new mode of the podcast as a medium distinguishing it from the traditional media triggers a novelty or coolness heuristic (i.e., "a conscious acknowledgement of the hipness of the digital device"; 2007, p. 82), which would in turn result in positive evaluations of both the medium and content obtained via this medium. A podcast user might also experience easiness and affordability, which could be other unique attributes of the podcast. These two attributes could

account for the navigability and interactivity uniqueness of this particular medium. Therefore, users would develop automatic associations between the use of the podcast and their expectations (i.e., gratifications sought; see Palmgreen and Rayburn 1976), thereby making it possible that, when those heuristics and user experiences with regard to the use of technology are aligned well, users would make positive evaluations of the medium and its experience (i.e., gratifications) and continue to use the medium. Indeed, (Sundar and Limperos 2013) further suggested newly identified gratifications from new media, undergirded by Sundar's (2007) theoretical model and a body of uses and gratifications research published between 1940 and 2011.

Despite conceptual suggestions from the previous literature (e.g., Sundar 2007; Sundar and Limperos 2013), the relationship between motivations and actual behaviors along with user gratifications in terms of podcast use has not been fully explored. Haridakis and Hanson (2009) examined the relationship between YouTube affinity and actual viewing and sharing of videos on YouTube. Although motivations to use YouTube predicted these YouTube behaviors, affinity failed to predict them. From the perspective that the podcast use is similar to the medium use of cell phone or the Internet, one might predict a similar positive correlation between motivations sought and actual user behaviors (e.g., Greenberg 1976; Rubin 1983) as well as satisfaction levels (Papacharissi and Rubin 2000). When user motivations are satisfied, it is expected that actual hours of technology use will increase. However, the nature of podcast use is obviously unique compared to experiences with previously mentioned communication technology. Furthermore, in general, attitudes are a strong predictor of behaviors, as shown in social behavior research (Fishbein and Ajzen 2010). Thus, instead of probing the relationships between motivations and attitudinal and behavioral aspects of podcast use independently, the current research aims to explore a holistic landscape of all three dimensions of uses and gratifications. The final research question referring to how likely salient podcast use motivations and attitudes toward podcast and its use predict actual podcast use behavior:

> RQ3: How likely do motivations to use podcasts and attitudes toward podcast use predict a user's gratification and behavior of podcast use?

Research Methods

College students at a large Midwestern university were asked to participate in an online survey. Emails containing the survey URL and informed consent form were sent to 13,000 students listed in a university registration roster to solicit participation in the survey. To encourage participation, small prizes were rewarded after a drawing. A total of 636 responses comprised the sample of this study after discarding 209 surveys from participants with no experience with podcasts from the 845 initial surveys collected.

Sample

The average age of the participants was 23. Females comprised 42.9% of the sample population, and Caucasians comprised 79.6% of the participants, followed by Asian/Pacific Islanders (10.9%), Hispanics (3.0%), African Americans (2.4%), and other (4.1%). Regarding students' year in school, seniors comprised 27.1%, followed by graduate students (23.5%), sophomores (17.7%), juniors (17.7%), freshmen (13.1%), and others (.9%). For participants' majors, arts and science accounted for 32.4% of the total, followed by engineering (19.5%), business (12.6%), agriculture (10.7%), human ecology (9.1%), education (8.0%), architecture (5.0%), veterinary medicine (1.3%), aviation (.5%), and other (.9%).

Instruments

In the survey, 11 media use motivation factors were adapted and modified from previous uses and gratification studies (Greenberg 1974; Rubin 1979, 1983; Pappacharissi and Rubin 2000; Perse and Rubin

1988): (1) relaxation, (2) companionship, (3) habit, (4) pastime, (5) entertainment, (6) social interaction, (7) information, (8) arousal, (9) escape, (10) convenience, and (11) voyeurism. Earlier studies reported that all of the instruments showed acceptable reliabilities ($\alpha > .70$). This study added an additional factor for podcasts. To examine the college students' pattern of using podcasts for their schoolwork, this study added (12) education factor.

Three items were used to measure educational motivation: (1) "I would use podcasts because they are helpful for my class work," (2) "I would use podcasts because I can listen to the lecture when I miss class," and (3) "I would use podcasts because I can use them to prepare for tests." Thus, the 12 motivation factors had 3 motivational statements each, and survey respondents were asked to respond to all 36 motivational statements when using podcasts. The statements used a 5-point, Likert-type scale that ranged from 1 (strongly disagree) to 5 (strongly agree). In addition, an open-ended question explored additional motivations for college students' podcast use other than these 12 motivations.

As an attitudinal indicator, both perceived affinity and realism were measured based on an instrument using a 5-point, Likert-type scale from Rubin's (1983) study, in which two indexes including five items each showed acceptable reliabilities (i.e., $\alpha > .70$). This study included two affinity items: "I would rather enjoy a podcast than do anything else" and "I could easily do without listening to a podcast for several days (reversed)." In addition, two realism items were included: "Podcasts present things as they really are in life" and "If I heard or watch something on a podcast, I can't be sure it really is that way (reversed)." The affinity and realism items were coded so that a "5" indicated an extremely positive attitude whereas a "1" reflected an extremely negative attitude.

Podcast use behavior was measured by asking subjects to estimate the average hours of use during both the previous weekday and a normal weekday. This strategy may be useful because it can be difficult for subjects to exactly recall how many hours the participants use media (Rubin, 1979). Finally, one gratification item asked subjects to rate their level of agreement with this item: "I think that I am a podcast fan."

Data Analysis

For research question 1, a principal factor analysis was conducted to explore salient podcast motivations and their interrelationships. This analysis identifies audience motivations for media consumption for various purposes, such as information, entertainment, social utility, and personal identity (Katz, Blumler, and Gurevitch 1974). Principal factor analysis is preferred over common factor analysis when the research question summarizes most of the original information (variance) in a minimum number of factors for prediction (Hair 1998). The traditional latent root criterion was used, and factors with more than one eigenvalue were retained. To arrive at a final factor solution that would allow for clear interpretation, the oblique rotation method was used in accordance with the interrelated nature among media use motivations. The final factor solution was derived so that each of the items loaded highly on only one factor; the cutoff size of the factor loading was set to .55, which shows more practical significance of the loading in interpreting the factor matrix than the conventional minimum size (.3) of loading (Hair 1998).

For research questions 2 and 3, a hierarchical regression analysis was conducted to explore the predictive relationships among motivations, attitudes, and use behaviors. In doing so, summated scales were constructed for identified motivation factors, based on items with factor loadings higher than .55 and close to the cutoff. Similarly, summated indexes were devised for the two attitude constructs: perceived affinity and perceived realism. The reliability of summated indexes for identified motivations and attitudes was assessed using Cronbach's α (see Table 2) by using the SPSS 19 statistical program.

Research Results

College students in this sample report that they are making some modest use of podcasts. Findings show that 50.5% of the participants use podcasts less than one hour per day. 33.7% of the participants use them between 1 and 2 hours, 10.1% use them between 2 and 3 hours, 4.9% use them between 3 and 4 hours, and .8% use them more than 4 hours.

When exploring the motivations for using podcasts, entertainment and convenience are the most important motivations for college students to use podcasts. Table 1 shows the mean and standard deviation values on 36 items for the 12 motivations, and 10 items for the two attitudes—namely, perceived affinity and perceived realism. The convenience motivation factor items had the highest group mean (M = 4.03), and one of three convenience motivation items, "I use podcasts because they're free," recorded the highest mean (M = 4.20). Voyeurism factor items showed the lowest group mean (M = 2.21), and one voyeurism statement had the lowest mean (M = 1.80) among all motivation statements.

Table 1
Podcast Use Motivation Sets

Podcast use motivation categories and statements ("I use podcasts…")	*M*	*SD*
Entertainment		
1) because it's enjoyable.	4.00	.72
2) because it entertains me.	4.12	.70
3) because it amuses me.	3.41	.92
Arousal		
1) because it's thrilling.	2.92	.81
2) because it peps me up.	3.14	.90
3) because it's exciting.	3.03	.87
Relaxation		
1) because it's pleasant.	3.77	.69
2) because it relaxes me.	3.42	.89
3) it allows me to unwind.	3.12	.96
Information		
1) so I can learn about what could happen to me.	2.93	.97
2) so I can learn how to do thing that I haven't done before.	3.20	1.05
3) because it helps me learn things about myself and others.	3.09	1.00
Voyeurism		
1) because it has someone's personal content.	2.93	1.04
2) because it shows someone's secret activities.	1.90	.86
3) because it tells someone's secret.	1.80	.80
Education		
1) because it is helpful for my classwork.	3.44	1.12
2) because I can listen to the lecture again when I miss the class.	3.83	1.06
3) because I can use it to prepare tests.	3.41	1.13
Convenience		
1) because I can use it anywhere.	4.03	0.86

2) because it's free.	4.20	0.83
3) because I can use it anytime.	3.87	0.85
Habit		
1) because I just like to use podcast.	3.42	0.90
2) because it's habit, just something to do.	2.73	0.96
3) because it's there.	3.28	0.97
Companionship		
1) so I won't have to be alone.	2.07	0.98
2) when there's no one else to talk to or be with.	2.63	1.07
3) because it makes me feel less lonely.	2.00	0.94
Social interaction		
1) so I can be with other members of the family or friends who are also using podcasts.	2.37	1.01
2) so I can talk with other people about what's on.	2.72	1.05
3) because it's something to do when friends come over.	2.10	.93
Pastime		
1) because it passes time, particularly when I'm bored.	3.34	1.08
2) when I have nothing better to do.	3.07	1.06
3) because it gives me something to do to occupy my time.	3.23	1.01
Escape		
1) so I can get away from the rest of the family or others.	1.95	0.88
2) so I can forget about school or other things.	2.43	1.09
3) so I can get away from what I'm doing.	2.73	0.98
Podcast perceived affinity		
1) I would rather enjoy podcast than do anything else.	1.87	0.83
2) I could easily do without podcast for several days. (Reversed)	1.83	0.93
3) I would feel lost without podcast to use.	1.72	0.85
4) If the podcast wasn't working, I would not miss it. (Reversed)	2.58	1.05
5) Enjoying podcast is one of the most important things I do each day.	1.92	0.92
Podcast perceived realism		
1) Podcast presents things as they really are in life.	2.96	0.79
2) If I hear or watch something on podcast, I can't be sure it really is that way. (Reversed)	2.92	0.86
3) Podcast lets me really see how other people live.	2.86	0.86
4) Podcast does not show life as it really is. (Reversed)	3.01	0.72
5) Podcast lets me see what happens in other places as if I were really there	3.15	0.78

Podcast Use Motivations and Interrelationships

An exploratory factor analysis was conducted to understand podcast motivations using oblique rotation, as six factors had eigenvalues higher than one. However, the initial solution was plagued by cross-loadings where the following six items loaded highly (i.e., above the cutoff value of .55) on two factors simultaneously. After removing these six items from the analysis, the final factor solution was obtained, with no cross-loadings, allowing for a clearer interpretation. This final factor solution produced six factors with eigenvalues higher than one, and these factors combined explained 57.98% of the total variance (see Table 2).

Factor 1 (voyeurism/social interaction/companionship) showed an eigenvalue of 7.22 and explained 24.08% of the common variance. Two voyeurism and social interaction items and each escape and companionship item were related. Factor 2 (entertainment/relaxation/arousal) showed an eigenvalue of 3.19 and accounted for 10.64% of the common variance. Two entertainment and relaxation items and three arousal items were highly loaded on this factor. Factor 3 (education/information) showed an eigenvalue of 2.71 and accounted for 9.05% of the common variance. Three education and information items combined on this factor. Factor 4 (pastime/escape) showed an eigenvalue of 1.91 and accounted for 6.38% of the common variance. Three pastime and two escape items were associated with this factor. Factor 5 (habit) showed an eigenvalue of 1.27 and accounted for 4.23% of the common variance. Three habit items combined on this factor. Factor 6 (convenience) showed an eigenvalue of 1.08 and accounted for 3.67% of the common variance. Two convenience items combined on this factor.

Initially, Factor 1 (voyeurism/social interaction/companionship) seemed perplexing because it seemed to be an amalgam of three distinct motivations. A possible characterization of Factor 1 was that it is a combination of motivations related to interactions with other people through podcasts. On the other hand, the other factors could be interpreted to be individual and personal without respect to interactions with others. Except for Factor 1 (voyeurism/social interaction/companionship), theoretically related motivations were grouped in three other factors: Factor 2 (entertainment/relaxation/arousal), Factor 3 (education/information), and Factor 4 (pastime/escape). In addition, Factor 5 (habit) and Factor 6 (convenience) stood out clearly.

Table 2
Factor Matrix of Podcast Use Motivations

	Factor					
	1	2	3	4	5	6
voyeurism (3)	**.84**	-.06	.15	.16	-.12	.05
voyeurism (2)	**.80**	-.05	.15	.17	-.13	.04
escape (1)	**.77**	-.12	.09	.32	-.08	.08
social (3)	**.75**	-.22	.14	.16	-.28	.06
companionship (1)	**.60**	-.18	.05	.28	-.36	.18
social (1)	**.60**	-.21	.29	.09	-.44	.20
social (2)	.49	-.27	.32	.20	-.32	.28
entertainment (1)	-.03	**-.77**	.05	.18	-.19	.30
relaxation (1)	.06	**-.77**	.08	.22	-.22	.26
relaxation (2)	.20	**-.73**	-.06	.26	-.17	.28
arousal (2)	.35	**-.69**	-.02	.08	-.20	.44
arousal (3)	.47	**-.64**	.09	.17	-.31	.37
arousal (1)	.39	**-.63**	.08	.01	-.26	.32
entertainment (2)	-.09	**-.62**	.05	.39	-.11	.25
education (3)	.06	.06	**.79**	.11	-.07	.12
education (2)	-.08	.09	**.76**	.05	-.07	.17
education (1)	03	.05	**.73**	-.03	-.09	.09
information (2)	.19	-.10	**.65**	-.02	-.18	.09
information (3)	.30	-.26	**.57**	.01	-.01	.12
information (1)	.26	-.14	**.53**	-.06	-.20	.00
pastime (1)	.18	-.26	.02	**.81**	-.34	.25
pastime (2)	.21	-.14	-.01	**.80**	-.38	.20

pastime (3)	.32	-.34	.11	**.73**	-.29	.31
escape (3)	.39	-.34	.09	**.68**	-.10	.17
escape (2)	.53	-.27	.04	**.57**	.00	.16
habit (2)	.35	-.24	.06	.30	**-.79**	.21
habit (3)	.14	-.13	.17	.27	**-.73**	.16
habit (1)	.10	-.47	.14	.09	**-.60**	.27
convenience (1)	.06	-.35	.07	.07	-.12	**.84**
convenience (3)	.04	-.18	.18	.24	-.17	**.82**
Eigenvalue	7.22	3.19	2.71	1.91	1.27	1.08
% of variance	24.08	10.64	9.05	6.38	4.23	3.61
Cronbach's α of the related items	.85	.84	.76	.82	.66	.62

The first research question explores the interrelationships among motivations for podcast use. Table 3 shows the results of bivariate correlation analyses of the six motivations. According to the results, Factor 1 (voyeurism/social interaction/companionship motivation) was moderately associated with Factor 4 (pastime/escape, $r = .47$, $p < .001$), Factor 2 (entertainment/relaxation/arousal, $r = .30$, $p < .001$), and Factor 5 (habit, $r = .34$, $p < .001$). However, the same motivation was weakly associated with Factor 3 (education/information, $r = .22$, $p < .001$), and it had a negligible association with Factor 6 (convenience, $r = .10$, $p < .05$).

Factor 2 (entertainment/relaxation/arousal) had moderate sizes of correlations ranging from $r = .41$, $p < .001$ to $r = .43$, $p < .001$ with Factor 4 (pastime/escape), Factor 5 (habit), and Factor 6 (convenience), but, a negligible correlation less than .10 with Factor 3 (education/information). Factor 3 (education/information) was negligibly associated with factor 4 (pastime/escape) and weakly related with Factor 5 (habit) and Factor 6 (convenience). Also, Factor 4 (pastime/escape) was moderately associated with Factor 5 (habit) and Factor 6 (convenience). Finally, Factor 5 (habit) was moderately associated with Factor 6 (convenience) as well. Overall, the findings suggested that the six motivations in podcast use are interrelated, although a lack of strong correlations (i.e., $r > .70$) among them indicated the distinct nature of each motivation.

College students described their motivations for using podcasts in different ways. This study explored additional motivations that college students might have for using podcasts. The 636 participants provided a total of 815 answers to the open-ended question. Of the total answers, 99% were categorized and tabulated into the 12 motivation coding schemes. Specifically, 27.4% of the total answers fit into entertainment motivation, such as "to listen to music" and "mainly for entertainment." Approximately 25.1% were categorized into convenience motivation, such as "fast and easy to use" and "portability and time efficiency." In addition, 22.1% fit into the education motivation, such as "listen to the recorded lectures," "have used podcasts for courses," and "to review before a test." Information motivation, such as "to keep up with the news and events of the day" and "great place to find niche information," fit another 19.0% of the total answers, followed by social interaction motivation like "communication with friends" and "to communicate with my German friend" (2.1%) and pastime motivation such as "to pass the time away" and "when bored" (1.1%). Finally, 2.2% of the total answers were categorized into other motivations. However, one new motivation was identified in 1% of the total answers that did not fit into any of the 12 motivations: fashion. Answers such as "using podcasts as a fashion and to look cool" were categorized into fashion motivation.

Table 3
Podcast Use Motivation Correlation Matrix

	Voyeurism / Social interaction / Companionship	Entertainment / Relaxation / Arousal	Education / Information	Pastime / Escape	Habit
Voyeurism / Social interaction / Companionship	–				
Entertainment / Relaxation / Arousal	.30***	–			
Education / Information	.22***	.07	–		
Pastime / Escape	.47***	.43***	.09*	–	
Habit	.34***	.41***	.17***	.42***	–
Convenience	.10*	.41***	.17***	.26***	.26***

Note. *$p < .05$, **$p < .01$, ***$p < .001$ (2-tailed)

Motivations and Attitudes as Predictors of Podcast Use Gratification and Behavior

Research questions 2 and 3 explore the predictive relationships between podcast use motivations, attitudes toward podcasts, and podcast use behaviors including user gratification. Hierarchical regression analyses were conducted, using the six motivations and two attitude variables (i.e., perceived realism and perceived affinity). Gratification level was conceptualized by the item "I think that I am a podcast fan" and hours of podcast use was used as an outcome variable. In preparation for the data analysis, a summated scale was constructed for each of the six motivation factors. For each scale, items with factor loadings higher than the cutoff point (.55) or close to it (e.g., .53) were selected and averaged (see Table 2). Of the six summated scales for the motivation factors, four showed high and acceptable reliabilities based on Cronbach's α: voyeurism/social interaction/companionship ($\alpha = .85$), entertainment/relaxation/arousal ($\alpha = .84$), education/information ($\alpha = .76$), and pastime/escape ($\alpha = .82$). In addition, the other two scales showed reliabilities slightly below the minimal cutoff point of .70: habit ($\alpha = .66$) and convenience ($\alpha = .62$).

To test the relationships among podcast use motivations, perceived affinity and realism, and actual hours of use, this study conducted two sets of hierarchical regression analyses. First, to predict the actual hours of using podcasts, factors of podcast use motivations (Step 1: Adjusted $R^2 = .20$) were entered followed by perceived affinity and realism (Step 2: Adjusted $R^2 = .32$). The first step of the hierarchical regression model revealed that Factor 1 (voyeurism/social interaction/companionship) ($\beta = .24$, $p < .001$) and Factor 2 (entertainment/relaxation/arousal) ($\beta = .30$, $p < .001$) were significant predictors of total hours of podcast use. In the second step, perceived affinity ($\beta = .43$, $p < .001$) appeared as the only significant predictor of total hours of podcast use (see Table 4).

To predict the level of gratification, the same two steps of hierarchical regression analysis were conducted (Step 1: Adjusted $R^2 = .22$; Step 2: Adjusted $R^2 = .31$). The analysis revealed that Factor 2 (entertainment/relaxation/arousal) ($\beta = .34$, $p < .001$), Factor 3 (education/information) ($\beta = .18$, $p < .001$), and

Factor 6 (convenience) (β = .12, $p < .01$) were significant predictors of the gratification level (F = 30.29, $p < .001$). In addition, two attitudinal predictors—perceived affinity (β = .29, $p < .001$) and realism (β = .19, $p < .001$)—were significant for predicting respondents' gratification level (see Table 4).

Table 4
Hierarchical Regression Model for Using Hours and Gratification Level

Step 1 (Motivations only)	**Using hours**		**Gratification level**	
	β	t	β	t
Voyeurism / Social interaction / Companionship	.24***	5.58	.04	.95
Entertainment / Relaxation / Arousal	.29***	6.67	.34***	7.86
Education / Information	.03	.71	.18***	4.93
Pastime / Escape	.02	.37	-.06	-1.42
Habit	-.05	-1.06	.06	1.39
Convenience	.06	1.49	.12**	2.93
	F = 25.94*** *df* = 6/629 *Adjusted R²* = .20		*F* = 30.29*** *df* = 6/629 *Adjusted R²* = .22	
Step 2 (Perceived affinity and realism)				
Voyeurism / Social interaction / Companionship	.03	.73	-.13**	-2.99
Entertainment / Relaxation / Arousal	.20***	4.90	.25***	5.97
Education / Information	-.001	-.02	.11**	3.16
Pastime / Escape	.05	1.17	-.03	-.72
Habit	-.05	-1.20	.05	1.28
Convenience	.04	.97	.08*	2.10
Perceived affinity	.43***	10.47	.29***	7.12
Perceived realism	-.02	-.52	.19***	5.20
	F = 36.59*** *df* = 8/627 *Adjusted R²* = .32		*F* = 36.88*** *df* = 8/627 *Adjusted R²* = .31	

Note. *$p < .05$, **$p < .01$, ***$p < .001$

In sum, college students use podcasts more for voyeurism/social interaction/companionship and entertainment/relaxation/arousal, although they report higher levels of gratification when they use it for entertainment/relaxation/arousal, education/information, and convenience. In addition, students' affinity toward podcast use is associated with an increase actual hours of technology use as gratification level. However, students' judgments of the realism of podcasts might not influence their usage whereas it was a significant predictor of becoming a podcast fan.

Discussion

This exploratory research discovered particular motivations to use podcasts along with predictive aspects of those motivations for user attitudes and behavior. This study found that college students primarily expressed six motivations for using podcasts, which articulates students' consolidation of interpersonal relationships, aspects of enjoying life, and for convenience as well as educational purposes. Of the six motivations, and unlike uses and gratifications for other media, education motivation appeared to be a significant motivation factor that clearly reflects a chief function of the podcasts for college students.

Findings of identified motivations to use podcasts among college students further shed light on noticeable differences and similarities between podcasts and other media—specifically, television and YouTube. For instance, Rubin's (1983) study on television motivations and the findings of the present study on podcast motivations demonstrate some similarities in their results. In Rubin's television study, the strongest, but still moderate, correlation was found between pastime/habit and companionship. Similarly, in the present study, the strongest, but still moderate, correlation appeared between pastime/escape and voyeurism/social interaction/companionship. These two motivations appeared to be the most common motivations across various media experiences. The convenience of using podcasts and YouTube drove similar gratifications among users. Users indicated their convenient access and related activities when using the media, which in turn increased the level of the gratification of the podcast use and actual behavior of YouTube use (Haridakis and Hanson 2009). Thus, podcasts themselves would offer users uses and gratifications to cater to not only their basic motivations in the course of media consumption similar to what they obtained from the traditional media, but also a unique motivation attributed to the nature of the medium.

On the other hand, pastime/escape motivation was negligible when associated with education/information motivation in this podcast study, which makes sense given that both the nature of these two motivations and purpose for using the podcast are considered simultaneously. Moreover, educational and information purposes of the podcast use became more salient in the current study when compared to the findings from Rubin's (1983) study in that the association between entertainment/relaxation/arousal motivation and education/information motivation was negligible in the podcast study (see Table 3), whereas the relationship reported in Rubin's (1983) study was quite significant. The result from the hierarchical regression analyses confirmed the unique function of the podcast as potential to the educational medium, such that pastime/escape and habit motivations had a very small relationship with the level of podcast use and user gratification. However, education/information motivation was a significant predictor of user gratification. Thus, it is apparent that college students might not use podcasts to just kill time. Rather, they use podcasts for specific purposes, including educational and informational purposes.

With regard to the findings related to the gratification level—namely, whether students would become a fan of podcasts or not—Lichtenstein and Rosenfeld (1983) found that entertainment, information, and pastime motivations had moderate-sized regression coefficients with the television gratification level. Similarly, entertainment/relaxation/arousal and education/information motivation increased the gratification level of podcasts in this study. In addition to these similar motivations that contributed to increasing user gratification,

the current study found that convenience motivation increased the podcast gratification level. Given that the convenience factor is critical in the use of new technology, this relationship should be underscored in order to understand why students use podcasts in their lives and what would be an important aspect of adopting podcasts for higher education.

The findings on the perceived affinity bring another important consideration for both theoretical and practical implications. The level of attachment to podcasts among college students is a significant predictor of both the actual hours of podcast use and user gratification. In other words, when students' motivations to use podcast are nicely transferred to their affinity to the medium use (Rubin 1983), they would form a strong fandom for this particular new medium and related experiences followed by increasing actual hours to use the medium. A certain medium that heavily delivers fictional content, such as television (Rubin 1983) and video games (Lucas and Sherry 2004), might require users to experience a realistic sense for achieving a positive behavioral consequence. However, the podcast apparently exhibits the different nature of the medium compared to television so that it only needs users to be fond of the media to increase total media consumption. Thus, motivations, attitudinal and behavioral outcomes in uses, and gratifications would show unique patterns depending on the types of media in which users are engaged.

The importance of the perceived affinity in the use of podcasts among college students also implies that podcast developers, especially in the higher education domain, should focus on a variety of content and means that essentially cater to key motivations among the target population—entertainment/social interaction/companionship, entertainment, and education/information—so that college students foster their affinity in the course of using podcasts for not only their cognitive (educational/informational) but also emotional (entertaining/relaxing/arousing and fashionable) drives.

Some limitations of the present study leave room for future research. The first weakness of this study is the sampling method for collecting data. This study used a convenience sampling method, with the researcher simply asking college students in one particular institution to participate and then finding volunteers who used podcasts. Thus, this sampling method cannot guarantee that the selected people represent the whole population (Goodwin 1995). Therefore, the sample used in the present study might differ from an ideal sample of all college students who use podcasts. The second limitation is that two motivations, habit and convenience and the realism index were below the cutoff level. Nonetheless, the present study identified college students' motivations to use podcasts and relevant attitudes and behavioral parameters that could explain the uses and gratifications of a particular new media technology—namely, podcasts.

Currently, massive open online courses (MOOCs) such as Coursera (https://www.coursera.org) and ed-X (https://www.edx.org) are offered at major universities like the University of Michigan, Harvard, and MIT. These sites provide diverse online courses similar to the actual learning environment by using lectures, quizzes, tests, and discussions through online bulletin boards. The ultimate benefit of this innovation of online education is the ability to build a virtual classroom with rich materials for learners who are cannot easily access the offline classroom environment. Despite the rapid growth of online and distance learning opportunities in higher education (Jackson 2013), such online courses might not be directly connected to students' lifestyle.

Podcasts, however, still possess the advantages of convenient, enjoyable, and relaxing aspects in medium use. As Lankshear and Knobel (2006) suggested, this process of understanding audiences of the MOOCs is critical for facilitating student engagement with classes via MOOCs or other online-learning sessions in relation to their active motivation to use podcasts for educational purposes, which is supported by the findings of the present study. Thus, even this growing educational environment of MOOCs (Paldy 2013; Severance 2013) is looking for more ways to incorporate student-friendly media convergence with podcasts. For instance, simply uploading the content of class materials in the podcast format would not be attractive to college students. Instead, students need to be actively engaged with class materials and activities that encourage interactions through uploading in addition to downloading podcasts of students themselves. This way of

students utilizing podcasts could gratify their enjoyment, convenience, and education simultaneously. Coolness in relation to fashion motivation is a plus in the use of podcasts, which always stands out through their use of podcasts inside and outside of virtual classes. Future research should explore the educational impact comparing podcasts and other online-based education systems, like MOOCs, or cross impacts between two media for educational purposes in particular. The findings and implications of the present study offer practitioners and educators in the realm of new media literacy solid evidence that highlights how to approach digital literacy tailored to this particular target technology (i.e., podcasts) for further use and growth in the higher education environment.

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