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Vodcast Impact on Students' Attitudes and Behavioral Intentions

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Abstract

Purpose: This paper uses structural equation modeling to assess the effectiveness of Vodcasts (video podcasts) as part of a university's communication strategy with prospective students.

Design/methodology/approach: Three theoretical models were tested using a structural equation model.

Findings: We find that perceived informativeness, credibility, and irritation of the advertising are directly related to the value of the Vodcast advertising. However of those three factors, only the informativeness is directly related to the intent to take further action toward enrollment. In addition, while prior work has suggested that perceived entertainment of advertising positively influences its perceived value, we find that for these university Vodcasts, perceived entertainment is not a statistically significant factor.

Research limitations/implications: The results suggest that for Vodcasts used for these purposes, less attention should be given to entertainment value, and more attention should be focused on providing useful information in a manner that is credible and not irritating to students.

Originality/value: Vodcasts have become part of the Internet multimedia experience and have been integrated into universities' web-based promotion strategies. While prior work has examined general advertising on the web, few studies have considered the impact of the interactive medium of Vodcasts on attitudes and behavioral intentions.

Keywords: web advertising, video-based communication, advertising value, gratification motivation, attitude, and action intent.

Paper type: Research paper

Introduction

Internet-based advertising, defined as “deliberate messages placed on third-party web site including search engines and directories available through Internet access” (Ha 2008), is considered more interactive than off-line advertising. One main characteristic of Internet-based communication is the consumer's control over the message (e.g., selection, search editing; (Hoffman and Novak 1996; Ariely 2000). It allows consumers to manage their exposure to product information and engage in multimedia or virtual experiences (Cho 1999).

YouTube paved the way for the adoption of video sharing experience. As a result, video podcasts, also called Vodcasts, have become part of the Internet multimedia experience and have

been integrated into universities' web-based promotion strategies (King and Judge 2007). They are also used by companies to demonstrate performance or usage of technologically complex products (e.g., HP tablet). Vodcasts are interactive because viewers can push buttons, activate voices, and/ or rotate the featured objects. Used effectively, Vodcasts capture attention, raise interest, increase involvement, and lead to purchase commitment (King and Judge 2007).

To assess the effectiveness of Vodcasts as part of a university's communication strategy with prospective students, we adopted Ducoffe's (1996) model of advertising on the web, with extensions from Brackett and Carr (2001) and Luo (2002). These communication models have been chosen since they have been employed by other researchers to assess the impact of Internet-based advertising on users' attitudes toward advertised brands and behavior intentions (Brackett and Carr Jr. 2001; Luo 2002; Ha 2008; An and Kim 2007). In addition, Ducoffe's model has been ranked as the third most cited in Internet-related papers (Kim and McMillian 2008).

Ducoffe's (1996) and the extended models are primarily focused on websites as communication tools, while the purpose of this paper is to assess a video-based communication tool embedded in websites. The central question addressed through this study is whether models assessing more static content of websites will be suitable for dynamic content provided by video clips embedded in websites. The effectiveness of Vodcasts will be examined through models assessing the impact of web-based communication tool(s) on value to users, on the attitude toward the tool, and on action-based intentions.

Though many Vodcasts are designed to entertain, their benefit as a recruitment tool for universities has not been well-documented, nor have the associated outcomes for universities been analyzed using structural equation models. This paper examines three structural equation

models grounded in Ducoffe's (1996) and his followers' theoretical perspective. These models provide one way to determine the value and benefit of Vodcasts as university's recruitment tool.

Theoretical Development

Ducoffe's model and follow-up models

The model Ducoffe (1996) developed focuses on consumers' perceived value of the web-based advertising medium (i.e., advertising value). Consumers must perceive some value from the Vodcast-based advertising as at any given moment they can stop the video and navigate away from the site. This approach is rooted in Uses and Gratification theory (Blumler and Katz 1974; Stafford, Stafford, and Schkade 2004), which argues that consumers use media for intrinsic gratification. This motivational theory has been used to explain consumers' engagement with various types of media including the Internet, focusing primarily on motives and usage (Tsao and Steffes-Hansen 2008; Stafford, Stafford, and Schkade 2004). Consumers are motivated to select the media that gratifies them most and that helps them achieve their goals (Ko, Cho, and Roberts 2005). The underlying motivations or needs can explain consumers' attitudes toward electronic media which is interactive and requires consumers to become involved in using it (Ko, Cho, and Roberts 2005; Luo 2002). Ducoffe's model suggests consumers derive value based on an exchange via communication where consumers and advertisers exchange benefits and costs from web-based media.

The first benefit consumers derive is in the form of *informativeness* which is defined as "the ability of advertising to inform consumers of product alternatives so that purchases yielding the greatest possible satisfaction can be made" (Ducoffe 1996, 22). Information seeking is the most common web-use utility and is perceived as information learning, which refers to searching

for information that will aid consumers' decision making (Lin 2006). Informativeness determines the degree to which consumers can receive resourceful and helpful information on the Internet (Luo 2002; Ducoffe 1996). *Entertainment* is another benefit and refers to consumers' experience of fun, pleasure, and enjoyment during media usage. Ducoffe suggests that because advertising makes up a substantial amount of the media content viewed by consumers, the perceived entertainment of the ads impacts the value of the advertising (Ducoffe 1996). Additionally, consumer needs such as social escapism, diversion, relaxation, aesthetic enjoyment, and emotional release are fulfilled through entertaining advertisement (Ducoffe 1996; Lin 2006). Consumers desire pleasant and likeable advertising, which results in a positive impact on advertising value. Entertainment (surf) and informativeness (information seeking/research) have been also considered as two out of four motives of the Web Motivation Inventory (Rodgers et al. 2007).

Irritation (annoyance) is created when the audience is exposed to advertising with unwanted outcomes (insulting or manipulating advertising techniques; Ducoffe 1996). When a consumer experiences Internet messiness which generates anxiety, distracts their attention, and dilutes their experience, it results in reduced advertising effectiveness and value (Luo 2002; Ducoffe 1996).

The motivations for Internet usage have been used to explain attitudes toward websites, web-based advertisements, and brands as well as behavior intentions (Ko, Cho, and Roberts 2005; Luo 2002; Ha 2008). Attitudes and behavior intentions are considered advertising outcomes that capture consumers' gratification from interacting on-line with an advertisement (Ducoffe 1996; Ko, Cho, and Roberts 2005; Luo 2002).

Researchers continue to build on Ducoffe's (1996) model, adding and extending it in terms of motivations and outcomes. Brackett and Carr (2001) added a fourth perceived benefit, *credibility*, to the model because of the construct was frequently used in other models (Eighmey 1997; Shavitt, Lowry, and Haefner 1998). When *credibility* is used in advertising, it conveys the consumer's perception that the information provided in the advertisement is truthful and believable (MacKenzie and Lutz 1989). Since consumers are seeking information from the Internet, they want that material to be truthful. In fact, consumers report the Internet to be a credible resource (Brackett and Carr Jr. 2005). Brackett and Carr (2001) also presented the case for the inclusion of several demographic constructs in the model, as there is research to support that people react to the web differently depending on variables such as gender and age. They also added an outcome construct, attitude toward advertising, as a frequent expected outcome in advertising research.

In additional research, Luo (2001) modified and extended Ducoffe's (1996) model. In Luo's model, *advertising value* was omitted as an outcome, and *web usage* and *satisfaction* were added as outcomes of *attitude toward the web*. The three original motivations, *entertainment*, *informativeness*, and *irritation*, were included as antecedents to *attitude toward the web*. Thus, variations on Ducoffe's model have been proposed to better explain consumers' behavior toward on-line marketing communication tools. This study considers the original Ducoffe model and posits changes based on the subsequent model modifications. The intent is to consider the usefulness of these models to explain potential students' attitudes and usage of Vodcasts for university recruitment. In addition, this research examines the viability of these models in explaining the Vodcast-related attitudes and intentions of today's college-aged students.

Technology usage by Millennials

The young people of traditional college age are frequently referred to as Millennials or the Net Generation, since they are frequent users of the Internet (Oblinger 2005; Brackett and Carr Jr. 2001). These younger adults have grown up spending four times as many hours watching television (20,000 hours) and two times as many hours talking on their cell phones (10,000) as they have reading books (5,000). They are more into visuals and kinetics and are used to getting information through multimedia sources rather than reading anything in print (Oblinger 2003; Oblinger and Kidwell 2000). Perceived as multimedia-taskers or Generation M, they engage on-line in buying, socializing, and playing (Tsao and Steffes-Hansen 2008). They are also known for their tendencies to learn on their own time, using informal processes rather than the more traditional classroom type atmosphere (Baker, Matulich, and Papp 2007).

As soon as juniors and seniors in high school begin the process of taking preadmission exams (i.e., ACT, PSAT, SAT) they are inundated with promotional information to help them make the decision about which institution of higher education to attend. When making important decisions, such as where to go to college, high school students seek information from a variety of sources, many of which are accessed through the internet.

Colleges and universities have added web-based multi-media to their recruitment approaches, realizing the important role the internet plays in the lives of these potential recruits, who represent a significant segment in the US population (Zollo 2004). Students are exploring methods beyond the typical campus website when searching for information about a particular university. These sources often include user-created videos, an area where prospective students spend much of their time anyway. Sites like YouTube and MySpace are perceived to provide a more realistic view of campus life, without the 'selling' lingo offered in college created

materials. Videos have become a method for communicating important information within a format more like “reality TV,” a popular Millennial television genre.

The content and format of many of the “reality” videos on YouTube and MySpace typically includes following an individual as they perform daily activities. The website visitor is introduced to a main ‘actor’ and follows the actor as he or she experiences life or a specific event. Often the theme is to instruct others on what to expect in similar situations, and to do so in an entertaining manner, by showing how the main actor reacts and responds. In some of the videos the storyline is manipulated in order to produce a specific outcome or event; in other videos events occur more naturally (King and Judge 2007).

This paper examines whether the Uses and Gratifications theory can explain the attitudes and behavior intentions of Millennials when exposed to Vodcasts. Brackett and Carr (2001) found that this generation perceived on-line advertising as irritating. However, in the same study this generation also predicted the pervasiveness of on-line advertisements in the future serving as a better source of information than TV advertisements (Brackett and Carr 2001). The current study focuses on Vodcasts featuring campus life of college students and examines the effectiveness of this communication tool as a recruiting strategy of universities. In particular this research considers if Vodcasts cater to in-coming students’ needs or gratifications, as assessed through their attitudes and behavior intentions (Tsao and Steffes-Hansen 2008).

Hypotheses Generation

Ducoffe’s original model investigated the value of media advertising (Ducoffe 1995). The application of the model in 1996 was advertising on the World Wide Web at a period of time when the majority of people had not been exposed to the web (Ducoffe 1996). Given the general

nature of Ducoffe's original model and its application using the internet, it makes sense to investigate the same model using more specific contexts available in Internet advertising. As mentioned previously, this study considers the use of Vodcasts as an advertising tool to attract high school students to universities. In a day and age when the Internet is more widely known and experienced, this study offers a way to test Ducoffe's original model and updated versions of the model in a specific Internet context, Vodcasts.

Vodcasts can promote a university's campus life and provide information to prospective students through online video presentations. Potential students would have the expertise necessary to view the Vodcasts and would therefore consider the benefits they might accrue from time spent watching them. As avid television and computer users, young adults are spending more and more time seeking sources of fun and entertainment. Their media entertainment often comes from watching reality based television (e.g., MTV's Road Rules, Oxygen's Bad Girls, CBS's The Amazing Race) or from hours spent playing video games. The Vodcast format mimics these media outlets because it includes a storyline and likeable characters and therefore, offers a similar entertaining experience. The benefit of being entertained by a Vodcast should impact both the advertising value and the attitude toward the Vodcast.

H1: Perceived *entertainment* of the Vodcast will be positively associated with the perceived *advertising value* of the Vodcast and with *attitude* toward the Vodcast.

At the same time high school students are in the process of making decisions about college alternatives and are seeking information about those choices. As noted previously, students are looking for a variety of online sources through which to secure college information. The Vodcast can offer a firsthand review of several "typical" college coed experiences from moving in to taking classes. The information is provided via the individuals in the Vodcast as

they relate their experiences (e.g., “I usually eat breakfast before my first class at 7:45 am but the cafeteria is open for breakfast until 10:00.”). Because the information is provided in this “reality” based format it is expected that students will report feeling positively about value of the Vodcast.

H2: Perceived *informativeness* of the Vodcast will be positively associated with the perceived *advertising value* of the Vodcast.

Millennials spend an incredible amount of time accessing the internet for all kinds of information. Still, their time is limited and the available website resources are nearly infinite. The potential students searching for information regarding college choices would be mindful of constraints (e.g., time, numerous sources) and may have a variety of reactions (e.g., bored, overwhelmed, and frustrated). Although the Vodcast is in a “reality” format and informative in nature, it is possible the Vodcasts will seem irritating as students seek immediate and clear answers to questions to help in their college selection.

H3: Perceived *irritation* of the Vodcast will be negatively associated with the perceived *advertising value* of the Vodcast.

In accordance with Ducoffe (1996) and other advertising models (Brackett and Carr 2001) that include attitude toward the advertising as a central concept, the same relationship is hypothesized in the Vodcast context. In particular, if the students find the Vodcast to be of value in aiding in their college selection, then they would also feel positively about the Vodcast itself and report a positive attitude toward it.

H4: The perceived *advertising value* of the Vodcast will be positively associated with the *attitude* toward the Vodcast.

Previous research has established that the perceived credibility of a website impacts both the value and the attitude toward the website (e.g. (Chiagouris, Long, and Plank 2008; Greer 2003; Chen, Clifford, and Wells 2002). The Vodcast used in this study represents the website as the context of interest and therefore similar results are expected.

H5: Perceived *credibility* of the Vodcast will be positively associated with the perceived *advertising value* of the Vodcast.

H6: Perceived *credibility* of the Vodcast will be positively associated with the *attitude* toward the Vodcast.

In the revised model by Brackett and Carr (2001) a relationship is predicted between the informativeness of the advertising and the attitude toward the advertising. The prediction is made in this study as well. As the students search for information in helping them make the college choice decision, it is likely that the perceived informativeness of the Vodcast will impact their attitude toward the Vodcast.

H7: Perceived *informativeness* will be positively associated with the *attitude* toward the Vodcast.

Many internet studies use college students as the subjects for their research as this audience is knowledgeable and experienced with the medium and its various forms of advertising. Because these subjects also make a strong and viable market for communication via the web, it is important to understand the relationship of relevant demographic variables to other model constructs, especially when the subjects can be clearly classified. Consistent with Brackett and Carr (2001) predictions were not made for each of the demographic variables, but it is anticipated that relevant demographics will impact students' attitude toward the Vodcast. As the students relate differently to the Vodcast actors (male or female) and their obvious characteristics (age, chosen major, field of study, etc.) differences in their attitude toward the Vodcast will be detected.

H8: *Relevant demographics* (e.g., gender, age, major of study, year in school and/or type of college) will have a direct relationship with the *attitude* toward the Vodcast.

Neither the original Ducoffe model nor the revised model suggested by Brackett and Carr include a prediction regarding the subsequent usage of the web based on the perceived

effectiveness of the web. However, Luo's model (2002) adds predictable consequences due to the attitude toward the web after exposure to an advertisement. This prediction is consistent with other advertising research suggesting that attitude toward the ad could indicate advertising effectiveness and influence outcomes (e.g. (MacKenzie, Lutz, and Belch 1986; Aaker and Stayman 1990). In this study it is anticipated that students will review the Vodcasts and be positively inclined to ask for or obtain further information to help in their university selection. In order to make an extended contribution to the exploration of the Vodcasts as a suitable Internet advertising tool for use with students, the anticipated outcome is that students' subsequent intent to take action and secure additional information about the subject of viewing the Vodcasts.

H9: *Attitude* toward the Vodcast will be positively associated with the *intent to take actions* toward the university.

Methodology

Data collection and sample description

This study investigated how Vodcasts influenced student's attitudes and behavior intentions toward a private university located in the Midwestern United States. The student population at the university is approximately 4,000 students. Vodcasts were created to entice potential students to make a virtual and/or physical campus visit. Students were encouraged to watch several episodes of the freshman college experiences of a typical male and female student through all stages of their first year (i.e., packing up to leave home, through move in day, attending classes and campus activities). A total of 12 serial episodes were professionally created to tell the story of these students. The Vodcasts were placed on the university's home page with links to iTunes and YouTube. Links to the videos were also included in all email, direct mail and other promotional materials sent to prospective students (King and Judge 2007).

An email with a link to an on-line survey was sent to 924 incoming students in July of the summer before their freshmen year. The email invited students to answer a survey about their impressions of the Vodcasts. Online respondents were offered a free music download in return for their participation completing the questionnaire. The original email yielded 75 completed questionnaires. A second reminder email in August yielded an additional 19 completed questionnaires for a total of 94 responses. In addition, students who had not yet taken the online Vodcast survey were invited to do so in a freshman course. Students were first shown three of the videos and then asked to complete a paper questionnaire. Sixty-three students completed the paper survey administered in class. The total number of respondents was 157, yielding a 16.99% response rate for this study.

The descriptive statistics for the sample are shown in Table 1. Almost two-thirds of the respondents were male (57%) and most (over 70%) were ages 18 or 17. Ninety-three percent of the participants were freshmen and about half (48%) were enrolled in the business school. Twenty-five percent were enrolled in the college of Liberal Arts and 15% were enrolled in Pharmacy and Health Sciences. Seventy-one percent came from public high schools.

[Insert Table 1 about here]

Measures

The measurement items for the variables used in this study are listed in Table 2. Ducoffe's (1996) measures of Entertainment and Advertising Value were used. Brackett and Carr's (2001) measures of Informativeness, Irritation, and Credibility were used. Attitude toward the Vodcasts were adopted from Geissler, Zinkhan and Watson's (Geissler, Zinkhan, and Watson 2006) study. These measures were adapted for the Vodcast context. Action Intent was a measure developed to cater to desired university goals (King and Judge 2007). The variables of

Entertainment, Informativeness, Irritation, Credibility, Advertising Value and *Action Intent* were each formatted in a 5-point Likert-style with a scale ranging from ‘1’ (strongly disagree) to ‘5’ (strongly agree). Each item of the *Attitude* toward the Vodcast measure used a 5-point semantic differential scale as presented in Table 2. The demographic variable, *Business College Enrolled*, was coded as ‘1’ if the student was enrolled in the business college and ‘0’ if the student was enrolled in any other college. This variable was chosen since the Vodcasts were created to cater to the Business College needs in addition to general university needs (King and Judge 2007). The correlations, means, standard deviations, minimums and maximums for all variables are shown in Table 3.

[Insert Tables 2 and 3 about here]

Convergent and discriminant validity analysis

The convergent and discriminate validity across variables was examined in several ways. A confirmatory factor analysis, using LISREL 8.8 (Jöreskog and Sörbom 2006), showed that all loadings on expected latent variables were significant ($p < 0.001$). The loadings are shown in Table 2. The internal consistency for the measurement items was also calculated, using the composite reliability score developed by Werts and colleagues (Werts, Linn, and Jöreskog 1973). Composite reliability should be interpreted like a Cronbach’s alpha coefficient and should exceed 0.70 (Fornell and Larcker 1981). Finally, the average variance extracted (AVE) is the ratio of the construct variance to the total variance among the indicators, and should be greater than 0.50 (Fornell and Larcker 1981). The composite reliability and AVE values in Table 2 exceed recommended levels and thus the latent variables demonstrate good convergent validity. Discriminant validity refers to the extent to which a construct is different from other constructs. Constructs demonstrate discriminant validity if the AVE is higher than the squared correlation

between the constructs (Fornell and Larcker 1981). The square root of each AVE is higher than the correlations between the other constructs, demonstrating discriminant validity.

Structural model analysis

Three models were constructed and tested using Lisrel 8 (Jöreskog and Sörbom 2006) and their fit compared. Model 1 was a test of the model presented by Ducoffe (1996), shown in Figure 1. Model 2, represented by Figure 2, was the Ducoffe's (1996) model as modified by Brackett and Carr (2001), with an additional third dependent variable, Action Intent, similar to the model by Luo (2002). LISREL model results from Model 2 suggested that a modified model would improve the fit. Therefore we ran a final model, Model 3, shown in Figure 3. In Model 3, several non-significant paths were removed compared to Model 2, in order to make the Model 3 more parsimonious while retaining the same explanatory power as Model 2.

[Insert Figures 1, 2, and 3 about here]

Table 4 contains the goodness-of-fit statistics for the model tests. The first criterion for model fit is the non-statistical significance of the chi-square test, which indicates that the sample covariance matrix and the model-implied covariance matrix are similar (Schumacker and Lomax 2004). The chi-square for model 1 is not statistically significant ($p=0.07$) and the goodness-of-fit statistics are generally good (GFI = 0.94, AGFI = 0.89, NFI = 0.91), except for RMSEA (0.10), which should be below 0.06 (Hu and Bentler 1999).

[Insert Table 4 about here]

The fit statistics for model 2 (RMSEA=0.20, GFI=0.91, AGFI=0.61, NFI=0.94), were poor. In addition, the χ^2 (58.51, 8 *df*) suggested that the model-implied covariance matrix was statistically significant from the sample covariance matrix. To improve the fit, we modified the model based on suggestions from LISREL, to create a third model. The fit of the third model was

good (RMSEA = 0.00, GFI = 0.99, AGFI = 0.95, NFI = 0.99) and improved over model 2. The χ^2 (0.40, 8 *df*) for model 3 not significant, suggesting that the model-implied and sample covariance matrices did not differ significantly. In the next section we discuss the hypothesis test results from Models 1 and 3.

Results

The structural equation models are presented in Figures 1-3 and show the standardized parameter estimates and t-values of the relationships. The significant relationships are denoted with solid line arrows and the insignificant relationships are designated by broken line arrows. Table 5 summarizes the hypotheses testing results comparing structural equation models 1 and 3. Ducoffe's (1996) and following models suggested that *Entertainment* was positively associated with both *Advertising Value* of and *Attitude* toward Vodcasts (H_1). H_1 was partially supported in Model 1 and not supported in Model 3. In Model 1, *Entertainment* was positively associated with *Attitude* toward Vodcasts, but was not associated with *Advertising Value*. In Model 3, *Entertainment* did not influence the perceive value of or attitude toward the Vodcasts.

All other relationship hypothesized based on Ducoffe's (1996) model were supported in Model 1 and Model 3. Perceived *Informativeness* was positively associated with perceived *Advertising Value* (H_2). In Model 3, the standardized path coefficient between these two variables suggests that perceived *Advertising Value* increased 1.9% with every 10% increase in perceived *Informativeness* level. Hypothesis 3 (H_3) suggested that a higher level of perceived *Irritation* was associated with lower perceived *Advertising Value* of the Vodcasts, which was supported. In Model 3 the standardized path coefficient between these two variables suggests that perceived *Advertising Value* decreased 4.3% with every 10% increase in perceived *Irritation*

level. Hypothesis 4 posited that the perceived *Advertising Value* of the Vodcasts was associated positively with *Attitude* toward the Vodcasts (H₄). Based on the path coefficients, *Attitude* toward Vodcasts increased 7.6% with every 10% increase in perceived *Advertising Value*.

Hypotheses 5 to 9 were only tested in Model 3 based on Brackett and Carr's (2001) and Luo (2001) extensions. Brackett and Carr suggested that perceived *Credibility* was an important factor in assessing on-line *Advertising Value* and *Attitudes*, and that perceived *Informativeness* and *Demographics* were associated with *Attitudes*. Hypothesis 5 was supported as perceived *Credibility* was positively associated with perceived *Advertising Value*. In the model, for every 10% increase in perceived *Credibility*, perceived *Advertising Value* increased by 1.9%. Neither perceived *Credibility* nor perceived *Informativeness* was significantly related to *Attitude* toward Vodcasts (H₆ and H₇).

As hypothesized (H₈), the *Demographic, Business College Enrolled* was significantly related to *Attitude* toward Vodcasts. In the model, being enrolled in the business college increased *Attitude* toward Vodcasts by 1.5%. Finally, Luo (2002) suggested that *Intent to take Action* was a critical factor in modeling on-line advertising outcomes. Hypothesis 9 however was not supported. *Attitude* toward Vodcasts was not significantly related to *Action Intent* (H₉).

[Insert Table 5 about here]

In addition to the hypothesized relationships, two statistically significant relationships were found in the final model. Perceived *Informativeness* was directly related to *Action Intent*. For every 10% increase in perceived *Informativeness*, there was a 3.3% increase in *Action Intent*. In addition perceived *Advertising Value* was directly related to *Action Intent*. *Action Intent* increased 4.3% for every 10% increase in perceived *Advertising Value*.

Conclusions

The final model validates most of Ducoffe's (1996) as well as Brackett and Carr's (2001) hypothesized relationships in the context of Vodcasts. Three out of four motives, namely *Informativeness*, *Credibility*, and *Irritation*, directly contribute to perceived *Advertising Value* which in turn contributes to *Attitude* toward the advertising Vodcast.

Interestingly, in contrast to what Ducoffe found regarding web advertising in general, in terms of Vodcasts, perceived *Entertainment* does not significantly relate to either *Advertising Value* or *Attitude toward Advertising*. One possible explanation is that perceived *Irritation* is more important than *Entertainment* in the context of university promoting Vodcasts. Prospective students will probably not be motivated to watch university Vodcasts just for pure pleasure but would have other goals in mind. Prospective students are goal driven when researching universities to apply (Brackett and Carr 2005) and therefore when watching university Vodcasts expect to receive relevant and valuable information that motivates them to take additional actions.

The type of college in which a student was enrolled was a *relevant demographic* for the Vodcast context. Brackett and Carr (2001) identified college major as a *relevant demographic* that directly related to attitude toward advertising. Type of college enrolled closely relates to college major as choices of majors determine the college to be enrolled in. As the Vodcasts promoted the College of Business goals, in addition to aspects of student life on campus, the *relevant demographic* was constructed around whether students were enrolled in the college of business or in another college. Our model 3 supports Brackett and Carr's results indicating that students enrolled in the College of Business had a more positive attitude toward the Vodcasts than students enrolled in other colleges.

Finally, *Action Intent* was added to the Brackett and Carr's (2001) model, to tie the value of and attitude toward the Vodcast advertising to concrete university related outcomes. Luo (2002) used number of hours users spend on the internet as an outcome measure. In the Vodcasts case more specific action-oriented outcomes were developed. Though Luo's suggested relation between attitude and outcome was not supported in model 3, *Action Intent* was directly related to perceived *Advertising Value* and *Informativeness*. Thus, in the context of Vodcasts, the more informative the Vodcasts are, the more viewers are inclined to take university-related actions (e.g., visit the campus, apply, and ask for additional information). Also, the more the viewers see value in the Vodcasts, the more they inclined to be action driven.

Limitations and Future Research

Although this study sampled freshman students in a small private university, the results are consistent with more general on-line communication models. Additional research of university-based Vodcasts should be examined to strengthen the generalizability of results presented in this paper. *Action intent* was the only measure that was developed specifically for this study. All other measures were adapted from on-line communication literature. *Action intent* was developed with university general goals in creating Vodcasts (King and Judge, 2007) however it was only applied to one private university. Future research needs to establish the generalizability of action intent for academic institutes sampling private and public schools.

Finally, this study examined only the Vodcasts strategy on perceptions, value, attitude, and action. Future research should examine the Vodcasts strategy in relation to other communication tools. In addition, commercial benefits of the Vodcasts strategy should be examined in future research as our study focused only on academic institution benefits. In the

commercial setting, action intent probably will need to be reconstructed to meet the goals of the specific industries.

Managerial Implications

The perceived informativeness of Vodcasts plays a central role for student viewers in forming their perceptions about Vodcasts' value to them and in students' motivation to take university-related actions. Therefore, universities should pay significant attention to how to construct Vodcasts that communicate relevant information to prospective students. The information needs to be conveyed without irritating students with too much information or with information that presented in annoying or insulting way. Also, to help students perceive value and act, Vodcasts need to be perceived as credible. Student-driven spontaneous video clips that are taken in students' everyday environment probably would be perceived as more credible to viewers than staged or rehearsed video clips.

Finally, the focus on the entertainment level, credibility, and irritation level of video clips should be reconsidered. None of those characteristics were found to have a direct influence on action intent. If a primary purpose behind a Vodcast is to elicit action from prospective students, such as asking for an application or coming to the campus for a visit, the Vodcast should focus on being informative. Universities that post entertaining but not very informative Vodcasts on their websites may find that they have failed to motivate their target audience to take further actions toward enrollment.

Table 1
Descriptive Characteristics of Participants (N = 157)

Characteristic	Number	Frequency (%)
Gender:		
Males	92	57
Females	57	36
Did not answer	8	5
Age		
17	7	5
18	107	68
19	33	21
20	2	1
Did not answer	8	5
Year in College		
Freshman	147	93
Sophomore	2	1
Did not answer	8	5
College Enrolled		
Business	75	48
Education	12	8
Liberal Arts & Sciences	39	25
Pharmacy & Health Sciences	24	15
Fine Arts	7	4
Type of High School		
Public	111	71
Private	38	24
Did not answer	8	5

Table 2
Measurement Items and Statistics

Latent Variables	Measured Variable	Measurement Item	Standardized Loading	Composite Reliability	AVE
Entertainment	Ent1	The Vodcasts were entertaining	0.89***	0.94	0.75
	Ent2	The Vodcasts were enjoyable	0.88***		
	Ent3	The Vodcasts were pleasing	0.87***		
	Ent4	The Vodcasts were fun to watch	0.90***		
	Ent5	The Vodcasts were exciting	0.78***		
Informativeness	Info1	The Vodcasts were a good source of information	0.80***	0.86	0.66
	Info2	The Vodcasts supplied relevant information	0.88***		
	Info3	The Vodcasts provided timely information	0.76***		
Irritation	Irr1	The Vodcasts insulted people's intelligence	0.68***	0.85	0.66
	Irr2	The Vodcasts were annoying	0.90***		
	Irr3	The Vodcasts were irritating	0.84***		
Advertising Value	Val1	The Vodcasts were useful	0.83***	0.84	0.64
	Val2	The Vodcasts were valuable	0.87***		
	Val3	The Vodcasts were important	0.67***		
Attitude	Att1	I found the Vodcasts to be: '1' Unlikeable to '5' Likeable	0.77***	0.86	0.61
	Att2	I found the Vodcasts to be: '1' Uninformative to '5' Informative	0.88***		
	Att3	I found the Vodcasts to be: '1' Incomplete to '5' Complete	0.71***		
	Att4	I found the Vodcasts to be: '1' Poorly structured to '5' Well-structured	0.75***		
Credibility	Cred1	The Vodcasts were credible	0.83***	0.89	0.74
	Cred2	The Vodcasts were trustworthy	0.87***		
	Cred3	The Vodcasts were believable	0.67***		

Action Intent	Act1	The Vodcasts would prompt me to ask for additional information	0.59***	0.83	0.55
	Act2	I would use the information in the Vodcasts to help me decide about attending	0.70***		
	Act3	I would schedule a campus visit after watching the Vodcasts	0.79***		
	Act4	The Vodcasts would prompt me to apply	0.84***		
Business College Enrolled	Business College Enrolled	Which university college are you enrolled? (<i>select one</i>) College of Business College of Education College of Liberal Arts & Sciences College of Pharmacy & Health Sciences College of Fine Arts	1.00		

Table 3
Correlations, Means, Standard Deviations, Minimum, and Maximum

		1	2	3	4	5	6	7
1	Entertainment	0.87						
2	Informativeness	0.62 ^{**}	0.81					
3	Irritation	-0.49 ^{**}	-0.50 ^{**}	0.81				
4	Advertising Value	0.40 ^{**}	0.45 ^{**}	-0.49 ^{**}	0.80			
5	Attitude toward Vodcast	0.33 ^{**}	0.34 ^{**}	-0.41 ^{**}	0.48 ^{**}	0.78		
6	Credibility	0.66 ^{**}	0.69 ^{**}	-0.48 ^{**}	0.45 ^{**}	0.35 ^{**}	0.86	
7	Action Intent	0.38 ^{**}	0.46 ^{**}	-0.33 ^{**}	0.49 ^{**}	0.36 ^{**}	0.36 ^{**}	0.74
8	Business College Enrolled	0.90	0.15	-0.20*	0.13	0.20*	0.12	0.02
	Mean	3.99	4.04	1.87	3.82	4.08	4.02	3.73
	Standard Deviation	0.71	0.67	0.75	0.68	0.8	0.68	0.77
	Min	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Max	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Note: **p≤.01; *p≤.05; two tailed tests; Square root of the AVE for latent variables are bolded on the diagonal

Table 4
Structural Model Statistics

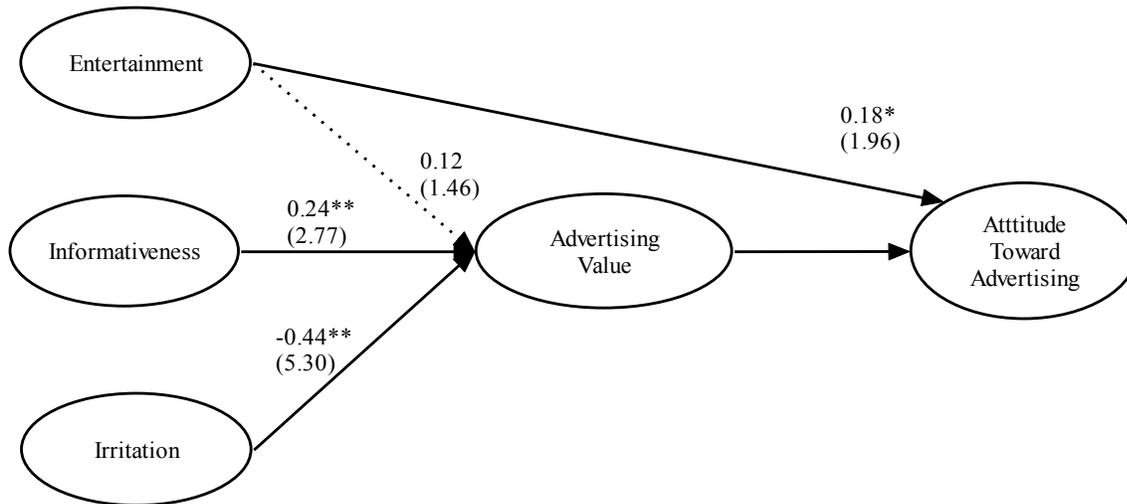
Model	χ^2	<i>df</i>	<i>p</i>	RMSEA	GFI	AGFI	NFI
1. Ducoffe model	5.31	2	0.07	0.10	0.99	0.90	0.99
2. Brackett and Carr model with Action Intent (Luo)	58.51	8	0.00	0.20	0.91	0.61	0.94
3. Final model	8.58	11	0.57	0.00	0.99	0.95	0.99

Note: RMSEA = Root-mean-square error of approximation; GFI = goodness-of-fit index, ratio of the sum of the squared differences between the observed and reproduced matrices to the observed variances; AGFI = adjusted goodness-of-fit index, adjusts GFI for degrees of freedom; NFI = normed fit index, compares proposed model with null model, not adjusted for degrees of freedom.

Table 5
Summary of Hypotheses Testing

Theoretical Model	Argument	Hypothesis	Structural Equation Results Model 1	Structural Equation Results Model 3
Ducoff's (1996) model	<i>Entertainment</i>	H ₁	Partially supported	
	(a) Perceived <i>entertainment</i> of the Vodcast will be positively associated with perceived <i>advertising value</i>		(a) Not Supported	(a) Not Supported
	(b) Perceived <i>entertainment</i> of the Vodcast will be positively associated with <i>attitude</i> toward the Vodcast		(b) Supported	(b) Not Supported
	<i>Informativeness</i>	H ₂	Supported	Supported
	• Perceived <i>informativeness</i> of the Vodcast will be positively associated with the perceived <i>advertising value</i> of the Vodcast			
<i>Irritation</i>	H ₃	Supported	Supported	
	• Perceived <i>irritation</i> of the Vodcast will be negatively associated with the perceived <i>advertising value</i> of the Vodcast			
<i>Advertising Value</i>	H ₄	Supported	Supported	
	• The perceived <i>advertising value</i> of the Vodcast will be positively associated with the <i>attitude</i>			

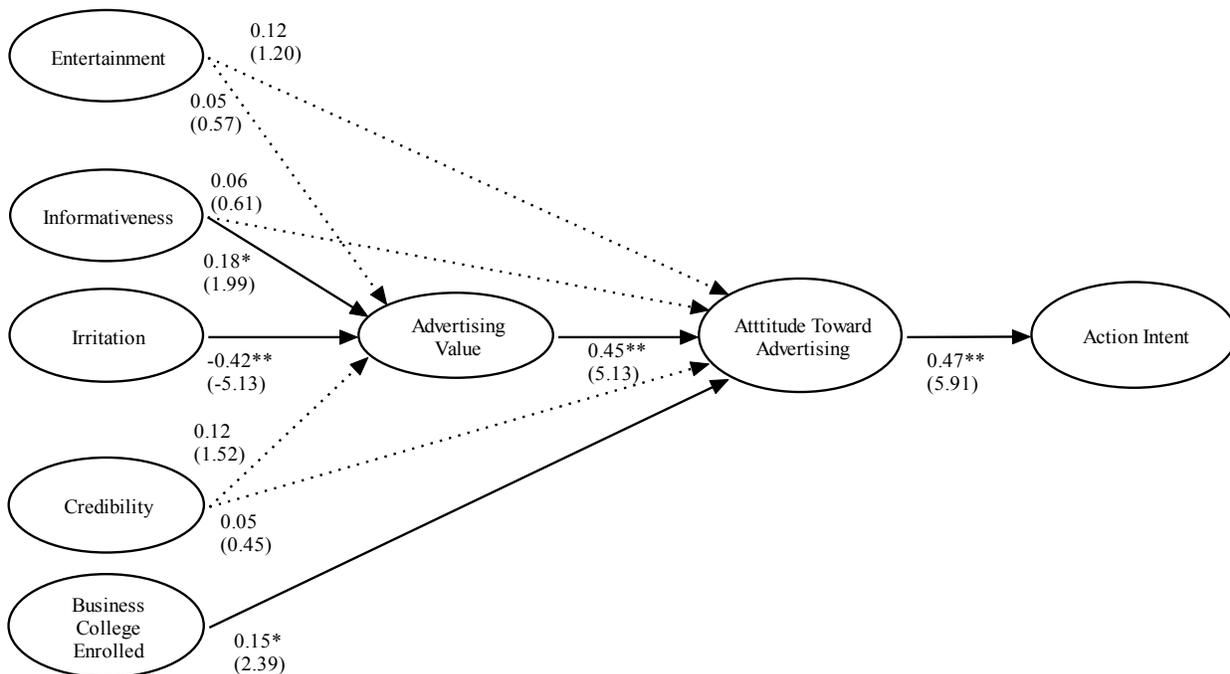
Theoretical Model	Argument	Hypothesis	Structural Equation Results Model 1	Structural Equation Results Model 3
	toward the Vodcast			
Brackett and Carr's (2001) extension	<i>Credibility</i>			
	(a) Perceived <i>credibility</i> of the Vodcast will be positively associated with the perceived <i>advertising value</i> of the Vodcast	H ₅	N/A	Supported
	(b) Perceived <i>credibility</i> of the Vodcast will be positively associated with the <i>attitude</i> toward the Vodcast	H ₆	N/A	Not supported
	<i>Informativeness</i>	H ₇	N/A	Not supported
	• Perceived <i>informativeness</i> will be more positively associated with the <i>attitude</i> toward the Vodcast			
	<i>Relevant demographics</i>	H ₈	N/A	Supported
	• <i>Relevant demographics</i> will have a direct relationship with the <i>attitude</i> toward the Vodcast			
Luo's (2002) extension	<i>Attitude toward Vodcast</i>	H ₉	N/A	Not supported
	• Attitude toward the Vodcast will be positively associated with the <i>intent to take actions</i> toward the university			



Note: This is a simplified version of the model. It does not show error terms. Solid lines indicate statistically significant paths; dotted lines indicated non-statistically significant path. Text alongside arrows indicates standardized path coefficients and t-values. ** $p \leq .01$; * $p \leq .05$; two tailed tests

Figure 1

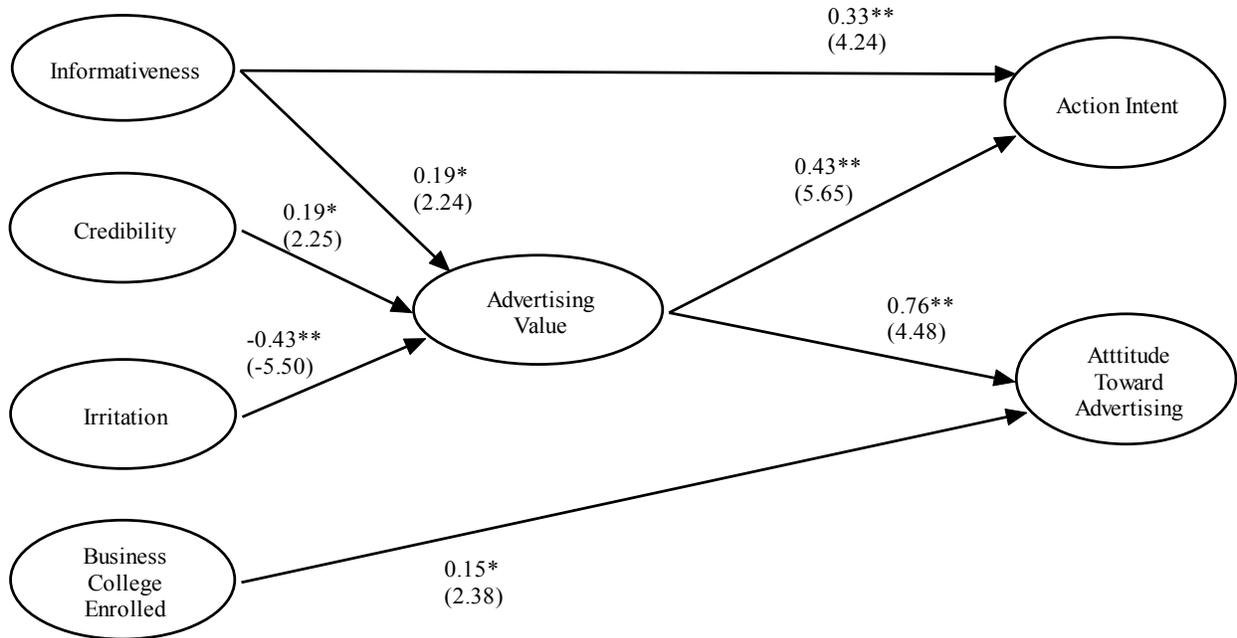
Structural Model 1 based on Ducoffe (1996)



Note: This is a simplified version of the model. It does not show error terms. Solid lines indicate statistically significant paths; dotted lines indicated non-statistically significant path. Text alongside arrows indicates standardized path coefficients and t-values. ** $p \leq .01$; * $p \leq .05$; two tailed tests

Figure 2

Structural Model 2 based on Brackett and Carr (2001) and Luo (2002)



Note: This is a simplified version of the model. It does not show error terms or non-statistically significant paths. Text alongside arrows indicates standardized path coefficients and t-values. ** $p \leq .01$; * $p \leq .05$; two tailed tests

Figure 3
Final Structural Equation Model 3

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