Running Head: iPad TV VIEWING

# Tablet Computers and Traditional TV Viewing: Is the iPad Replacing Television?

Clark F. Greer
Professor
Department of Communication & Theatre
Point Loma Nazarene University
San Diego, CA
(619) 849-2385
clarkgreer@pointloma.edu

Douglas A. Ferguson
Professor
Department of Communication
College of Charleston
Charleston, SC
(843) 953-7854
fergusond@cofc.edu

Submitted to the Interactive Media and Emerging Technologies Division
Broadcast Education Association
Annual Convention 2012

**Abstract**

Over the past two years, tablet computers have become increasingly popular devices. In particular, Apple's iPad and its accompanying apps have taken the tablet market by storm. The technology enables users to accomplish a variety of tasks, including viewing TV programs and other video sources on the device. Based on media uses and gratifications, an exploratory study examined whether the iPad was replacing traditional TV viewing. Results showed that, rather than displacing time with TV, the amount of TV viewing on an iPad was positively related to the amount of time watching traditional TV.

# Tablet Computers and Traditional TV Viewing:

# Is the iPad Replacing Television?

In January 2010, Apple, Inc. introduced its iPad tablet computer. At its unveiling, corporate CEO Steve Jobs proclaimed the iPad "a magical and revolutionary device" (Apple, 2010a). Although Jobs' statement was likely intended to characterize the device and its predicted uses, his description turned out to be prophetic for the rapid diffusion of the product and its associated tools. On the first day the iPad became available to the public in April 2010, the company sold 300,000 of the devices (Apple, 2010b). During its "fiscal 2011 third quarter" alone, Apple reported selling more than 9-million iPads (Apple, 2011b). Although Apple faces competitors in tablet technology, Nielsen reported that, as of 2011, more than 80% of tablets in use were iPads (Walsh, 2011).

Coupled with the popularity of the device is the number of programs (apps) that are available for the iPad. According to a report in CNN Money (Elmer-Dewitt, 2011), by mid-2011 more than 100,000 apps had been "written or adapted" for the device (para. 1). Additionally, Apple stated that as of July 2011, more than 15 billion apps for use on iPad, iPhone and iPod Touch had been downloaded "worldwide" from the company's app store (Apple, 2011a, para. 1).

National media organizations are beginning to capitalize on this technology through the development of their own apps. For example, PBS is providing videos from PBS Kids and PBS Kids Go via an iPad app ("PBS introduces," 2011). HBO Go makes mobile content available anywhere to its subscribers (Corr, 2011). ESPN is available through an iPad app for subscribers through providers such as Time Warner Cable and Verizon (Worden, 2011). In July 2011, CNN announced that it was offering subscribers of several cable and satellite services a live stream of

its programming through the CNN.com website and through apps for Apple portable devices (Reardon, 2011).

Local television stations also are using apps to provide news, weather, traffic reports, sports, and video any time of the day to a mobile audience (Whitney, 2011). Content providers, both locally and nationally, are still trying to determine which television shows they will be able to offer and whether to provide services for free or on a subscription basis (Mossberg, 2011). For local stations, distributing their own content via apps is beneficial because there is less concern about legal issues associated with content distribution (State of the News Media, 2011), such as those faced by cable providers (Flint, 2011; Goetzl, 2011). Another benefit for TV stations is that apps may serve as an additional source of revenue (Whitney, 2011).

The diffusion of mobile computing technology, especially the iPad, has been phenomenal. More important, however, are the potential effects this device might have on the public's use of traditional media. Streaming video has been part of Web fare for more than a decade. Although smart phones are capable of receiving Internet video streams, one concern is a small screen size that may be a limiting factor in the amount of video an individual watches. That becomes less of a concern with the iPad because of its much larger screen. Given that factor and the increased availability of apps that permit viewing of television programs and other videos, this study provides an exploratory analysis of the extent to which the iPad might be replacing traditional television consumption. This topic is pertinent not only for media researchers, but also for broadcasters, as television content moves from purely traditional delivery via a TV set and Internet streaming to portable devices (Mossberg, 2011).

## Tablet Computing

The diffusion of new communication technologies is often associated with variables such as age, income and education. For example, Ditta-Bergman (2004) observed that individuals who read news online tended to be younger, male, more educated, and had a higher income. In relation to the iPad, specifically, research by GfK MRI found that men were more likely than women to own the device (eMarketer, 2011a). Similarly, an iPad study by the Reynolds Journalism Institute at the University of Missouri-Columbia (Fidler, 2010) revealed that about 80% of respondents were male, more than 75% held a bachelor's degree, and slightly more than 50% had annual "household income of at least $100,000" (para. 2). According to comScore (2011) data, 27% of iPad users were ages 25-34, followed by slightly over 20% for ages 35-44.

One crucial question for the communication industry in general and broadcasters in particular is the effect that the Internet and mobile devices are having on television, especially as it relates to cable and satellite connections in the home. Although 27% of subscribers to connected television services watch video on a mobile device, only 3% indicated they had cut the cord (Friedman, 2011). An eMarketer study (2011b) found that 34% of people who own tablet computers spend more time with the device than with television. Although Americans still prefer watching a TV set, a study by the Cable & Telecommunications Association for Marketing (CTAM) (2010) found that 26% of survey respondents watched television shows and/or movies via the Internet. Furthermore, the study revealed that 6% watched on cell phones and 6% viewed video on portable devices.

On the other hand, tablet use might actually be an overlapping with other media rather than a singular activity to the exclusion of other media. For example, a Nielsen study (Bergman,

2011) revealed that 30% of iPad users use the device while watching television. That study also found that TV was the most prevalent activity while also using the iPad.

The iPad also appears to be changing Americans' use of computers. Nielsen research data indicated that 35% of people who own tablet computers spend less time on desktop computers (Walsh, 2011). Additionally, 32% of respondents noted that they spend less time on laptops.

Perhaps the biggest driving force behind the rapid diffusion of the iPad and other tablet computers is the wide range of apps that are available for the devices. The downloadable programs offer users the ability to transfer files, watch videos, play games, read the latest news, draw (Chen, 2011) and accomplish a seemingly unlimited number of other tasks.

How are tablet computer owners using these devices? According to March 2011 AdMob research, entertainment is the number one target (eMarketer, 2011b). More than 80% of owners indicated they use the technology for playing games. However, 78% noted they used the tablet for "searching for information." Also, eight in ten of respondents indicated they used their tablet computer at home versus on the go.

Tablet owners also appear to be interested in news and their communities. The AdMod study cited above found that 61% of tablet computer owners use the technology for "reading the news" (eMarketer, 2011b). Research released by the Project for Excellence in Journalism (Rosenstiel, Mitchell, Rainie, & Purcell, 2011) revealed that 47% of people who own a smart phone or tablet computer, indicated they get "at least some local news and information" on one of those types of devices. In addition, 13% of mobile users indicated they have an app through which they obtain news content.

In a series of studies (Fidler, 2010, 2011) examined the relationship between iPad users and their consumption of news. In the early study, Fidler (2010) found that breaking news and

current events was the primary use of the technology for than 80% of respondents. More than 70% of users who spend at least a hour reading news on their iPad indicated they were “very likely” to use a newspaper's app to obtain news rather than read news on the website of the paper. An especially pertinent finding in relation to the present study is the statistically significant relationship between iPad use for news and reduced time spent reading the print version of a newspaper. In a follow-up study, Fidler (2011) found that reading news via apps from aggregating sources was the most likely activity for 51% of iPad users, followed by 41% who used an app to read a newspaper. More than a third of users accessed news "once or twice a day" on the device. Seventeen percent of subscribers to print newspapers indicated it was very likely they would cancel their print subscription “in the next six months.” However, the study also revealed that not all newspaper subscribers are ready to relinquish their print editions. Twenty-seven percent of respondents who subscribed to a paper, indicated they were very unlikely to cancel their print subscriptions in the next half year.

## Media Gratifications and Displacement

It has long been recognized that people are active in their selection of media types and content in order to fulfill certain needs, including those associated with information acquisition, connections to society or self, and even escape (Katz, Blumler, & Gurevitch, 1975). The historical assumptions of uses and gratifications also posited that a particular medium possesses certain characteristics that help to satisfy a person's needs, so that the attributes of some media are more suited than others for fulfilling needs. The focus of that proposition is the differences between media types based on attributes. However, the inverse also may be true in that there are similarities between media so that a person’s needs can be met equally well by one medium or the other (Katz, Blumler, & Gurevitch, 1975).

The central issue of the present study is the extent to which there is an observable displacement of an existing medium by new technology. Research regarding the displacement of one medium by another can be traced to Schramm, Lyle and Parker's (1961) study of a small Canadian town. The goal of the study was to determine the extent to which the introduction of television reduced the amount of time spent with existing media, particularly children's use of media. The Schramm and his colleagues found that television seemed to displace the amount of time children spent with "radio, movies, and comic books," but not "newspapers, books, and magazines" (p. 19).

In the intervening years since Schramm, Lyle and Parker's (1961) research, the results of several of studies supported the notion that increased use of a new medium appeared to decrease the usage of another. For example, Henke and Donohue (1989) found that VCR use was displacing time spent with television, but it was dependent upon the uses of the VCR that were important to the individual. Ferguson, Greer and Reardon (2007) found that college students who spent more time listening to their iPod or other MP3 device spent less time listening to the radio.

Over the past two decades, the ubiquity of personal computers and online communication have prompted researchers to consider the effects of new media on traditional communication. Of specific importance to the present study is prior research dealing with emerging technologies on television viewing. Kayana and Yelsma (2000) studied the effects of online media use on traditional media and family communication. Although not statistically significant, there was some displacement of time spent with television. They found that functional displacement was based on the type of content. The informational function of online media was displacing television, but there were no significant differences for the entertainment function between television and online media.

Ferguson and Perse (2000) sought to determine whether the Web served as a functional alternative to television. They found that entertainment was a likely motivation for using the Web over television. However, typical motivations for watching television, such as passing time, relaxation and companionship, were not associated with Web use. The researchers concluded that the Web is different "functionally from television viewing" (p. 169).

Cai (2004) examined the relationship between college students' use of computers and traditional media. Students were asked to restrict their use of computers, then other media. The reduced use of the computer for entertainment did not affect the time spent with other media. However, reduced time with television was related to spending more time with other media, except the computer. Cai concluded that the findings of the study did not appear to follow the idea of functional equivalence between traditional and new media. However, that could be attributed to the computer having functions that are unique compared with other media.

More recently, Newell, Pilotta and Thomas (2008) argued that displacement can be either symmetrical or functional. Symmetrical displacement focuses on the correlation between time spent between media, so that increased usage of one is related to the decreased usage of another. On the other hand, functional displacement is the action whereby the functions of one medium replace another. In that instance, the new medium is better able to fulfill a person's needs than the former medium. One example was television replacing some of the traditional functions of radio during TV's early years (Newell, 2007).

In reality, there are a limited number of hours in a day that an individual can spend with a given medium. Given that fact, the approach of media research has often assumed what Kayana and Yelsma (2000) termed a "zero-sum" relationship in which the introduction of a new medium takes the place of an existing one. Instead, Pilotta and Schultz (2005) argued that various media

might be used simultaneously during "intermittent activities of daily life" (p. 26). According to a study by Arbitron and Edison Research, people are spending 20% more time using electronic media compared with 10 years ago (Mindlin, 2011). That finding was partially attributed to the increased number of individuals who were online, as well as the use of smart phones.

With that in mind, Newell, Pilotta and Thomas (2008) asked whether the issue concerns one medium replacing another or if it is actually a matter of individuals using several media simultaneously. Compared with prior cross-sectional research, they examined the usage of multiple media in a longitudinal study that encompassed four years. During that time, they found an increase in total media use. Most important was their finding that there were no observed increases in time spent with one medium at the expense of another. Newell and colleagues suggested it is possible that new media are being incorporated into time spent with old media, since there was no significant increase or decrease in the usage of either types of communication.

In follow-up studies to Schramm, Lyle and Parker's (1961) research cited earlier, Newell (2007) examined recent media use in the same Canadian town regarding media displacement. Newell found that, just as people did not relinquish the use of radio during the introduction of television in the 1960s, they also did not substitute the Internet for television in 2000. Newell argued that media use was more an issue of "saturation than media displacement" (p. 10), since respondents had more access to multiple types of media. Rather than newer media replacing the older, media use was continuous and usage, overall, had increased.

Ditto-Bergman (2004) examined news acquisition from the standpoint of media complementary theory. This approach compares usage (or non-usage) based on content rather than time spent with media. In the results of the study, individuals who used traditional broadcast and print media for information on a given topic also accessed that type of information online.

The notion that information gathering might not just be allocated to one form or communication also might relate to portable media, with mobile devices serving as one part of a larger media mix. For example, just over half of respondents in the Project in Excellence in Journalism study cited earlier in this paper indicated that they get local news and information from multiple media platforms (Rosenstiel, Mitchell, Rainie, & Purcell, 2011). Similarly, Fidler (2010) found that iPad users obtain news on a variety of platforms.

## Channel Repertoire

Given the iPad's potential similarities to television, comparisons might also be made regarding the regular selection of content as compared with the types and quantities of channels that have been observed in prior research. Channel repertoire is defined as "the number of available television channels that viewers choose to watch" (Ferguson & Perse, 1993, p. 31), thus highlighting the active nature of audiences in the process of media selection. Despite the number of available channels, individuals tend to select a set of channels that they regularly view (Heeter, 1985). Even satellite television viewers were found to have a repertoire of channels, despite the number of sources available to them (Lochte & Warren, 1989).

A number of factors may affect the number of channels viewed. Research regarding television channel repertoire has shown that the selection of channels watched is based on routines (Heeter, 1985). Additionally, people with more leisure time were found to have a higher number of channels in their viewing repertoire (Ferguson & Melkote, 1997). Studies also have shown that relationship exists between the types of channels viewed and demographic variables, such as gender and race (Neuendorf, Atkin, & Jeffres, 2001). Also, individuals who used a television remote control had a higher channel repertoire than non-users (Ferguson, 1992).

The concept of channel repertoire has also been extended from television to examining a person's Web repertoire. Compared with the number of cable or even satellite channels, there are millions of potential sites a person might visit. To deal with that challenge, Ferguson and Perse (2000) used a list of the top 100 visited sites during the week of their study. As with earlier television studies, respondents regularly visited an average of between 4 and 5 of the sites.

Based on the results of prior research about media displacement, the following questions are posed:

RQ1: What is the relationship between user demographics and viewing television on an iPad?

RQ2a: Do iPad users have a repertoire of programs (and thus channels) that they regularly watch on their device? Is it related to satisfaction with watching TV on an iPad?

RQ2b: What is the relationship between channel repertoire, demographic variables, and time spent viewing television programs on an iPad?

RQ3: What is the relationship between affinity for the iPad and time spent with the device for viewing television programs?

RQ4: Is there a relationship between iPad usage motives, technological experience and amount of time viewing television on an iPad?

RQ5: What is the relationship between time spent viewing TV on an iPad, on a TV set, and on a computer?

## Method

In August and September 2011, study participants were recruited to complete an online questionnaire about their use of the iPad to watch television programs. Because of the requirement that respondents use their iPad in this fashion, several methods were used to

disseminate survey invitations to potential respondents. This included posting survey invitations on the pages of various iPad groups on Facebook, other iPad forums, and Facebook friends of college students and other individuals. Invitations were also sent via email to approximately 3,100 undergraduate and graduate students at a small west coast university. More invitations were sent to 175 undergraduates at an east coast college. 153 people attempted to answer the survey, but not everyone finished all the items. 87 respondents professed experience watching TV on an iPad and 73 of them answered most of the iPad TV motivation questions. Cohen (1988) estimated that a sample size of 64 is sufficient to detect medium- and large-sized effects.

**Demographics**

Of the 87 iPad users, there were 29 males (33.3 %) and 58 females (66.7%). The ages ranged from 18 to 84 (M=28.81, SD=15.68, n=85), with 53 respondents between 18 and 22. Respondents also indicated their completed education on a 7-point scale from high school to doctoral education (M=2.76, SD=1.41). Most respondents either had some college (51.7%) or a bachelor's degree (23.0). 11.5% reported a high school degree and 3.4% had an associate's degree. Master's, professional and doctoral degrees represented 5.7%, 2.3% and 2.3%, respectively.

**iPad and TV Use**

Respondents were asked a set of three questions that relate to time spent with various technology: (1) the number of hours and minutes they watched a television set yesterday; (2) the total number of hours and minutes they used their iPad yesterday for all activities; and (3) the total hours and minutes they watched television programs on their iPad yesterday; and (4) total hours and minutes they spent watching TV programs on a computer other than an iPad. TV time ranged from 0 to 645 minutes (M=103.93, SD=115.61), total time spent with an iPad ranged

from 0 to 530 minutes (M=101.40, SD=116.17), time spent viewing TV on an iPad ranged from 0 to 180 minutes (M=21.75, SD=47.41), and time spent viewing TV programs on a computer ranged from 0 to 530 minutes (M=54.62, SD=99.02)

Next, respondents were asked to rate (on a 5-point scale) their level of expertise using an iPad (adapted from Ferguson & Perse, 2000). As indicated above, 87 people responded (M=3.34, SD=1.17).

Two sets of questions were adapted from Fidler (2011). First, based on a 5-point scale (not at all to a great deal), respondents were asked about the extent to which they watch TV on an iPad at four different locations: home, school, work, during transit (bus, car, etc.). Home use was highest (M=2.28, SD=1.43), with the remaining locations ranked as follows: transit (M=1.76, SD=1.17), school (M=1.55, SD=1.00), and work (M=1.28, SD=0.75). Second, respondents were asked to indicate on a 5-point scale (not at all to great deal) the extent to which they viewed TV on their iPad during specific dayparts. The three most popular times were 7:30-11:00 p.m. (M=2.14, SD=1.42), 4:30-7:30 p.m. (M=1.89, SD=1.16), and 11:00 p.m.-1:00 a.m. (M=1.72, SD=1.21).

Two items, adapted from prior research (Palmgreen & Rayburn, 1985; Perse & Ferguson, 1993), asked respondents to rate their level of satisfaction in general with an iPad and with using the iPad to watch TV. Overall satisfaction ranged from 1 to 5 (M=4.09, SD=1.03, n=85) and satisfaction with watching TV on the iPad had the same low-to-high range (M=2.95, SD=1.25, n=82).

Respondents were then presented with two questions related to channel repertoire. First, they were asked to indicate how often they watched six different categories of TV programs on their iPad (adapted from Rubin, 1984), using a 5-point scale (not at all to a great deal): news

(M=1.83, SD=1.16), sports (M=1.74, SD=1.19), movies (M=2.77, SD=1.57), scripted shows (M=2.33, SD=1.44), unscripted reality (M=1.56, SD=0.94), and talk (M=1.32, SD=0.69). Second, respondents were asked to list specific TV programs they viewed on their device (Heeter, 1985). These shows were tallied into a measure of different shows, or channel repertoire, which ranged from 0 to 6 (M=2.03, SD=1.57).

Research conducted by Nielsen in June 2011 showed that people who watched online videos spent the most time using Netflix, followed by Hulu. In addition, apps are available for users to watch video through those two sources on their iPad (Mossberg, 2011). According to the Nielsen study cited above, only 3-percent of Netflix viewers and 1-percent of Hulu viewers use an iPad app to watch video from those sources. Given those factors, respondents were asked to indicate the frequency with which they used Netflix and Hulu apps on their iPad, using a 5-point scale ranging from never to frequently. Netflix (M=2.61, SD=1.67) scored higher than Hulu (M=1.46, SD=1.04).

**Affinity**

iPad use for television represents a convergence of portable media, television viewing and online content. Drawing on prior research dealing with affinity toward television and new communication technologies (Rubin, 1984; Ferguson, Greer, & Reardon, 2007), respondents were presented with five items and asked to rank their level of agreement toward the iPad on a 5-point scale (1=strongly disagree; 5=strongly agree). Responses were summed to create an affinity index, after discarding one of the items to create a more reliable measure. Affinity ranged from 4 to 20 (M=8.99, SD=4.14, alpha=.88)

Finally, respondents were asked to indicate, on a scale of one to five (strongly disagree to strongly agree) their agreement with 27 statements that served as motivations for watching TV

programs on an iPad. Items were adapted from prior research about television viewing in general (Rubin, 1981). 8 items were used to measure ritualistic motivations (M=18.56, SD=6.93, alpha=.88) and 8 items were used to measure instrumental motivations (M=17.84, SD=7.02, alpha=.91). The 16 items were identical to those used by Ferguson and Perse (1993), but reworded to reflect iPad viewing.

## Results

The first research question asked about the relationship between user demographics and viewing television on an iPad. Neither age nor education were significant predictors of iPad television use. However, age and education were both negatively correlated with iPad TV repertoire ($r$=-.36, $p$<.01, N=68; $r$=-.32, $p$<.01, N=70). In addition, there was a near-significant difference in iPad TV use related to gender ($t$=1.83, $df$=50, $p$=.07). Males (M=39.38 minutes, SD=63.61, N=16) tended to use the iPad for this purpose more than females (M=13.91, SD=36.55, N=36).

Research question 2a sought to determine whether iPad users have a repertoire of programs (and thus channels) that they regularly watch on their device. Results indicate that a repertoire exists based on the shows compared with the genres, as described above in the Method section. Repertoire was related to iPad TV satisfaction ($r$=.25, $p$<.05, N=69).

To answer research question 2b, a hierarchical regression was run to see if total repertoire and demographic variables predicted time spent viewing television programs on an iPad. The results of the analysis did not show statistically significant predictors of time spent viewing.

The third research question focused on the relationship between affinity for the iPad and time spent with the device for viewing television programs. Results showed that, while affinity is correlated with general use ($r$=.45, $p$<.01, N=44), only 40 respondents used their iPad for

watching TV ($r$=.27, $p$=.09). Given the size of the correlation, a slightly larger sample might have produced a significant association.

The fourth research question asked whether there was a relationship between iPad usage motives, technological experience and amount of time viewing television on an iPad. A hierarchical regression of total iPad use for watching TV on demographics in the first step, iPad experience in the second step, and viewing motivations in the third step produced a significant model (F=2.87, $p$<.05) explaining 38.1% of the variance. Neither the demographic variables nor iPad experience were significant predictors, but ritualistic (beta = .06) and instrumental motivations (beta = .44) produced a significant ($p$=.03) change in $R^2$ (delta = 0.25).

The final research question asked whether there was a relationship between time spent viewing TV on an iPad compared with viewing programs on a TV set or a computer. Results showed that there was a statistically significant positive correlation between viewing TV on an iPad and a regular TV set ($r$=.32; $p$<.05). However, there were no significant relationships between viewing TV on an iPad and PC, or between TV viewing on a TV set and a PC.

## Discussion

Since its debut in early 2010, Apple's iPad and its accompanying apps have dominated the tablet computer market. As of 2011, more than 80% of tablets in use were iPads (Walsh, 2011). By mid-2011, more than 100,000 apps had been developed or adapted for the device (Elmer-Dewitt, 2011). Media entities, including broadcasters and cable companies, are providing an increasing amount of content that can be viewed on the iPad. The purpose of this exploratory study was to examine the extent to which iPad users are watching television programs on this technology, their motivations and attitudes toward the device.

Demographic comparisons with iPad use for television viewing produced mixed results. Prior research studies have noted that the diffusion of a new technology tends to be related to age, so that a younger demographic adopts the technology earlier than older ages. However, the results of the present study did not follow that pattern. Age was not found to be a significant predictor of using the iPad to watch television. At the same time, however, both age and education level were negatively correlated with repertoire. iPad TV users who were older and more educated appeared to have a smaller repertoire.

Previous research has examined what is termed "channel repertoire," which is the number of television channels that an individual views out of the total number of channels available (Ferguson & Perse, 1993). Earlier studies found that viewers have a small number of channel that they watch on a regular basis (e.g., Heeter, 1985), including viewers of satellite television (Lochte & Warren, 1989). Even Internet users have been found to have a limited online repertoire of websites that they access regularly (Ferguson & Perse, 2000). As a point of comparison, the present study also examined iPad viewing repertoire, based on a list of television shows compared with program genre. Consistent with prior research, this study found that iPad TV viewers also have a repertoire of content. Furthermore, repertoire was also related to iPad television viewing satisfaction.

Results of this study showed that movies were the most watched form of programming on the iPad, followed by scripted television shows. Given findings of the Nielsen (2011) study that Netflix is the most used source to watch online video, an ad hoc analysis was run between Netflix usage on the iPad and the level of viewing movies on the device. Results showed a strong positive correlation between the two variables ($r$=.636, $p$<.001).

In contrast with the top two uses of the iPad noted above, users were less likely to watch news, sports, unscripted shows and talk programs on their device. This finding is interesting compared with findings of Fidler's (2010) study of iPad users. His research showed that, for his respondents, news and current events was the top content accessed (in the last 30 days) on an iPad, while entertainment was the fifth most popular type of use. The finding that movies played a more important role for respondents in the present study might be due to the focus of this research. The invitation to participate in this study was targeted at people who watched TV programs on their iPad. Therefore, individuals who completed the survey were likely more interested in entertainment rather than information content.

iPad usage studies have shown that owners of the device are loyal to the technology. Fidler (2010) found that 70-percent of users he surveyed were "very satisfied" with the iPad, and that 76-percent were very likely to "recommend the iPad to a friend or relative." Respondents to the present study also appeared to have a high level of satisfaction with the device. On a scale of one to five, overall satisfaction averaged 4.09. However, when it came to watching TV on the iPad, the level of satisfaction averaged 2.95 on the same 5-point scale. Future research should seek to understand more about users' experience watching TV on the device. Another interesting finding was related to the affinity index. While respondents were satisfied with an iPad, affinity toward the technology ranged from 4 to 20, with a mean of just under 9 (out of a possible 20).

The big question for this study is whether using the iPad to watch TV is replacing television viewing on regular sets. Some prior research has shown that displacement is not simply one medium versus another, but rather might actually be dependent upon a person's use of the particular technology (e.g., Henke & Donohue, 1989), as well as usage motivations (e.g., Ferguson & Perse, 2000). In the present study, time spent watching TV on an iPad did not seem

to be replacing time spent with watching a TV set. On the contrary, there was a positive correlation between the use of those two technologies. One possible explanation is that the iPad is a technology that is functionally similar to a TV set. Perhaps television audiences are using different media to view the same content. At the same time, there were no significant relationships between time spent viewing TV on an iPad and a computer, or between time spent viewing television on a set and on a computer. Respondents were equally as likely to view TV programming on either of those technologies.

Motivations for viewing TV on an iPad are important to note. Demographic variables and iPad experience were not significant predictors of using the iPad to watch television. However, a regression analysis showed that instrumental and ritualistic motivations were significant predictors. This suggests that people who use an iPad to watch TV are similar in their motivations to those observed in Rubin's (1981, 1984) early research about traditional television viewing. This suggests that the iPad as a TV source might be perceived as functionally similar to traditional TV.

Although technology changes, some things remain the same. For example, iPad TV viewers exhibited similar habits in relation to channel repertoire. Future research should delve more deeply into that issue to determine if individuals who watch TV on their iPad are viewing the same programs that they typically watch on a regular TV set.

A number of limitations should be noted regarding this study. The most important concern was the low response rate. Despite distributing survey invitations through a number of channels, few individuals completed the questionnaire. One reason might be the target audience. Because the purpose of the study was to assess the uses of the iPad for viewing TV, this immediately limited the number of respondents. Second might be the questionnaire itself.

Comparing iPad TV viewing with prior television studies necessitated the inclusion of multiple sets of scaled items, including the section with 27 motivations. A third reason is information overload. Given the amount of information that flows through social network sites, email and technology interest forums, it would be easy for readers to simply ignore the survey invitation.

Since this is an exploratory study, application of the data should be used with caution. An attempt was made to distribute survey invitations through various channels across the U.S. However, because of the low response rate, the results cannot be generalized to the population of iPad TV viewers. Despite that issue, this study provides at least a glimpse at individuals who use their iPad for this purpose. Additionally, this study provides broadcasters and other video content providers with helpful information about iPad TV viewers. Academic researchers and media practitioners should both continue to follow trends in iPad TV usage to determine how mobile technologies are changing the notion of the traditional audience member.

## References

Apple Computer (2010a, January 27). Apple launches iPad. [Press release]. Retrieved from http://www.apple.com/pr/library/2010/01/27Apple-Launches-iPad.html

Apple Computer (2010b, April 5). Apple sells over 300,000 iPads first day. [Press release]. Retrieved from http://www.apple.com/pr/library/2010/04/05Apple-Sells-Over-300-000-iPads-First-Day.html

Apple Computer (2011a, July 7). Apple's App Store downloads top 15 billion. [Press release]. Retrieved from http://www.apple.com/or/library/2011/07/07Apples-App-Store-Downloads-Top-15-Billion

Apple Computer (2011b, July 19). Apple reports third quarter results. [Press release]. Retrieved from http://www.apple.com/pr/library/2011/07/19Apple-Reports-Third-Quarter-Results.html

Bergman, C. (2011, May 20). iPad users spend most time in front of TV. Retrieved from *LostRemotes.com*.

Cable & Telecommunications Association for Marketing (2010, June 23). Study shows social networking feeds Americans' hunger for television. [Press release]. Retrieved from http://www.ctam.com/html/news/releases/2010-06-24.htm_Android_by_59_Percent_in_U.S

Cai, X. (2004). Is the computer a functional alternative to traditional media? *Communication Research Reports, 21* (1), 26-38.

Chen, B. X. (2011, March 19). 10 apps you should download for iPad 2. *Wired*. Retrieved from http://www.wired.com/gadgetlab/2011/03/download-apps-ipad/?pid=1627

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

comScore (2011, April 11). Apple iOS platform outreaches Android by 59 percent in U.S. when accounting for mobile phones, tablets and other connected media devices. [Press release]. Retrieved from http://www.comscore.com/Press_Events/Press_Releases/2011/4/Apple_iOS_Platform_Outreaches

Corr, A. (2011, May 11). Out to launch. *Media Post Communications*. Retrieved from http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=150346

Ditta-Bergman, M. J. (2004). Complementarity in consumption of news types across tradition and new media. *Journal of Broadcasting & Electronic Media, 48*(1), 41-60.

Elmer-DeWitt, P. (2001, June 30). Apple iPad apps: 100,000+. Android tablet apps: 1,300+. *CNN Money*. Retrieved from http://tech.fortune.cnn.com

eMarketer (2011a, July 22). Men still lead the tablet revolution. Retrieved from http://www.emarketer.com/Articles/Print.aspx?1008507

eMarketer (2011b, April 20). Tablets quickly become major home entertainment device. Retrieved from http://www.emarketer.tv/Article.aspx?R=1008350

Ferguson, D. A. (1992). Channel repertoire in the presence of remote control devices, VCRs and cable television. *Journal of Broadcasting & Electronic Media, 36*(1), 83-91.

Ferguson, D. A., Greer, C. F., & Reardon, M. E. (2007). Uses and gratifications of MP3 players by college students: Are iPods more popular than radio? *Journal of Radio Studies, 14*(2), 102-121.

Ferguson, D. A., & Melkote, S. R. (1997). Leisure time and channel repertoire in a multichannel environment. *Communication Research Reports, 14*(2), 189-194.

Ferguson, D. A., & Perse, E. M. (1993). Media and audience influence on channel repertoire. *Journal of Broadcasting & Electronic Media, 37*(1), 31-47.

Ferguson, D. A., & Perse, E. M. (2000). The World Wide Web as a functional alternative to television. *Journal of Broadcasting & Electronic Media, 44*(2), 155-175.

Fidler, R (2010). iPad news apps may diminish newspaper print subscriptions in 2011. RJI: Donald Reynolds Journalism Institute, University of Missouri. Retrieved from http://rjionline.org/news/rji-dpa-fall-2010-ipad-survey-results

Fidler, R. (2011). RJI-DPA spring 2011 iPad survey results. RJI Donald W. Reynolds Journalism Institute, University of Missouri. Retrieved from http://rjionline.org/news/rji-dpa-spring-2011-ipad-survey-results

Flint, J. (2011, March 30). News Corp's Fox tells Time Warner Cable to stop offering its channels on the iPad. *Los Angeles Times*. Retrieved from: http://latimesblogs.latimes.com/entertainmentnewsbuzz/2011/03/news-corps-fox-tells-time-warner-cable-to-stop-offering-its-channels-on-ipad.html

Friedman, K. (2011, June 29). TV holds: Young adults more likely to media migrate. *Media Daily News*. Retrieved from http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=153318

Goetzl, D. (2011, May 13). CableVision fields complaints about iPad streaming. *Media Daily News*. Retrieved from http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=150513

Heeter, C. (1985). Program selection with abundance of choice: A process model. *Human Communication Research, 12*(1), 126-152.

Henke, L. L., & Donohue, T. R. (1989) Functional displacement of traditional TV viewing by VCR owners. *Journal of Advertising Research, 29*(2), 18-23.

Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Utilization of mass communication by the individual. In J.G. Blumler & E. Katz (Eds.), *The uses of mass communication: Current perspectives on gratifications research* (pp. 19-32). Beverly Hills, CA: Sage Pubs.

Kayana, J. M., & Yelsma, P. (2000). Displacement effects of online media in the socio-technical contexts of households. *Journal of Broadcasting & Electronic Media, 44*(2), 215-229.

Lochte, R. H., & Warren, J. (1989). A channel repertoire for TVRO satellite viewers. *Journal of Broadcasting & Electronic Media, 33*(1), 91-95.

Mindlin, A. (2011, April 10). More media time, on various screens. *The New York Times*. Retrieved from http://nytimes.com.

Mossberg, W. S. (2011, May 5). Couch potato on the go: Watching TV on an iPad. *The Wall Street Journal*. Retrieved from http://online.wsj.com/article/SB10001424052748703849204576303221289075838.html

Neuendorf, K. A., Atkin, D. J., & Jeffres, L.W. (2001). Reconceptualizing channel repertoire in the urban cable environment. *Journal of Broadcasting & Electronic Media, 45*(3), 464-482.

Newell, J. (2007). Revisiting Schramm's Radiotown: Media displacement and saturation. *Journal of Radio Studies, 14*(1), 3-19.

Newell, J., Pilotta, J. J., & Thomas, J. C. (2008). Mass media displacement and saturation. *The International Journal on Media Management, 10*, 131-138. DOI: 10.1080/14241270802426600

Nielsen (2011, July 20). June 2011: Top U.S. online destinations for video. Retrieved from http://blog.nielsen.com/nielsenwire/online_mobile/june-2011-top-u-s-online-destinations-for-video/

Palmgreen, P., & Rayburn II, J. D. (1985). A comparison of gratification models of media satisfaction. *Communication Monographs, 52*(4), 334-346.

PBS introduces iPad app for children (2011, May 12). *TVNewsCheck*. Retrieved from http://www.tvnewscheck.com/article/2011/05/12/51189/pbs-introduces-ipad-app-for-children

Perse, E. M., & Ferguson, D. A. (1993). The impact of newer television technologies on television satisfaction. *Journalism Quarterly, 70*(4), 843-853.

Pilotta, J. J., & Schultz, D. (2005). Simultaneous media experience and synesthesia. *Journal of Advertising Research, 45*(1), 19-26. DOI: 10.1017/S0021849905050087

Reardon, M. (2011, July 18). CNN live news comes to iPad, other mobile devices. *CNET*. Retrieved from http://news.cnet.com/8301-30686_3-20080409-266/cnn-live-news-comes-to-ipad-other-mobile-devices/

Rosenstiel, T., Mitchell, A., Rainie, L., & Purcell, K. (2011). Survey: Mobile news and paying online. *The State of the News Media 2011*. Retrieved from http://stateofthemedia.org/2011/mobile-survey/

Rubin, A. M. (1981). An examination of television viewing motivations. *Communication Research, 8*, 141-165.

Rubin, A. M. (1984). Ritualized and instrumental television viewing. *Journal of Communication, 34*(3), 67-77.

Schramm, W., Lyle, J., A. Parker, E. B. (1961). *Television in the lives of our children*. Stanford, CA: Stanford University Press.

State of the News Media (2011). Pew Research Center's Project for Excellence in Journalism. Retrieved from http://stateofthemedia.org/

Walsh, M. (2011, May 5). Tablets change media behavior, iPad still king. *Online Media Daily*. Retrieved from http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=149962

Whitney, D. (2011, March 15). Stations' mobile apps showing promise. *TVNewsCheck*. Retrieved from http://www.tvnewscheck.com/article/2011/03/15/49813/stations-mobile-apps-showing-promise

Worden, N. (2011, April 8). ESPN launches app for mobile-TV devices. *The Wall Street Journal*. Retrieved from http://online.wsj.com/article/SB10001424052748704013604576248892096438426.html