

# **E-Readers On Campus: Overcoming Product Adoption Issues With A Tech-Savvy Demographic**

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## **ABSTRACT**

*The literature reports that males have been more open to technological change and adoption. This pattern includes high-tech products as well as online applications. For example, early tests with e-books (i.e., books available via websites) were welcomed more readily by males than were females. A survey was conducted among college students to assess whether differences still occur between males and females with regard to technology usage, product adoption and social media participation, as well as to measure perceptions of traditional print media versus the emerging market of e-reader devices. Results of the study showed that no significant differences exist between males and females in their use and adoption of technology and applications, as well as perceptions of or willingness to use such products, but overall, students feel that traditional print media is still better than e-readers.*

## **INTRODUCTION**

Distribution and consumption of printed material remained largely unchanged over the last five centuries. The digital publishing revolution, however, is changing the way we read, write, store and learn information. Digital publishing can be traced back to the formation of Project Gutenberg in 1971 by Michael Hart. He published the Declaration of Independence electronically, becoming the first digitized publication. This led to the first free online public-domain library. Project Gutenberg presently has over 33,000 books available for free download, and has mirror sites located all over the world. (Vaknin, 2002.)

The U. S. National Institute of Standards and Technology (NIST) held the first International Electronic Book Workshop in 1998. The Internet Public Library, which is an educational initiative from the University of Michigan's School of Information, has links to over 20,000 e-books that can be read and downloaded free of charge.

Also in 1998, websites selling books in digital form began to appear. While these books could be read on computers, they were ultimately designed to be used on handheld e-reader devices. In 1999, Baen Publishing opened the Baen Online Library, offering free downloads of in-copyright books by Baen speculative fiction writers, as well as a similar paid service, Webscriptions.

While e-books work well on computers, a significant hurdle to overcome was that readers were accustomed to holding their books. E-reader devices filled that need. The first e-readers were developed using backlit screens, but because of eye fatigue, customers quickly lost interest.

In 2003, e-paper became viable for the mass market . This technology used electrically arrangeable pigments behind a clear screen,. Amazon introduced its Kindle e-reader in 2007, raising the bar by virtue of its revolutionary idea of a wireless link to Amazon's bookstore. Kindle owners could instantly download new book purchases, as well as have newspaper and magazine subscriptions “arrive” overnight via the Sprint 3G network. The idea of having a bookstore in your pocket appealed to many users, and the market took off.

Concurrent with the introduction of Amazon’s Kindle, Google started working on a new type of search engine. Technicians went to large university libraries and began to scan entire collections of books, creating searchable PDFs for the new database. Although there were some copyright issues early on, the Google Books search engine caught on quickly. There are now over one million books in the online library that are out of copyright; these can all be freely downloaded and read as PDFs.

Starting in 2009, there was another revolution in the e-reading world. Sony and Barnes & Noble both introduced e-readers, while Amazon produced two new versions of the Kindle. Sales of e-books rose dramatically, from fairly flat annual sales below \$10 million per year from 2002 through the end of 2005, to reported sales of nearly \$91 million in the first quarter alone of 2010. This final figure represents a 70-percent increase over 4Q 2009 sales (Lebert 2009).

Universities are becoming increasingly interested in e-books and e-readers, especially in light of the rising cost of traditional textbooks and the need to engage a new generation of learners. It is important, therefore, to explore the perceptions that college students have about eReader technology and potential adoption patterns, as well as assess their readiness to adopt such technologies and applications. This paper further explores technology adoption and usage in general, as well as specific college student expectations, perceptions and benefits sought of e-readers. Special emphasis is placed on gender-related differences.

## **LITERATURE REVIEW**

Gender differences have been evident in the adoption and usage of technological advances throughout modern times. (Horowitz & Mohun, 1998). As recent as 2000, Bimber cites significant gender differences in Internet access and use. About 50-percent of the "digital divide" between men and women on the Internet is fundamentally gender related. (Bimber, 2000). Some theorists suggest that the Internet may appeal differently to men than women because of stereotypes suggesting that computer technology is more appropriately male than female (Janssen, Reinen & Plomp, 1997; Fletcher-Finn & Suddendorf, 1996; Sutton, 1991.)

In the United States and Australia, unlike many other countries, men and women use the Internet in nearly equal measure, but often for very different purposes. Singh (2001), for example, found that women generally use the Internet as a tool for activities , rather than as play or a technology to be mastered. Jackson, et al (2001) found that females used the Internet more for email than did males, while males used the web more than females did.

Other studies indicate additional gender differences related to email technology. Gefen and Straub (1997), in their study of knowledge workers using email systems in the airline industry in North America, Asia and Europe, concluded that men and women differ dramatically in their perceptions of email, but not in their usage of it.

Morris and Venkatesh (2000) used the Technology Acceptance Model to consider the adoption of new technology in general. On all points of measurement, men's technology usage decisions were more

strongly influenced by their perception of usefulness. In contrast, women were more strongly influenced by their perceptions of ease of use.

Broos' (2005) General Linear Model analysis revealed a significant effect of gender, computer use and self-perceived computer experience on computer anxiety attitudes. In general, females tend to have more negative attitude towards computers and the Internet than do men, while males have less computer anxiety than females. In contrast, Rockwell (1997) supports the hypothesis about the relevance of computer anxiety and communication apprehension in predicting future technology use, but notes that past experience is a stronger predictor of future use than gender differences.

Additional gender differences were noted in the way that males and females respond to online rich media, which is the term given to digital communication that features audio, video, animation or interactive elements. Dennis, et al (1999) *studied the effects of media richness on decision making in two-person teams (all male, all female, and mixed gender) using one form of "new media" (computer-mediated communication). Participants took longer to make decisions with computer-mediated communication. Matching richness to task equivocality only resulted in better performance for the all-female teams. This is likely because females are more sensitive to nonverbal communication, and more affected by its absence in computer-mediated communication.*

*Springer (2003) examined the adoption and use of mobile phones as a distinct form of new technology, studying the connection between consumption patterns and mobile phone use. Technology enthusiasm and trend-consciousness were linked to impulsive consumption and "hard" values prevalent among males, while an "addictive" use of the phone was related to "trendy" and "impulsive" consumption styles among females. The traditional gender division in mobile phone use styles that was observed stands in opposition to propositions that genders are becoming more alike in their use of new technology.*

*Despite these gender differences, access to, and experience with, technology seem to be narrowing the gender gap with regard to technology use. The adoption of e-books and e-readers, though, presents a more complicated set of consumer decision making steps. As opposed to the Internet and cell phones, e-readers attempt to take a consumer experience that has traditionally been very tactile and tangible, and replace it with one that is intangible aside from the device itself.*

*Thus far very little is written on the subject of e-book and e-reader access and adoption. Starr's (1983) early work shows that most research has examined only the ways that technology has influenced the ways information is created and distributed, primarily via digital publishing. It is only in recent years (1990s) that digital texts widely accessible, even though they have been available since the early-1970s.*

*Current literature focuses on the access of digital content via institutional resources such as netLibrary. Summerfield, et al (1999) report that the earliest significant study of electronic book usage on a college campus was the Columbia University Online Books Evaluation Project. The study, which ran from 1995 to 1999, gathered e-book usage and experience statistics. Additional studies by the University of Texas and Texas A&M University show that the provision of access to electronic books through an online catalog significantly improved usage.*

*Hughes and Buchanan's (2001) study focused on the use of electronic titles in the Questia humanities and social sciences. Their assessment of time spent with e-books indicated that readers were often willing to read large amounts of text online, suggesting that a paradigm shift was now beginning.*

*Interestingly, Lynch, (2006) reports that after the Press began offering their books available for free online, sales of the print version increased. This indicates that readers were either unwilling to read entire books online or print them out in their entirety.*

*Other research has sought to examine the differences between electronic books and traditional print titles. The California State University e-book Task Force (2003) compared online access and circulation figures. They determined that the print version of a book was used 1.03 times for every digital copy, although follow-up surveys revealed that most users (60%) preferred the print over the electronic version.*

*De Jong's (2002) work tested the desirability of print and electronic titles with emergent readers. The comparison project did not confirm Labbo and Kuhn's (2000) earlier work, which suggested that electronic books have the potential to result in reading sessions that are similar or even more challenging than those with regular books. In contrast, De Jong's findings indicated that children did not read well with e-books, indicating that electronic book formats (with young readers) are a less efficient means of internalizing story content and phrasing.*

*At present, the only literature that has examined general academic populations and their attitudes toward electronic books is Clark's (2005) survey. This study indicated that e-books were used by 50% of the campus community. E-text attributes that were most attractive to readers included the ability to search for information within the text, as well as the general ease of access. Most students, however, read only small portions of content online and most respondents preferred printed books over electronic versions, indicating that the paradigm shift was still in its infancy.*

*This print preference and potential cross-over buying behavior may contribute to the figures the Association of American Publishers report. In 2009 the Adult Hardcover category rose 6.3 percent in with sales of \$259.9 million; year-to-date sales were up by 3.9 percent. Adult Paperback sales jumped 37.5 percent. And although some categories saw slight declines, the Children's/YA Hardcover category increased 4.4 percent while the Children's/YA Paperback category was up by 20.2 percent. For the same year electronic book sales posted an industry record sales figure of \$130 million. (Jordan, 2009.)*

*Publisher Weekly (2006) reports that women buy considerably more books than men, and have done so for many years. The female cohort purchases 68% of all books sold.*

*Traditional and electronic book sales continue to climb, indicating that reading and book consumption are a growth industry. As more consumers begin to explore e-readers and other electronic information portals, it is important to examine consumer expectation, acceptance and usage of this new technology, especially in regard to gender in the academic environment. With regard to university acceptance of e-readers, it will be necessary for there to be no gender disparities, lest educational opportunity be sacrificed.*

## **METHODOLOGY AND HYPOTHESES**

A survey of college students at a regional Division II school was conducted in February 2010. The survey was comprehensive in that it included social media usage, smartphone ownership and apps downloading, computer ownership and internet usage, attitudes toward social media, and perceptions of eReaders. The volunteer sample resulted in 141 undergraduate students between the ages of 18 and 40 completing the survey, with nearly equal representation among males and females.

Only three major brands of eReader were available on the market (Kindle, Sony and Nook), but there was much hyper concerning the then-future release of the Apple iPad. The existing products were rather limited in usage, relying on 3G automatic downloads of purchases and subscriptions. There were no apps

available for these products, and the graphical user interface was simplistic compared to what was to become available in the iPad.

Essentially, the market consisted of very basic portable eReaders that delivered text and little more. Those existing products retailed for \$200-\$300 at the time, while the forthcoming iPad started at \$499 and offered many of the benefits of the iPhone and iPad Touch. Because of the advertising and media hype surrounding the impending new product introduction, students were highly likely to have been exposed to product information, and thus brought this into the survey environment. Only 7 students reported owning an eReader at the time of the survey.

Students were asked to report the number of books they read per year (not including text books), the number of magazines read in a month, the frequency of reading a daily newspaper, and their desire (on a scale of 0 -100) of owning an e-reader. Finally, students were asked to rate (each on a scale of 0 – 100) both traditional print media and eReaders along six product attributes (Ease of Us, Readability, Tactile Quality, Portability, Retaining Personal Copy and Price).

Gender differences have historically existed in both media consumption and technology usage. These differences forming the bases for many of our hypothesized relationships. Based on the literature and data reported above, we hypothesize that female college students will be more frequent users of print media in the forms of newspapers, magazines and books. Thus:

H1a: Females will read more books per year than males.

H1b: Females will read more magazines per month than males.

H1c: Females will read more newspapers per week than males.

In spite of data showing greater female consumption of written media vis-à-vis males, males have historically been first movers with technological products. We thus hypothesize that men will have a significantly higher desire to own an eReader than will females. Thus:

H2: Males will report a higher desire to own an e-reader than males.

Because of the gender differences in usage and technology reported above, we hypothesize that females will have significantly higher evaluations of print media attributes than will males, but that males will have significantly higher evaluations of eReader attributes than will females. Thus:

H3a – H3f: Females will rate traditional print media significantly higher than males along the six attributes evaluated.

H4a – H4f: Males will rate eReaders significantly higher than females along the six attributes evaluated.

Next, based on the results of field usage of eBooks in a campus setting, we hypothesize that combined male-female evaluations of six attributes of print media will be significantly higher than evaluations for eReaders. Thus:

H5a – H5f: Overall paired-comparison evaluations of the six attributes will be higher for traditional print media than for e-readers.

A major portion of the study was the creation and deployment of the Social Media Affinity Scale, a 13-item instrument developed to measure respondent beliefs about social media sites in general. Prior to the study, an extensive exploratory phase was conducted in order to better ascertain the issues of importance to users and non-users of social media. This resulted in the 13-item Social Media Affinity Scale.

The Social Media Affinity Scale consists of Likert-scale items, of which nine were stated in the positive, and four in the negative. These four were re-coded in the subsequent analysis. The scale was pre-tested with volunteer subjects prior to deployment in this study. The pre-test was used to check for any difficulties in comprehending the items, as well as the overall technicalities of the instrument. No substantial problems in wording or mechanics were recorded.

Gender differences have historically existed in both media consumption and technology usage. These differences forming the bases for many of our hypothesized relationships. Based on the literature and data reported above, we hypothesize that there will be significant differences between males and females with regard to internet and social media usage, as well as beliefs about social media.

H6a-d: (a)There will be no significant difference in the amount of internet usage (hours per week) between males and females, (b) computer ownership, (c) smartphone ownership, or (d) the number of smartphone apps downloaded.

H7: Females will report a significantly higher amount of social media usage (hours per week) than will males.

H8: Females will report a significantly higher overall affinity for social media usage (as measured on the SMA Scale) than will males.

H9a – 9c: Females will report significantly higher scores on all factors extracted from the Social Media Affinity Scale than will males.

**RESULTS**

While usage of print media among this college student sample is low, females were shown to read significantly more books per year than do males, while males read significantly more newspapers per week than do females. T-tests for independent means were calculated for each of the three sets of means. There was no significant differences in the reported monthly consumption of magazines. We thus reject H1a and H1b, while retaining H1c (see Table 1).

**TABLE 1  
Usage of Traditional Print Media**

Media Vehicle	Gender	N(*)	Mean	t-stat	prob
Newspapers Per Week	Males	71	1.154	2.590	0.011(**)
	Females	69	0.565		
Magazines per Month	Males	70	1.785	0.230	0.263
	Females	71	2.197		
Books per Year	Males	70	4.985	-2.238	0.027(**)
	Females	71	8.056		

(\*) cell counts vary because of missing data

(\*\*) significant at p = 0.005

Overall, students did not express much desire to own an eReader, with females reporting a mean score of 39 out of 100, and males 32 out of 100. A t-test for independent means was calculated for each group. While these scores are very low and do not hold much promise for this market, these means are significantly different at the p=0.05 level. We thus retain H2 (see Table 2).

**TABLE 2**  
**Desire to Own an eReader**

	<b>Gender</b>	<b>N(*)</b>	<b>Mean</b>	<b>t-stat</b>	<b>prob</b>
Desirability	Males	52	32.75	-1.046	0.298
	Females	62	39.35		

(\*) cell counts vary because of missing data

(\*\*) significant at p = 0.005

T-tests for independent means were calculated for the evaluations of traditional print media and eReaders along six product dimensions. These yielded only one significant difference (females perceiving Ease of Use as being much higher for traditional print media, compared to how males rated this attribute). We thus retain H3a, while rejecting H3b – H3f and H4a – H4f (see Table 3 and Table 4).

**TABLE 3**  
**Traditional Print Media Attributes by Gender**

<b>Attribute</b>	<b>Gender</b>	<b>N(*)</b>	<b>Mean</b>	<b>t-stat</b>	<b>prob</b>
Ease of Use	Male	60	75.51	-2.051	0.042(**)
	Female	62	85.64		
Readability	Male	60	82.71	-0.587	0.558
	Female	62	85.32		
Tactile Quality	Male	60	68.41	-1.310	0.193
	Female	61	75.75		
Portability	Male	60	73.23	-0.793	0.429
	Female	62	77.25		
Retaining Personal Copy	Male	60	75.46	-1.721	0.08
	Female	63	84.52		
Price	Male	60	73.48	-0.551	0.583
	Female	62	76.59		

(\*) cell counts vary because of missing data

(\*\*) significant at p = 0.005

**TABLE 4**  
**eReader Attributes by Gender**

<b>Attribute</b>	<b>Gender</b>	<b>N(*)</b>	<b>Mean</b>	<b>t-stat</b>	<b>prob</b>
Ease of Use	Male	60	60.45	-0.496	0.621
	Female	61	63.44		
Readability	Male	60	78.60	0.095	0.924
	Female	59	76.69		
Tactile Quality	Male	60	56.10	-0.385	0.701
	Female	58	58.62		
Portability	Male	60	72.83	-0.174	0.863
	Female	61	73.93		
Retaining Personal Copy	Male	60	54.16	0.644	0.521
	Female	60	49.66		
Price	Male	60	41.50	-1.556	0.122
	Female	60	51.50		

(\*) cell counts vary because of missing data

(\*\*) significant at  $p = 0.005$

Paired comparisons were then made for scores assigned to the six product attributes for traditional print media and eReaders. T-test pairs were calculated for these comparisons, with four of the comparisons yielding significant results in the hypothesized direction (see Table 5). We thus retain H5a, H5c, H5e and H5f, while rejecting H5b and H5d.

**TABLE 5**  
**Paired Sample T-Tests for Media Attributes**

Attribute	Media	N(*)	Mean	t-stat	prob
Ease of Use	Traditional	120	80.675	5.283	0.000(**)
	eReader	120	62.141		
Readability	Traditional	119	84.395	0.676	0.501
	eReader	119	77.655		
Tactile Quality	Traditional	118	72.254	3.873	0.000(**)
	eReader	118	57.339		
Portability	Traditional	120	75.033	0.312	0.756
	eReader	120	73.833		
Retaining Personal Copy	Traditional	120	80.441	6.355	0.000(**)
	eReader	120	51.916		
Price	Traditional	119	74.773	6.657	0.000(**)
	eReader	119	46.638		

(\*) cell counts vary because of missing data

(\*\*) significant at  $p = 0.005$

The next step in the analysis was to assess the reliability of the Social Media Affinity Scale. An  $\alpha=0.77$  was calculated, indicating the scale has strong internal reliability.

An Exploratory Factor Analysis was then performed on the scale. Using Principal Components Analysis with a Varimax Rotation, three factors were extracted with eigenvalues greater than 1.00. A qualitative inspection of the factors showed that the analysis had collapsed the survey items into factors with these themes: Redeeming Value, Shared Interests, and Business & Organization Uses. The factor loadings were all sufficiently high as to warrant their inclusion (see Table 6).

**TABLE 6**  
**Exploratory Factor Analysis (\*)**

Item	Statement	Factor 1: Redeeming Value	Factor 2: Shared Interests	Factor 3: Business & Organizations
1	Social networks are a great way for people to stay in touch with one another.		.435	
2	Social network sites are a waste of time. (**)	.694		
3	Social networks allow people with similar interests to stay connected.		.810	.
4	It consumes too much time to maintain and/or read social networking pages. (**)	.521		
5	It is important for a person to have his or	.570		

	her own social networking page in which they can tell about themselves and their activities.			
6	I want to read about my friends and/or family members on their social network pages.	.547		
7	Potential and/or existing employers may use information found on social networking pages to make decisions about prospective and/or existing employees.			.644
8	Social network sites are a great way to build online communities of people with shared interests or traits.		.808	
9	Social networking sites are just a fad. (**)	.733		
10	I do not care what other people are doing. (**)	.718		
11	The emergence of social networking sites illustrates a growing need among people for a sense of community.			.616
12	A social network could be an effective communications tool in a college class.	.563		
13	Social networking sites have great potential for marketing businesses and/or individuals.			.706

(\*) Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization

(\*\*) These items were recoded for analysis

Next, t-tests for independent means were calculated for gender by the following variables: internet usage/hours per week, computer ownership, smartphone ownership, smartphone apps downloaded (males in the 16-20 category, females in the 11-15 category), and social media usage/hours per week (see Table 6) and gender by the summed scores of the complete SMA Scale as well as the summed scores of the three extracted factors (see Table 7). These t-tests formed the basis of all tests for the hypotheses above.

**TABLE 7:**  
**T-Tests for Independent Means**  
 Gender by Summed MSA Score and Summed Factor Scores

Variable	Gender	N	Mean	t-stat	prob.
Entire SMA	Male	67	49.5821	-1.208	0.229
	Female	67	50.8358		
Factor 1	Male	69	25.1884	-1.543	0.125
	Female	68	26.3088		
Factor 2	Male	69	12.8406	-0.432	0.667
	Female	70	12.9429		
Factor 3	Male	70	11.5915	-0.122	0.903
	Female	71	11.6338		

(\*) cell counts differ because of missing data

In every instance, the t-tests failed to reveal any significant differences between males and females. Thus, we reject H6a-d, H7, H8, and H9a-H9c. While there were small observed differences in the directions hypothesized, they were no so large as to conclude significant differences exist (see Table 8).

**TABLE 8**  
**T-tests for Independent Means**

Variable	Gender	N	Mean	t-stat	prob.
Internet Hrs/week	Male	70	23.3571	0.969	0.334
	Female	70	20.3571		
Computer Ownership	Male	70	1.0143	-0.568	0.571
	Female	71	1.0282		
Smartphone Web-enabled	Male	42	1.1190	-0.369	0.713
	Female	48	1.1458		
Apps Downloaded	Male	42	4.3810	1.203	0.232
	Female	48	3.6667		
Social Media Hrs/week	Male	69	11.0145	-1.052	0.295
	Female	70	14.5143		

(\*) cell counts differ because of missing data

These results thus confirm previous findings indicating no imbalance in internet usage among males and females, while at the same time demonstrating that no imbalance exists with regard to social media usage. Furthermore, the high reliability and successful factor analysis of the SMA Scale indicate it has useful application in the field for determining overall beliefs about social media, as well as possible readiness to embrace social media in new applications.

**DISCUSSION**

This study is limited in that it was conducted on only one college campus, and may not be representative of college students in general. The sample itself was rather homogeneous, with few minority groups represented. Still, the sample and the campus in general are representative of the local population in which the campus is located. Future studies should seek to include students from a variety of campuses across regions, seeking greater balance among ethnic and income groups.

Furthermore, while eReaders have a high degree of applicability in a campus setting, textbooks (price, size, ownership options, etc.) were not specifically included in the study, which focused in a more general sense on the attributes of e-readers to deliver any otherwise printed material. Thus, it could be fruitful to further explore how the inclusion of textbooks (both printed and in electronic format) might influence student perceptions of these devices.

The sample itself, while providing sufficient numbers of subjects for statistical purposes, is small. In future efforts to broaden the scope of the sample, a greater number of participants overall is also desirable

Finally, there were no eReaders for students to manipulate or try. The current study measured perceptions of a device that for most students existed outside their range of ownership. Still, given the amount of advertising and publicity surrounding both the then-existing e-readers and the ones to come, it is fairly

certain that survey participants had a high degree of exposure to the product category, even if only in concept.

The numerous findings from this comprehensive study indicate that, for the sample studied, there is no gender divide with regard to internet usage, smartphone usage, computer ownership, phone apps downloaded, or social media usage. Furthermore, the Social Media Affinity Scale indicates there are no difference between the genders with regard to readiness to embrace such applications. Of the 141 students surveyed, only one student did not have a social media account; all but four used the dominant social media site (Facebook).

Also important, the findings from this study indicate that, while males and females appear to have converged in their perceptions and willingness to adopt and use technological products such as the e-reader, there are many hurdles to be spanned before students embrace them. For example, in the minds of these students, traditional print media far surpass e-readers on five of six dimensions. Portability is the only attribute perceived to be more or less equal between both media vehicles.

Furthermore, the price attribute produced the greatest disparity in student comparisons, in spite of the fact that in the long run, books would be cheaper in electronic format. It is the initial start-up cost for jumping to a new format that apparently causes much concern for these students.

Given that 62% of students in this study already own a smartphone, and nearly 90-percent of those have their smartphone web-enabled, a tipping point has been reached with regard to technology usage. These phones are often in the \$200-300 range, roughly 50-percent as much as the price of a web-enabled e-reader such as the iPad. That additional 50—percent may be difficult for some students to absorb, but in terms of technology, students are indeed ready for e-reader devices.

An enormous opportunity exists for educators to leverage social media platforms such as Facebook for delivering course content and engaging students outside the classroom. While smartphones and their apps are one way to accomplish this task, the limitations of their size limit their applicability. But e-readers, with much larger screens, are effectively laptop computers without the bulk and weight. The iPad, for example, can do nearly as much as a laptop, yet can also use many of the same apps available for the iPhone.

Once educators start en masse leveraging social media sites for course enhancement and engagement, students will begin to see greater need for portable devices capable of delivering information in ways superior to those of a smartphone.

Implications for higher education include the possibility of institutions providing e-readers to students in an effort to help them overcome their hesitations toward the product. If students can avoid the price issue, perhaps their perceptions of other relevant attributes will improve for the e-reader, specifically overcoming Ease of Use apprehensions. Furthermore, institutions of higher learning need to encourage professors to use applications that will leverage these devices, including social media apps like Facebook, as well as text books, web videos and images.

Once Price and Ease of Use are overcome, it is possible that student perceptions of Readability and Tactile Quality will change for the better. Thus, it is possible that the biggest hurdles to gaining widespread acceptance of e-readers on-campus may in fact be related to whether institutions can simply put one in the hands of each student, while at the same time encouraging its educators to put information in a format conducive to reading on it.

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