

# The Social Media Affinity Scale: Implications For Education

R. Nicholas Gerlich, West Texas A&M University, USA  
Leigh Browning, West Texas A&M University, USA  
Lori Westermann, West Texas A&M University, USA

## ABSTRACT

*In recent years, males and females have demonstrated fairly equal amounts of internet usage, but females have demonstrated higher usage of social media sites. These observed differences served as the impetus for the current study. A survey was conducted in early 2010 among college students to assess whether differences still occur between males and females, and specifically with regard to social media usage. In order to assess these phenomena, the Social Media Affinity Scale was created and deployed. Results of the study showed that, among the students surveyed, no significant differences exist between males and females in their internet usage, social media usage, and also beliefs about social media sites in general. Given that students have overwhelmingly adopted social media, we propose that there is now an opportunity to leverage social media in college courses to deliver content and engage students in ways not previously possible.*

**Keywords:** social media, Facebook, internet, education

## INTRODUCTION

It is impossible to ignore the influence of social media on our society. There are segments of our daily lives that have been dramatically impacted by the use of these new technologies. Be it a high school reunion, national conference, or family wedding, platforms like Twitter and Facebook are a vital part of the communication process.

Students are so accustomed to using this technology that when they enter a classroom they are often "cut off" from this vital connection, as they see it. This disconnect between education, educators, and the student is creating a chasm that needs evaluation.

This paper works to examine that chasm, and to draw some conclusions as to why it may be time to incorporate this technology into our classrooms. We created and deployed the Social Media Affinity Scale as a way to examine current usage and beliefs, as well as to discern implications for education.

## LITERATURE REVIEW

First, making a case for the rise of social media usage is important in our study. Patel (2010) gives us a visual way of seeing the rise of social media. In his article, he draws from a figure published by Tom Bugey in 2007. Patel titles the figure, "Social Media Can Be a Powerful Learning Tool," and reports that the rise of social media among three target groups (Baby Boomers, Generation Xers, and Millennials) is dramatic. Not only has the usage of these technologies grown, Patel notes that the tenants of learning and work productivity also improve dramatically as we move along the target groups.

In fact, this notion of using social media as a learning tool has carried over to the business world.

*It is virtually impossible to ignore the potential of social media for any business operation. The main reason for the excitement is the fact that social media is engulfing the population at phenomenal rates. While it took radio and*

television 38 years and 13 years, respectively, to reach 50 million users, it took Facebook less than nine months to reach 100 million users. iPhone applications even hit 1 billion in nine months. (Patel 2010).

Educators have been somewhat reluctant to use technologies in the classroom, for varying reasons. But, as noted by Adrienne Matteson, “Without disrupting the flow of work in the classroom, the teacher and students can tweet questions and responses on the lesson and post photos or related sources with hyperlinks. In this way, everyone remains on the same page with few interruptions” (2010).

However, we are far from adopting these technologies in the classroom.

*Even as electronic technologies accelerate the pace of their encroachment into every aspect of our lives, the education community continues its decades-long struggle to establish the role these innovations should play in effective teaching and learning. Traditionally, students come to school “powered-up” and wired with the newest technologies available – but often they must leave them at the door, since faculty do not use them in classrooms and may even regard them with suspicion. The most recent example of a potential disconnect between tools preferred by students and those used by teachers is the category of social media known as Social Networking Sites (SNS) (McDaniel, et al., 2010).*

Aside from the social media divide that often exists between students and educators, some theorists worry about the inherent gender differences that have been noted in the past. Numerous studies have identified measurable differences in the way males and females perceive and use new technology.

As recent as 2000, Bimber cites significant gender differences in Internet access and use. Around one half 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 and women because of stereotypes signally 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 countries, men and women use the Internet in nearly equal measure, but for often decidedly different purposes. An open-ended interview study found that women generally use the Internet as a tool for activities, rather than as play or a technology to be mastered. (Singh, 2001.)

In another study based on a general model of internet use, it was found that females used the internet more for email than did males, while males used the web more than females did. (Jackson, Ervin, Gardner, Schmitt, 2001.)

Further literature indicates additional gender differences related to email technology. A study drawing from a comparable group of knowledge workers using email systems in the airline industry in North America, Asia and Europe indicted that men and women differ dramatically in their perceptions of email, but not in their usage of it. (Gefen & Straub, 1997.)

In expanding the discussion to consider the adoption of new technology in general, the Technology Acceptance Model was used to determine that 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. (Morris, Venkatesh, 2000.)

Broos' General Linear Model analysis revealed a significant effect of gender, computer use and self-perceived computer experience on computer anxiety attitudes. In general, females had more negative attitude towards computers and the Internet than men and males were found to have less computer anxiety than females. (Broos, 2005.)

Additional gender differences were noted in the way that males and females respond to online rich media. Rich media is the term given to digital communication that features audio, video, animation or interactive elements. Experiments have 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, likely because females are more sensitive to nonverbal communication and more affected by its absence in computer-mediated communication. Results support media richness theory only for all-female teams. (Dennis, Kinney & Hung, 1999.)

Other literature has examined the adoption and use of mobile phones as a distinct form of new technology. Springer's 2003 paper reports on an empirical study of the connection between consumption patterns and mobile phone use. Technology enthusiasm and trend-consciousness was linked to impulsive consumption and "hard" values prevalent among males; whereas 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 could be observed is interesting in the light of conjectures that genders are becoming more alike in their use of new technology. (Springer, 2003.)

As recent as 2009, a study conducted for the Pew Internet and American Life Project identifies persistent gender differences in regard to the way teens use social media specifically. Sixty-five percent of online teens have a profile online. Girls, particularly older girls, however are more likely to use social networking sites than boys (86% of girls 15-17 have profile online, compared to 69% of boys 15-17) (Lenhart, 2009).

Baird and Fisher are credited with conducting the first major examination of potential uses of social media in education and identify key advantages that social media platforms provide today's neomillennial learners. Their study readily points out that today's students have been raised in the "always on" world of interactive media, the Internet, and digital messaging technologies and, therefore, have very different expectations and learning styles than previous generations. This net-centric generation values their ability to use the Web to create a self-paced, customized, on-demand learning path that includes multiple forms of interactive, social, and self-publishing media tools. (Baird & Fisher, 2005).

With the rise in social media quite apparent, and the need to connect the chasm between educators and students of the digital age, this paper deploys the *Social Media Affinity Scale* as a way to examine implications for education.

## **METHODOLOGY AND HYPOTHESES**

A paper-and-pencil 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, demographic questions, and beliefs about social media. 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.

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.

- H1:** There will be no significant difference in the amount of internet usage (hours per week) between males and females.
- H2:** Females will report a significantly higher amount of social media usage (hours per week) than will males.
- H3:** Females will report a significantly higher overall affinity for social media usage (as measured on the SMA Scale) than will males.
- H4:** Females will report significantly higher scores on all factors extracted from the Social Media Affinity Scale than will males.

## **RESULTS**

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

The second step was to perform an Exploratory Factor Analysis 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 2).

Next, t-tests for independent means were calculated for gender by the following variables: internet usage/hours per week and social media usage/hours per week (see Table 1) and gender by the summed scores of the complete SMA Scale as well as the summed scores of the three extracted factors (see Table 3). These t-tests formed the basis of all tests for the hypotheses above.

In every instance H1, the t-tests failed to reveal any significant differences between males. Thus, we reject H2, H3, and H4a-H4c, while retaining H1. While there were small observed differences in the directions hypothesized, they were no so large as to conclude significant differences exist.

These results thus confirm previous findings indicating no imbalance in internet usage among males and females, while at the same time confirming such an 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 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.

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

A confirmatory factor analysis should be performed with the SMA Scale, utilizing a separate sample. This will help to further validate the scale as a useful tool for indicating openness to using social media.

Most significantly, though, the results of this study along with the reliability and factor analysis of the SMA scale suggest that the time has come for institutions and individual professors and instructors to consider utilizing social media sites (such as Facebook) as important components of course delivery. Since only 4 out of 141 respondents did not have a Facebook account, it would not be a technological impossibility to utilize the popular social media site as a means of content delivery and student engagement. This can be accomplished by the course professor creating and maintaining a Fan Page, at no cost to anyone involved, and completely apart from the limitations of course management systems such as Blackboard, Angel and WebCT.

For example, class discussion can be held at the course page, supplemental material can be linked or presented, and pictures and video can be embedded. Furthermore, professors and students alike can access this site via their smartphones as well as computers, thereby creating a class that is truly without boundaries.

The lack of significant difference between males and females in all aspects of this study demonstrate that relative parity has come to not only internet usage, but also that of social media. While it is possible that males and females utilize these two for different reasons (and in different ways), the fact that both genders are using them in fairly equal (and large) amounts presents opportunities for educators. Social media are a tool to be leveraged, not avoided.

Finally, the fact that sites like Facebook have now become part of the broader social fabric makes it possible to communicate with and engage students and professors at all ages. They are a communications medium nearly on par with face-to-face interaction.

The primary contributions of this paper are thus twofold: (1) the Social Media Affinity Scale is a reliable tool for assessing beliefs about social media, and can be used to determine readiness to use social media in a variety of applications; and, (2) a significant opportunity exists to leverage the power of social media in college courses.

**Table 1: T-tests for Independent Means  
Gender by Internet Usage (hours per week) and Social Media Usage (hours per week)**

Variable	Gender	N	Mean	t-statistic	Prob.
Internet	Males	70	23.3571	0.969	0.334
	Females	70	20.3571		
Social Media	Males	69	11.0145	-1.052	0.295
	Females	70	14.5143		

(\*) cell counts differ because of missing data

**Table 2: 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 her own social networking page in which they can tell about themselves and their activities.	.570		
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

**Table 3: T-Tests for Independent Means  
Gender by Summed MSA Score and Summed Factor Scores**

Variable	Gender	N	Mean	t-statistic	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	Males	69	12.8406	-0.432	0.667
	Females	70	12.9429		
Factor 3	Males	70	11.5915	-0.122	0.903
	Females	71	11.6338		

(\*) cell counts differ because of missing data

### AUTHOR INFORMATION

**R. Nicholas Gerlich**, Ph.D. is Professor of Marketing and Department Head of Management, Marketing & general Business at West Texas A&M University. He received his Ph.D. from Indiana University, and joined the faculty of WTAMU in 1989. Dr. Gerlich has played a significant role in the development of online courses in the College of Business, and has been teaching in this format since 1997. He has twice won the Distance Learning Innovation Award during this time. His recent research has focused on music piracy as well as assessment-related issues.

**Leigh Browning**, Ph.D. Five years after her graduation from West Texas A&M University, Dr. Browning joined the WTAMU faculty and now serves as director of broadcasting, coordinator of Maroon Productions, an on-campus student production company, and faculty adviser for KWTS, 91.1 FM, the campus radio station. She received her doctorate from the University of Southern Mississippi in Mass Communication where she also served as a visiting professor. Dr. Browning's student groups at WT have won more than 20 National Championships in audio and video production, scriptwriting, web design and commercial production.

**Lori Westermann**, M.A. received a B.A. in mass communication from Mississippi College and an M.A. in mass communication from Southwestern Theological Seminary. Her industry career includes positions with network affiliates, the cable industry, advertising agencies and corporate public relations efforts. She helped create *The Eternal Flame*, the University year-in-review publication and serves as the faculty adviser for the student chapter of the American Advertising Federation and the Texas Public Relations Society. Westermann received an Emmy Award for her work on the documentary *China: Walls & Bridges* and is the most recent recipient of the AAF 10<sup>th</sup> District Advertising Educator of the Year.

### BIBLIOGRAPHY

- Baird, D., Fisher, M. (2005). Neomillennial user experience strategies: Utilizing social networking media to support "always on" learning styles. *Journal of Educational Technology Systems*. 34 (1) 5 - 32.
- Bimber, B. (2000). Measuring the gender gap on the Internet. *Social Sciences Quarterly*, 81 (3):25-32.
- Broos, A. (2005). Gender and information and communication technologies (ICT) anxiety: Male self-assurance and female hesitation. *Cyberpsychology & Behavior*. 8(1):21-31.
- Dennis, A.R., Kinney, S.T., & Hung, Y.T.C. (1999) Gender differences in the effects of media richness. *Small Group Research*. 30 (4): 405-437.
- Dillon, D. (2001). E-books: The University of Texas Experience. *Library Hi Tech*. 19 (4) 350-62.
- Gefen, D. & Straub, D. W. (1997) Gender differences in the perception and use of email: an extension to the technology acceptance model. *MIS Quarterly* 4: 389-400.
- Horowitz, R. & Mohum, A. (1998). *His and Hers: Gender, Consumption & Technology*. University of Virginia Press.
- Jackson, L.A., Ervin, K.S., Gardner, P.D. & Schmitt, N. (2001). Gender and the internet: women communicating and men searching. *Sex Roles*, 44: (5/6) 363-377.
- Lenhart, M. (2010). Teens and Social Media, An Overview. *Pew Internet and American Life Project*.

10. Morris, M.G. & Venkatesh, V. (2000). Why men don't ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage. *MIS Quarterly*, 24 (1):115-139.
11. Scott, C. R., & Rockwell, S.C. (1997). The effect of communication, writing and technology apprehension on likelihood to use new communication technologies. *Communication Education*, 46 (1) 44-62.
12. Singh, S. (2001). Gender and the use of the Internet at home. *New Media & Society*, 3 (4): 395-415.
13. Summerfield, M., Mandel, C., Kantor, P. (1999). Online books at Columbia: Early findings on use, satisfaction, and effect. *Technology and Scholarly Communication*. Berkley; University of California Press 282-308.
14. Wilska, A. (2003). Mobile use as part of young people's consumption styles. *Journal of Consumer Policy*. 26: 441-463.

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