

# Social Media in Education: The Relationship Between Past Use and Current Perceptions

Quisto Settle, Research Coordinator

Ricky Telg, Professor

*University of Florida*

Lauri M. Baker, Assistant Professor

*Kansas State University*

Tracy Irani, Professor

*University of Florida*

Emily Rhoades, Associate Professor

*The Ohio State University*

Tracy Rutherford, Associate Professor

*Texas A&M University*

*The purpose of this study was to assess the relationship between prior use of social media in education and the perception of social media use in education and for future careers. College agriculture students and instructors were surveyed to address the objectives. The descriptive measures showed that instructors had more positive perceptions of social media than students, though neither group was in favor of social media in education in general. Prior use of social media in education was positively correlated with more positive perceptions of social media in education, with the relationship being stronger for instructors than students. The results indicate prior use could be a prerequisite for improving perceptions of social media in education. It was recommended instructors be aware of the discrepant views of social media in education that students hold when introducing social media into classes to help navigate potential conflicts as effectively as possible. Instructors should also be aware that the relationship between prior use and perceptions of social media is not as strong between different social media types. Further research is needed to better understand the direction of the relationship between prior use and perceptions. Experimental or quasi-experimental designs could address this area of research.*

Keywords: social media; Expectancy Violations Theory; education; colleges of agriculture

## Introduction and Literature Review

College instructors and students view the effects of Internet use on education differently. Jones and Johnson-Yale (2005) conducted a national survey of higher education faculty members where the participating faculty members reported that e-mail use had increased and improved communication with students, but the faculty members were more likely to report Internet use had negative effects on student work rather than improving it. Conversely, Jones (2002) studied students from universities across the United States and found the majority of

students (79%) reported that “Internet use has had a positive impact on their college academic experience” (p. 3). The students also reported that the Internet had improved their relationships with professors.

Understanding communication and information technology in education is important because of the pervasiveness of computers in higher education. Rhoades, Irani, Telg, and Myers (2008) surveyed agriculture students at a land-grant university and found that 98.8% owned a computer. A decade older study at a different land-grant university reported that 62.3% of students owned computers (Johnson,

Ferguson, & Lester, 1999), indicating growth in computer use on college campuses.

#### *Social Media & Education*

“The 21st-century learner requires educational opportunities not bound by time or place, yet allow interaction with the instructor and peers” (Beldarrain, 2006, p. 150). Social media are a relatively recent addition to education. In short, social media are media whose “content has been created by its audience” (Comm, 2009, p. 2) and are built using the read-write capabilities of Web 2.0 technologies (Thompson, 2007). Social media are user-driven and their success depends on users contributing content, not just consuming content. In a discussion of the transition higher education has to make to meet the needs of Millennials, who are students born after 1982 and are “talented in digital-mobile technologies” (Howe & Strauss, 2007, p. 31), Thompson stated that faculty members who were not using Facebook were “missing an opportunity to capitalize on their students’ involvement with (Facebook)” (p. 2). Facebook is a social networking site with more than 840 million active users worldwide, with more than half of its users logging on daily (Facebook, 2012). Of the students surveyed by Rhoades et al. (2008), 85.2% had Facebook accounts. Similar to Thompson’s view, Rhoades et al. stated that social media offer a “unique new teaching opportunity to instructors” (p. 114). While it could be advantageous, Thompson stated that it could take time for higher education to catch up with the capabilities that Web 2.0 technologies afford faculty members.

Social media use in higher education is being documented. Burke, Snyder, and Rager (2009) assessed health education faculty members’ use and perceptions of YouTube because of its increased prevalence in classes. YouTube is an online video-sharing site that allows users to view and upload videos. The faculty members had a positive perception of the site because it was a free source that could help the learning process. All faculty members who used YouTube reported that it was an effective teaching tool. The time needed to find appropriate videos and the need to make sure the videos work in the classroom were negative aspects related to YouTube use.

Using focus groups and surveys at different universities in the United States, Head and Eisenberg (2010) studied student use of Wikipedia for coursework. Wikipedia is an online encyclopedia that has its content created by its users without the same filters a traditional encyclopedia has. Even when told explicitly not to do so by instructors, the majority of surveyed students used Wikipedia. The findings of the study illustrated that students recognized the limitations of using Wikipedia and were able to circumvent them. To do so, they were using Wikipedia at the beginning of the research process to gain background knowledge of the topic. After gaining this background knowledge, students moved to more academic sources, which were what the students would actually cite. Wikipedia was being used to supplement scholarly sources, not as a replacement for scholarly sources (Head & Eisenberg, 2010).

On the topic of wikis, Schwartz, Clark, Cossarin, and Rudolph (2004) developed a list of six criteria to use when considering wikis for educational use. The first is cost, which concerns the choice between free software and software that has to be paid for. The second is complexity, which refers to items like technical support availability. The third is control, which refers to who can access and/or edit the wiki. The fourth is clarity, which refers to being able to find information and changes that have been made to different components of the wiki. The fifth is common technical framework, which refers to the technical ability for individuals to interact with the wiki. The last is features, which refers to various smaller components such as spell check and drawing tools that affect the wiki experience.

Settle, Telg, and Irani (2010) surveyed students in a graduate course where Facebook was being used for discussion as a replacement for the course management system offered by the university. The instructor implemented Facebook due to frustrations with the course management system offered by the university and the ease of access offered by Facebook. The majority of students were receptive to Facebook use in the course, but there were members of the course who were uncomfortable with Facebook being used for education because of its personal nature.

### *Distance Education*

An area that is related to the implementation of social media into education is distance education. Factors that affected perception of distance education could be analogous to that of social media because both involve the adoption of new technology to facilitate the learning process. Social media and distance education can overlap because of the capabilities of social media to mirror the technologies used traditionally in education. Specifically, the Web 2.0 technologies that have supported the growth of social media offer interactivity that was not available with the first generation of Web tools, which could help students in their construction of knowledge (Beldarrain, 2006).

One documented case was addressed by Holmberg and Huvila (2008) where Second Life was used as a part of a distance education course in Finland. Second Life is an avatar-based environment where users navigate a three-dimensional world. Unlike other online environments, Second Life offers the ability to more closely mimic a real world classroom environment; the students and instructors can be in the same physical location, including chairs, desks, and a classroom. The students reported the site was more fun and lessened psychological distance between students when compared to other online environments. The majority of the students also reported that barriers for asking questions and participating in discussions were lowered when using Second Life.

Comparisons have been made between live and distance/online-delivered courses (Diebel & Gow, 2005; Moore & Wilson, 2005; Witt & Wheelless, 1999). Diebel and Gow assessed differences of perceptions for courses that were available in live and distance versions in a pre and posttest design at Oregon State University. Though the live version of the class was rated higher, the distance-delivered course was “satisfactory” (p. 11). Results of student expectations of the course – including the content, the instructor, and delivery methods – indicated that students were poor predictors of what to expect. From the perspective of faculty members, Stedman, Roberts, Harder, Myers, and Thoron (2011) found that instructors’ self-perceived knowledge and relevancy of distance education basics were lowest among the teaching competencies addressed in the study.

In a study that compared nonverbal immediacy expectations of students taking a distance course and a live course at the Dallas County Community College District, Witt and Wheelless (1999) reported that live students expected higher levels of nonverbal immediacy than the distance students. They also reported that those who had actually taken a distance course reported higher expectations than those who had not, though the levels were still below that of live course expectations.

Moore and Wilson (2005) assessed graduate students’ perceptions of online and live courses at North Carolina State University based on the Chickering and Ehrmann (1996) seven principles of good teaching as they apply to technology. The seven principles are encourage contact between students and faculty, develop reciprocity and cooperation among students, use active learning strategies, give prompt feedback, emphasize time on task, communicate high expectations, and respect diverse talents and ways of learning. In the Moore and Wilson study, the most important factors for choosing online courses reported by the students were issues that related to convenience, not learning. Though they did not assess nonusers, they compared more frequent to less frequent users of distance education, which was determined by the number of distance courses they had taken, and found that frequent users viewed distance education more favorably than less frequent users, though this could be a product of self-selection based on experience with initial distance coursework.

Distance education is prevalent in agricultural education. The majority of agricultural education departments and programs surveyed by Roberts and Dyer (2005) had distance programs (62.7%). Department chairs who had distance education programs perceived there was a higher need or demand for distance education than chairs at departments without distance education. While distance courses are not perceived as favorably as live courses (Diebel & Gow, 2005; Moore & Wilson, 2005; Witt & Wheelless, 1999), they are still pursued as a viable option for successful learning outcomes. Mink and Moore (2005) found that students were satisfied with the distance program at the University of Idaho, and Koch, Townsend, and Dooley (2005) conducted a case study of a graduate leadership course that

showed that web-based and live students had similar results regarding learning outcomes of the course. Bernard et al. (2009) argued distance education courses should not be compared to live courses because of confounding variables, and it detracts from the ability to determine best practices for distance education. On a similar note, if the decision is made to implement social media into education, comparing the effectiveness of social media in education to traditional education may detract from reaching the best implementation of social media in education.

#### *Theoretical Framework*

Expectancy Violations Theory (West & Turner, 2007) provides the framework for this study. In any given interaction, both parties have expectations. When one party deviates from the other's expectations, a violation has occurred. A violation is not inherently negative. The violation will be deemed negative or positive based on what the violation is, what the characteristics of the violator are, what the relationship between the parties is, and what the context of the violation is. Anything new implemented into a course could constitute a violation for students or instructors. By understanding student and instructor perceptions of social media, it could become clearer where deviations from expectation could occur. Looking at the Settle et al. (2010) study, a violation of expectations could have occurred for some students because they did not expect Facebook to be used as a part of their education; they viewed Facebook as being inherently personal. While the use of Facebook could have been seen as a violation of expectations by all students, it was not deemed negative by all students; in fact, it was viewed positively by the majority of students. Factors relating to the instructor and how Facebook was implemented likely affected the evaluation of Facebook as a discussion tool.

Looking back at the literature from distance education, there is evidence that expectations played a role. The Moore and Wilson (2005) results showed that experience with distance courses was related to perceptions. Similarly, the Witt and Wheelless (1999) findings that students who had completed distance coursework had higher expectations of nonverbal immediacy than students who had not taken distance

courses. Diebel and Gow's (2005) results that indicated students were poor predictors of what to expect from distance courses could indicate that experience will be necessary to accurately predict what experiences with social media in education will be like.

#### **Purpose and Objectives**

Social media are being adopted by educators, which is being documented. Research at the national and regional conferences of the American Association for Agricultural Education documented 28 poster and three paper presentations in 2010 that discussed social media and technology in education, but most were assessing individual cases. While these individual cases are important, it is necessary to address the broader context of social media in education so see beyond the successes and failures of individual cases. In this manner, we can gain a better understanding of how social media are being perceived in colleges of agriculture on a broader level by students and instructors.

The purpose of this study was to assess the relationship between students' and teachers' prior use of social media and perception of it in relation to education and future careers. Prior experience could prove to be an indicator of positive perceptions of social media in education, similar to the more positive perceptions of distance education by those with more experience with distance education (Moore & Wilson; Witt & Wheelless, 1999). As it relates to the National Research Agenda, this study addresses "Priority 4: meaningful, engaged learning in all environments" (Doerfert, 2011, p. 21), specifically by understanding perceptions of social media in education and how prior use might relate to those perceptions. The objectives of this study were to

1. Describe instructors and students in agriculture courses and perceptions of social media in education.
2. Describe the relationship between students' and instructors' prior use of social media and perceptions of social media in education.

## Methods

Data were gathered for this correlational study using online survey design. College agriculture students and instructors served as the target populations for the study. For instructors, the sampling frame consisted of individuals on the American Association for Agricultural Education (AAAE) listserv and Southern Association of Agricultural Scientists (SAAS) attendees, and the data were gathered fall 2009. For students, the sampling frame consisted of students from three land-grant universities: University of Florida, The Ohio State University, and Texas A&M University. The students were enrolled in agriculture courses at the respective universities and surveyed in the spring of 2010. The courses were not for any specific majors and included a variety of agriculture majors. Per the recommendations of Dillman, Smyth, and Christian (2009), members of the sampling frames were sent successive e-mail waves until the number of responses gathered were no longer high enough to warrant further e-mail solicitation. The e-mails provided a brief description of the study, as well as a link to the online questionnaire.

Response rates for instructors were as follows: 729 usable e-mail addresses for SAAS attendees, with 202 respondents (27.7%), and 593 usable e-mail addresses on the AAAE listserv, with 192 respondents (32.4%). Though it is possible to know which respondents were members of SAAS and AAAE, it is not possible to know which non-respondents were members of both groups because one group was solicited through a listserv that did not include all individuals on the listserv, therefore a separate response rate was calculated for each organization. There were 338 total instructor respondents. Ninety-eight instructor participants were members of both groups, 19 reported they were members of neither group, and 23 did not respond to the question. Due to the scope of the organizations included in the sampling frame, individuals who do not teach college courses could have been included in the sampling frame, including administrators or faculty with research-only appointments. Only those who teach college courses were included in the study because this study addressed course-related perceptions. The final instructor sample size was 232. For students, there were 1,165 members of

the student sampling frame, with 460 respondents (39.5%). The final sample size includes only individuals who completed the questionnaire.

Potential nonresponse error was handled by following guidelines by Lindner, Murphy, and Briers (2001). Specifically, early respondents were compared to late respondents, operationally defined as the first and last 50% of respondents, respectively. The groups were not statistically different for instructors or students on any items, indicating results can be generalized beyond the sample to the rest of the sampling frame.

The questionnaires were based, in part, on studies by Rhoades and Aue (2010) that addressed social media use by agricultural communications practitioners, Irani and Telg (2002) that addressed technologies students perceived as being important for their future careers, and Jones and Johnson-Yale (2005) that in part addressed faculty perceptions of the effects of student Internet use. The social media addressed in this study were Facebook, non-Facebook social networking sites (e.g., MySpace, LinkedIn), blogs, microblogs (e.g., Twitter), wikis, online forums, and video-sharing sites (e.g., YouTube). To address prior usage, participants were first asked if they had used social media for assignments, out-of-class discussions, and/or communicating between students and instructors at all, then participants indicated prior use of each social media type. Five-point, Likert-type questions were used to address interest in using social media for education, expected changes to productivity and communication, and perceived importance of social media for students' future careers. The expected changes to productivity and communication were derived from the Jones and Johnson-Yale (2005) study. Each social media type was addressed for the interest and perceived importance questions. For expected changes, the topics addressed were student productivity, quality of student work, amount of communication, and quality of communication.

Faculty members from departments relating to agricultural education and communications were used as a panel of experts to assess face and content validity. The questionnaires also went through a pilot test to help ensure participants' comprehension and ability to answer questions. Graduate students were used

for the pilot test because they had experience both as students and as instructors in their current situations. The graduate students did not participate in the final study. Cronbach's alpha was used to assess reliability post hoc. Reliability scores for students were .86 for interest in using social media for education, .90 for perceived importance of social media for future careers, and .83 for effects of social media on students in education. Reliability scores for instructors were .82 for interest in using social media for education, .91 for perceived importance of social media for future careers, and .79 for effects of social media on students in education. A reliability coefficient of .80 is generally considered proficient (Norcini, 1999), but .70 is also considered acceptable (Kline, 1998).

Point-biserial correlations were used to analyze the relationships between prior use and the Likert-type questions relating to interest, expected changes, and perceived importance. Prior use was coded as a dichotomous variable. If the participant had used the social media type for assignments, discussion, or communication, the participant was marked as having used the social media type. Prior use of each social media type was correlated with interest and perceived importance for each social media type. For the relationship of prior use and expected changes, prior use was coded for any social media used for any purpose in education. The correlations were interpreted using Davis's (1971; as cited in Miller, 1998) descriptors: negligible for .01-.09, low for .10-.29, moderate for .30-.49, substantial for .50-.69, very high for .70-.99, and perfect for 1.0.

## Results

### *Objective 1: Student and Instructor Perceptions of Social Media*

For instructors, 144 (62.1%) had used social media for courses. The number of professors who had used each social media type for courses were as follows: 69 (29.7%) had used Facebook, nine (3.9%) had used a non-Facebook social networking site, 51 (22.0%) had used a blog, 25 (10.8%) had used a microblog, 55 (23.7%) had used a wiki, 116 (50.0%) had used an online forum, and 101 (43.5%) had used a video-sharing site. The total number of students who had taken a course that used social media was

314 (70.1%). The number of students who had used each social media type for courses were as follows: 168 (37.4%) had used Facebook, 37 (8.2%) had used a non-Facebook social networking site, 83 (18.4%) had used a blog, 42 (9.4%) had used a microblog, 95 (21.2%) had used a wiki, 186 (41.4%) had used an online forum, and 210 (46.7%) had used a video-sharing site.

Students were not interested in having instructional information delivered through social media and were, overall, less interested in having instruction delivered through social media than instructors (Table 1). Participants responded to a statement of interest, with answers ranging from 1 = Disagree to 5 = Agree. Students were least interested in non-Facebook social networking sites ( $M = 1.53$ ) and microblogs ( $M = 1.57$ ) and were most interested in video-sharing sites ( $M = 2.47$ ) and online forums ( $M = 2.70$ ). Instructors were also not interested in presenting instructional information through social media, with the exception of online forums ( $M = 3.73$ ). Video-sharing sites ( $M = 2.97$ ) was the second-highest social media type for instructors. Instructors were least interested in non-Facebook social networking sites ( $M = 1.74$ ) and microblogs ( $M = 2.01$ ).

As for the perceived effects of social media, instructors ( $M = 3.82$ ) and students ( $M = 3.61$ ) expected increases in the amount of communication would occur if social media were implemented into courses. Instructors ( $M = 2.79$ ) and students ( $M = 2.76$ ) expected decreases in the quality of student work if social media were implemented. Students and instructors were split on the expectations for student productivity and quality of communication, though scores for both criteria were relatively neutral. Students expected an increase in the quality of communication ( $M = 3.06$ ) and a decrease in student productivity ( $M = 2.85$ ). Instructors, conversely, expected an increase in student productivity ( $M = 3.12$ ) and a decrease in the quality of communication ( $M = 2.90$ ).

None of the social media types were perceived by students as important for the future careers. Based on the means, Facebook ( $M = 2.98$ ) and online forums ( $M = 2.98$ ) were rated with the highest importance for future careers. Non-Facebook social networking sites ( $M = 2.08$ ) and microblogs ( $M = 2.22$ ) were rated with

the least importance for future careers. Instructors had higher perceptions of importance of social media for students' future careers. Online forums ( $M = 3.85$ ) and video-sharing sites ( $M = 3.42$ ) were rated with the highest importance for students future careers. Non-Facebook social networking sites ( $M = 2.66$ ) and microblogs ( $M = 2.91$ ) were rated with the least importance for students' future careers.

*Objective 2: The Relationship Between Prior Use and Perceptions of Social Media*

Table 2 shows the correlation between prior use of a social media type and interest in having instructional information presented through the various social media types. The results showed a positive correlation between prior use of social media and interest between all types of social

media. Looking at relationships between specific social media types (e.g., prior Facebook use in class and interest in presenting instructional information through Facebook), all relationships were statistically significant. There were higher correlations for instructors than students for all but one of the relationships. For instructors, there was a substantial relationship for wikis and online forums (both  $r_{pb} = .51$ ) and moderate relationships for all other social media types. The weakest, which were moderate, were for non-Facebook social networking sites ( $r_{pb} = .31$ ) and video-sharing sites ( $r_{pb} = .37$ ). For students, there were moderate relationships for wikis ( $r_{pb} = .34$ ) and non-Facebook social networking sites ( $r_{pb} = .30$ ). The rest of the relationships were low, with video-sharing sites ( $r_{pb} = .20$ ) and Facebook ( $r_{pb} = .20$ ) being the weakest.

Table 1  
 Mean Responses for Instructors (N = 232) and Students (N = 460) for Social Media Relating to Education

I would like to receive instructional information through... <sup>a</sup>		I would like to give instructional information to students through...						
	Facebook (SD)	Non-Facebook (SD)	Blogs (SD)	Microblogs (SD)	Wikis (SD)	Video-sharing (SD)	Online forums (SD)	
Students	2.11 (1.20)	1.53 (0.88)	1.78 (1.05)	1.57 (0.91)	1.79 (.07)	2.47 (1.30)	2.70 (1.26)	
Instructors	2.38 (1.26)	1.74 (0.91)	2.54 (1.21)	2.01 (1.10)	2.56 (1.24)	2.97 (1.28)	3.73 (1.17)	
Perceived effects of social media in education on student work and communication. <sup>b</sup>								
	Student Productivity (SD)	Student Work Quality (SD)	Communication Amount (SD)	Communication Quality (SD) <sup>c</sup>				
Students	2.85 (1.06)	2.76 (0.94)	3.61 (1.15)	3.06 (1.20)				
Instructors	3.12 (0.92)	2.79 (0.80)	3.82 (0.90)	2.90 (1.04)				
Students should know how to use _____ for future careers. <sup>d</sup>								
	Facebook (SD)	Non-Facebook (SD)	Blogs (SD)	Microblogs (SD)	Wikis (SD)	Video-sharing (SD)	Online forums (SD)	
Students	2.98 (1.35)	2.08 (1.11)	2.55 (1.23)	2.22 (1.17)	2.48 (1.20)	2.71 (1.22)	2.98 (1.29)	
Instructors	3.21 (1.33)	2.66 (1.24)	3.37 (1.20)	2.91 (1.31)	3.31 (1.22)	3.42 (1.17)	3.85 (1.10)	

<sup>a</sup>Coded as 1 = Disagree, 2 = Mostly Disagree, 3 = Neutral, 4 = Mostly Agree, and 5 = Agree.

<sup>b</sup>Coded as 1 = Major Decrease, 2 = Moderate Decrease, 3 = No Change, 4 = Moderate Increase, and 5 = Major Increase.

<sup>c</sup>For students, results for early respondents were significantly different from late respondents, meaning results cannot be inferred past study's sample.

<sup>d</sup>Coded as 1 = Not Important, 2 = Probably Not Important, 3 = Neutral, 4 = Probably Important, and 5 = Important.

Table 2  
Correlation Between Past Social Media Use in Education and Interest in Having Instructional Information Presented Through Social Media

Social Media Type <sup>b</sup>	I would like to give/receive instructional information through... <sup>a</sup>						
	Facebook	Non-Facebook	Blogs	Microblogs	Wikis	Online Forums	Video-sharing
Facebook							
Students	.20*	.15*	.08	.14*	.08	.11*	.09
Instructors	.44*	.22*	.19*	.25*	.15*	.15*	.20*
Non-Facebook							
Students	.12*	.30*	.12*	.18*	.20*	.08	.17*
Instructors	.18*	.31*	.16*	.19*	.08	.06	.14*
Blogs							
Students	.00	.11*	.21*	.13*	.14*	.07	.10*
Instructors	.24*	.26*	.41*	.35*	.34*	.24*	.28*
Microblogs							
Students	.07	.17*	.12*	.21*	.15*	.07	.03
Instructors	.18*	.20*	.20*	.39*	.17*	.10	.14*
Wikis							
Students	.12*	.16*	.23*	.25*	.34*	.16*	.17*
Instructors	.18*	.18*	.34*	.27*	.51*	.27*	.28*
Online Forums							
Students	.03	.04	.06	.04	.06	.29*	.11*
Instructors	.25*	.12	.24*	.13	.26*	.51*	.34*
Video-sharing							
Students	.03	.05	.10*	.07	.11*	.14*	.20*
Instructors	.31*	.11	.17*	.13*	.16*	.27*	.37*

<sup>a</sup>Coded as 1 = Disagree, 2 = Mostly Disagree, 3 = Neutral, 4 = Mostly Agree, and 5 = Agree.

<sup>b</sup>Social media use coded as 1 = No, 2 = Yes.

\* $p < .05$ .

Table 3 shows the correlations between use of any social media for education and expected effects of social media use in education. Prior use for this correlation was operationally defined as use of any social media type for any purpose in education. There was a positive correlation between any use of social media in education and expected increases in the variables. The correlations were stronger for instructors than students. For instructors, there was a moderate relationship between prior social media use in

education and expected increases in student productivity ( $r_{pb} = .32$ ), while the other relationships were low, with expected changes in quality of communication ( $r_{pb} = .24$ ) being the weakest. For students, there were low relationships between prior social media use and expected changes in student productivity ( $r_{pb} = .16$ ), quality of student work ( $r_{pb} = .14$ ), and amount of communication ( $r_{pb} = .13$ ), and there was negligible relationship for expected changes in quality of communication ( $r_{pb} = .07$ ).

Table 3

*Correlation Between Past Social Media Use and Effects on Communication and Student Productivity*

		Student Productivity <sup>a</sup>	Quality of Student Work <sup>a</sup>	Amount of Communication <sup>a</sup>	Quality of Communication <sup>a</sup>
Any Social Media <sup>b</sup>	Students	.16*	.14*	.13*	.07
	Instructors	.32*	.27*	.26*	.24*

<sup>a</sup>Coded as 1 = Major Decrease, 2 = Moderate Decrease, 3 = No Change, 4 = Moderate Increase, and 5 = Major Increase.

<sup>b</sup>Social media use coded as 1 = No, 2 = Yes.

\* $p < .05$ .

The correlations between prior use of a social media type and perceived importance of social media types for students' future careers are shown in Table 4. There were no negative relationships between any social media type used for education and perceived importance of any social media type for future careers. As for the relationship between specific social media types (e.g., prior Facebook use in class and perceived importance of Facebook for future careers), all but one of the correlations were statistically significant. The trend of correlations being stronger with instructors than students also appeared in this group of correlations, except for

the correlation for non-Facebook social networking sites, which was stronger for students ( $r_{pb} = .18$ ) than instructors ( $r_{pb} = .11$ ). For the instructor correlations, all but one of the relationships were moderate, with online forums ( $r_{pb} = .41$ ) and wikis ( $r_{pb} = .40$ ) being the strongest. The relationship for non-Facebook social networking sites ( $r_{pb} = .11$ ) was low. For students, all were low correlations. Relationships for wikis ( $r_{pb} = .28$ ), online forums ( $r_{pb} = .25$ ), and video-sharing sites ( $r_{pb} = .25$ ) were strongest, and microblogs ( $r_{pb} = .14$ ), blogs ( $r_{pb} = .14$ ), and Facebook ( $r_{pb} = .15$ ) were the weakest.

Table 4  
Correlation Between Past Social Media Use and Perceived Importance of Social Media for Students' Future Careers

Social Media Type <sup>b</sup>	Students should know how to use _____ for future careers <sup>a</sup>						
	Facebook	Non-Facebook	Blogs	Microblogs	Wikis	Online Forums Video-sharing	
Facebook	Students	.15*	.04	.11*	.07	.09	.13
	Instructors	.33*	.21*	.25*	.19*	.14*	.20*
Non-Facebook	Students	.05	.18*	.08	.14*	.02	.07
	Instructors	.20*	.11	.16*	.16*	.12	.10
Blogs	Students	.00	.05	.14*	.06	.12*	.03
	Instructors	.30*	.08*	.37*	.33*	.26*	.28*
Microblogs	Students	.04	.13*	.07	.14*	.11*	.02
	Instructors	.24*	.07	.28*	.32*	.22*	.13
Wikis	Students	.10*	.09	.14*	.11*	.28*	.10*
	Instructors	.29*	.12	.34*	.22*	.40*	.30*
Online Forums	Students	.00	.01	.09	.01	.06	.25*
	Instructors	.28*	.11	.24*	.19*	.23*	.41*
Video-sharing	Students	.04	.04	.06	.04	.09	.11*
	Instructors	.28*	.08	.20*	.14*	.29*	.26*

<sup>a</sup>Coded as 1 = Not Important, 2 = Probably Not Important, 3 = Neutral, 4 = Probably Important, and 5 = Important.

<sup>b</sup>Social media use coded as 1 = No, 2 = Yes.

\* $p < .05$ .

## Conclusions

The results of objective 1 showed instructors were more interested than students in having instructional information be presented through social media, though instructors were still not interested in general. These results are similar to results in distance and online education studies that find students prefer live learning over distance or online learning (Diebel & Gow, 2005; Moore & Wilson, 2005; Witt & Wheelless, 1999). This lack of positive perception should not necessarily preclude the implementation of social media in education. Despite the less positive views of distance education, student learning outcomes in distance and online courses have been shown to be similar (Koch et al., 2005), which could be an analogous situation to implementing social media in education. Prior experience with distance education has been associated with more positive expectations of distance education (Witt & Wheelless, 1999). For social media, positive experiences could be necessary for positive perceptions to occur.

For the expected changes, instructors and students were in agreement as far as expecting the amount of communication to increase and the quality of student work to decrease if social media were implemented in classes. These results are similar to the results from the Jones and Johnson-Yale (2005) study that showed instructors perceived that e-mail had increased communication but that Internet use had hurt student work. Students and instructors in the current study were split on the effects to student productivity and quality of communication, though the expected changes were relatively neutral for both groups.

Students did not perceive any social media as being important for their future careers. Instructors held higher perceptions of social media's importance for students' future careers. The instructors perceived online forums, video-sharing sites, and blogs as the most important social media types for students' future careers. While instructors and students were not in agreement as to the overall importance of social media on students' future careers, both groups indicated non-Facebook social networking sites and microblogs (Twitter) were the least important.

As a general trend, students and instructors had discrepant views on social media in

education and future careers. Student and instructor interactions involving social media could violate expectations for either group, similar to the violation in the Settle et al. (2010) study. Care should be taken when introducing social media into classes knowing violations could occur. Instructors should, at the very least, be aware that student expectation regarding social media in education could differ from their own. In particular, students were less interested in social media for classes and perceived social media as less important for their own careers.

Objective 2 results showed that prior use of social media was positively correlated with higher interest in social media use for instructional purposes, higher expectations of increases relating to student work and communication, and higher perception of social media's importance for future careers. These relationships were stronger for instructors than for students.

When looking at the relationship between prior use of specific social media types and interest in instructional information being presented through specific social media types, the relationships were all positive. The relationships were strongest when matching social media type (e.g., the relationship between prior Facebook use and interest in using Facebook to present instructional information). This indicates that interest in using social media in education could be strengthened by actually using social media but would be more effective if past use included the social media type in question. For instructors, all relationships were moderate or substantial, while the relationships for students were mostly low.

As for the expected effects of social media use in education, prior use of any social media type in class was positively correlated with expected increases in all areas. The relationship was strongest for expected changes in student productivity, though it was only moderate for instructors and low for students. The relationship was weakest for expected changes in quality of communication, with the relationship being low for instructors and negligible for students.

There was also a positive relationship between prior social media use and perceived importance of social media for students' future careers. As with the relationship between use and interest in using social media to present instructional information, the relationships were

strongest between prior use of a social media type and perceived importance of the same social media type. For instructors, all of the relationships between the same social media type were moderate correlations, with the exception of non-Facebook social networking sites. For students, all of the relationships between the same social media types were low correlations.

The positive correlation between prior use of a social medium and positive perceptions of social media in education and for future careers is consistent with the literature from distance and online education that shows that perceptions of distance and online learning is higher with those who have more experience than those who do not (Moore & Wilson, 2005; Witt & Wheelless, 1999). Another issue from distance education literature to consider is the findings from Diebel and Gow (2005) that showed students were poor predictors of what to expect from a distance course. Without experience, students and instructors could be poor predictors of what to expect from social media implementation in education. Like distance education, social media in education could be something that is not perceived as favorably as live courses but is still able to have equal outcomes for student learning.

The caveat that must be acknowledged is that the study is correlational, not experimental. There is no way of knowing which variable would be considered the independent variable and which variable would be considered the dependent variable. Instructors with more positive perceptions of social media could have had those perceptions come from prior social media use in education or the perceptions could be the impetus for the initial use. With the students, there is not as much self-selection as far as choosing when social media use occurs in education. By and large, instructors make the majority of decisions regarding how communication technology is implemented in courses, but causation can still not be determined in this study. Due to sampling, another limitation of the study is that the results can only be inferred to the sampling frames, not the target population.

## **Recommendations**

It is recommended that instructors be aware of the possible discrepancies between their perceptions of social media in education and students' perceptions. These discrepancies could lead to violations in students' expectations for what should be introduced into educational settings. Violations are deemed negative or positive based on the actual violation, the characteristics of the violation, the relationship between the two parties involved, and the context of the violation (West & Turner, 2007). Burke et al. (2009), Head and Eisenberg (2010), and Holmberg and Huvila (2008) have documented successful implementations of social media into university courses. But while violations are not inherently negative, it has been documented that students could see the use of social media in class as a negative violation because of the personal nature of social media (Settle et al., 2010).

With the relationship between prior use and perceptions of social media relating to education and careers being stronger for instructors than students, instructors should be aware they could be viewing the experiences more positively than students. Instructors should accurately ascertain students' perceptions of implementation to ensure that instructor and student views of the outcomes of social media use in education are similar. While rigorous techniques associated with research, such as surveys or in-depth interviews, would be ideal, assessing students' perceptions through conversations with the students or informal course evaluations would also be able to gauge student perceptions.

Instructors should also be aware that history of use with a specific social media type is a stronger predictor of perception than history of use with other social media types. For instance, student use of Facebook is not the best indicator of receptiveness for the implementation of a blog in the classroom. It would be a mistake to assume that because the majority of students use Facebook that they would be receptive to blogs in classes.

When considering the adoption of social media into educational practices, the criteria Schwartz et al. (2004) suggested for wikis – cost, complexity, control, clarity, common technical framework, and features – could be a beneficial starting point as general selection

criteria for social media in education. Should the decision be made to implement social media in education, it could also be beneficial to be cognizant of Chickering and Ehrmann's (1996) seven principles of effective undergraduate education as applied to technology: encourage contact between students and faculty, develop reciprocity and cooperation among students, use active learning strategies, give prompt feedback, emphasize time on task, communicate high expectations, and respect diverse talents and ways of learning. Beldarrain (2006) stated "the seven principles, along with the specific needs of the course, will help determine the purpose and rationale of integrating the particular technology, and how it benefits the learner" (p. 144).

Finally, future research is needed to determine the direction of the relationship between prior use and perceptions of social media use. A quasi-experimental study is the

most realistic way of testing the variables in actual class settings, but one-group experimental designs could also be used. It could be difficult for social media to be implemented into education if the causal agent in the relationship is not determined. With instructors especially, they would have more control over the choice to use social media in courses. Because the majority of surveyed students and instructors have used social media in education, research should continue to better understand the variables relating to successful implementation. Bernard et al. (2009) recommended focusing on distance education instead of comparing distance education to traditional classroom instruction. Similarly, if the use of social media in education is to be improved, research should focus on factors that associated with successful social media use in education instead of comparing social media in education to other types of education.

### References

- Beldarrain, Y. (2006). Distance education trends: Integrating new technologies to foster student interaction and collaboration. *Distance Education, 27*(2), 139-153. doi:[10.1080/01587910600789498](https://doi.org/10.1080/01587910600789498)
- Bernard, R. M., Abrami, P. C., Borokhovski, E., Wade, C. A., Tamim, R. M., Surkes, M. A., & Bethel, E. C. (2009). A meta-analysis of three types of interaction treatments in distance education. *Review of Educational Research, 79*(3), 1243-1289. doi:[10.3102/0034654309333844](https://doi.org/10.3102/0034654309333844)
- Burke, S. C., Snyder, S., & Rager, R. C. (2009). An assessment of faculty usage of YouTube as a teaching resource. *The Internet Journal of Allied Health Sciences and Practice, 7*(1), 1-8.

Retrieved from <http://ijahsp.nova.edu>

Chickering, A., & Ehrmann, S. C. (1996). Implementing the seven principles: Technology as lever. *AAHE Bulletin*, October, 3-6.

Comm, J. (2009). *Twitter power: How to dominate your market one tweet at a time*. Hoboken, NJ: John Wiley & Sons, Inc.

Diebel, P. L., & Gow, L. R. (2005). *Student expectations and preferences of distance course delivery methods*. Paper presented at the annual meeting of the Western Agricultural Economics Association, San Francisco, CA. Retrieved from <http://purl.umn.edu/36304>

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2006). Implementation procedures. In *Internet, mail, and mixed-mode surveys: The tailored design method* (3rd ed., pp. 234-299). Hoboken, NJ: John Wiley and Sons, Inc.

Doerfert, D. L. (Ed.). (2011). *National research agenda: American Association for Agricultural Education's research priority areas for 2011-2015*. Lubbock, TX: Texas Tech University, Department of Agricultural Education and Communications.

Facebook. (2012). *Fact sheet*. Retrieved from <http://newsroom.fb.com/content/default.aspx?NewsAreaId=22>

Head, A. J., & Eisenberg, M. B. (2010). How today's college students use Wikipedia for course-related research. *First Monday*, 15(3). Retrieved from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/index>

Holmberg, K., & Huvila, I. (2008). Learning together apart: Distance education in a virtual world. *First Monday*, 13(10). Retrieved from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/index>

Howe, N., & Strauss, W. (2007). *Millennials go to college* (2nd ed.). Great Falls, VA: LifeCourse Associates.

Irani, T., & Telg, R. W. (2002). Gauging distance education students' level with technology and perceptions of self-assessment and technology training initiatives. *Journal of Applied Communications*, 86(2), 45-55.

Johnson, D. M., Ferguson, J. A., & Lester, M. L. (1999). Computer experiences, self-efficacy and knowledge of students enrolled in introductory university agriculture courses. *Journal of Agricultural Education*, 40(2), 28-37. doi: [10.5032/jae.1999.02028](https://doi.org/10.5032/jae.1999.02028)

Jones, S. (2002). *The Internet goes to college: How students are living in the future with today's technology*. Retrieved from Pew Internet & American Life Project website: <http://www.pewinternet.org/>

Jones, S., & Johnson-Yale, C. (2005). Professors online: The Internet's impact on college faculty. *First Monday*, 10(9). Retrieved from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/index>

Kline, P. (1998). *The new psychometrics: Science, psychology and measurement*. New York, NY: Routledge.

- Koch, S., Townsend, C. D., & Dooley, K. E. (2005). A case study comparison between web-based and traditional level academic leadership instruction. *Journal of Agricultural Education*, 46(4), 72-82. doi: [10.5032/jae.2005.04072](https://doi.org/10.5032/jae.2005.04072)
- Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education*, 42(4), 43-53. doi: [10.5032/jae.2001.04043](https://doi.org/10.5032/jae.2001.04043)
- Mink, J. L., & Moore, L. L. (2005). Evaluation of the distance education degree program available to students through the college of agricultural and life science. *Journal of Agricultural Education*, 46(4), 83-95. doi: [10.5032/jae.2005.04083](https://doi.org/10.5032/jae.2005.04083)
- Miller, L. E. (1998). Appropriate analysis. *Journal of Agricultural Education*, 39(2), 1-10. doi:[10.5032/jae.1998.02001](https://doi.org/10.5032/jae.1998.02001)
- Moore, G., & Wilson, E. B. (2005). Perceptions of graduate students taking on-line and on-campus courses. *Journal of Agricultural Education*, 46(4), 23-35. doi:[10.5032/jae.2005.04023](https://doi.org/10.5032/jae.2005.04023)
- Norcini, J. J., Jr. (1999). Standards and reliability in evaluation: When rules of thumb don't apply. *Academic Medicine*, 74(10), 1088-1090. Retrieved from <http://journals.lww.com/academicmedicine/pages/default.aspx>
- Rhoades, E., & Aue, K. (2010, February). *Social agriculture: Adoption of social media by agricultural editors and broadcasters*. Paper presented at 2010 Southern Association of Agricultural Scientists' Conference, Orlando, FL.
- Rhoades, E. B., Irani, T., Telg, R., & Myers, B. E. (2008). Internet as an information source: Attitudes and usage of students enrolled in a college of agriculture course. *Journal of Agricultural Education*, 49(2), 108-117. doi: [10.5032/jae.2008.02108](https://doi.org/10.5032/jae.2008.02108)
- Roberts, T. G., & Dyer, J. E. (2005). A summary of distance education in university agricultural education departments. *Journal of Agricultural Education*, 46(2), 70-82. doi: [10.5032/jae.2005.02070](https://doi.org/10.5032/jae.2005.02070)
- Schwartz, L., Clark, S., Cossarin, M., & Rudolph, J. (2004). Educational wikis: Features and selection criteria. *The International Review of Research in Open and Distance Learning*, 5(1). Retrieved from <http://www.irrodl.org/index.php/irrodl/index>
- Settle, Q., Telg, R., & Irani, T. (2010). The Facebook factor: Social media in a graduate course. *Proceedings of the American Association for Agricultural Education Southern Region Conference*, 109-111. Retrieved from <http://aaaeonline.org/index.php>
- Stedman, N. L. P., Roberts, T. G., Harder, A., Myers, B. E., & Thoron, A. C. (2011). The relationship between experience and self-perceptions of knowledge and relevance of teaching competencies of faculty in a College of Agricultural and Life Sciences. *Journal of Agricultural Education*, 52(1), 50-60. doi:[10.5032/jae.2011.01050](https://doi.org/10.5032/jae.2011.01050)
- Thompson, J. (2007). Is education 1.0 ready for Web 2.0 students? *Innovate*, 3(4). Retrieved from <http://www.innovateonline.info/>
- West, R., & Turner, L. H. (2007). *Introducing communication theory: Analysis and application*. New York, NY: McGraw-Hill.

Witt, P. L., & Wheelless, L. R. (1999). Nonverbal communication expectancies about teachers and enrollment behavior in distance learning. *Communication Education*, 48(2), 149-154.  
doi: [10.1080/03634529909379162](https://doi.org/10.1080/03634529909379162)

QUISTO SETTLE is a Research Coordinator for the National Public Policy Evaluation Center at the University of Florida, G086A McCarty Hall, Gainesville, FL 32611, [quisto.settle@gmail.com](mailto:quisto.settle@gmail.com)

RICKY TELG is a Professor of Agricultural Communication in the Department of Agricultural Education and Communication at the University of Florida, 113D Bryant Hall, Gainesville, FL 32611, [rwtelg@ufl.edu](mailto:rwtelg@ufl.edu)

LAURI M. BAKER is an Assistant Professor of Agricultural Communications at Kansas State University, 307 Umberger Hall, Manhattan, KA 66506, [lbaker@ksu.edu](mailto:lbaker@ksu.edu)

TRACY IRANI is a Professor of Agricultural Communication in the Department of Agricultural Education and Communication at the University of Florida, 121E Bryant Hall, Gainesville, FL 32611, [irani@ufl.edu](mailto:irani@ufl.edu)

EMILY RHOADES is an Associate Professor of Agricultural Communication in the Department of Agricultural Communication, Education and Leadership at The Ohio State University, 203c Ag Administration, Columbus, OH, [rhoades.100@cfaes.osu.edu](mailto:rhoades.100@cfaes.osu.edu)

TRACY RUTHERFORD is an Associate Professor of Agricultural Communications and Journalism in the Department of Agricultural Leadership, Education, and Communications at Texas A&M University, 264 Agriculture and Life Sciences Building, College Station, TX 77843, [rutherford@tamu.edu](mailto:rutherford@tamu.edu)