Instructors' Social Media Use and Preferences in Agriculture Classes

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Abstract

The purpose of this study was to assess how college agriculture instructors use social media in their classes and view social media's place in education. The majority (61.3%) have used social media in class. The social medium used the most was online forums, followed by video-sharing sites (e.g., YouTube) and Facebook. The media types used the least were microblogs (e.g., Twitter) and non-Facebook social networking sites (e.g., MySpace, LinkedIn). With the exception of online forums and video-sharing sites, participants, in general, did not want to use social media to deliver instructional information. They were most opposed to using microblogs and non-Facebook social networking sites. Participants expected communication with students to increase if social media were used in class. Participants perceived that it was at least probably important that students know how to use online forums, video-sharing sites, and blogs for future careers. Microblogs and non-Facebook social networking sites were seen as the least important for future careers. Future studies should address the appropriateness of social media in education, as well as student perceptions of social media in education.

Introduction

Educational and communication technologies' effects have been shown to vary between what students and instructors perceive. Jones and Johnson-Yale (2005) reported that faculty members believed email had increased and improved communication with students and their teaching, they were more likely to think Internet use had hurt student work than to think it aided student work. Students, on the other hand, believed Internet use had improved their academic experience (Jones, 2002)

and has been beneficial to them overall (Rhoades et al., 2008). Students also reported that the Internet had improved their relationship with professors, with about half indicating that email "allows them to more freely express their ideas to professors" (Jones, 2002, p. 9). Internet and email served as mediums for students and professors to communicate with each other about class and assignments (Jones, 2002).

Rhoades et al. (2008) found that 98.8% of agriculture students surveyed owned a computer in an assessment of students at a land-grant university, which was up from the results found by Johnson et al. (1999) that showed 62.3% of the students owned a computer at a different land-grant university. In the Rhoades et al. (2008) study, students used the Internet most often for search engines, online course management systems, and Facebook or MySpace. The students also found the Internet to be beneficial. As for faculty use of technology, the majority of faculty members surveyed by Jones and Johnson-Yale (2005) had been using computers for at least a decade. Ninety-two percent were using email to communicate with students, and 55% were using course websites to communicate with students. Sixteen percent of participants had taught an online course.

Thompson (2007) discussed the transition of higher education to meet the needs of Millennials, who are students born after 1982 (Eubanks, 2003). Alluding to Millennials and their connection to social media, Thompson (2007) stated that faculty members not using Facebook were "missing an opportunity to capitalize on their students' involvement with (Facebook)" (p. 2). Rhoades et al. (2008) also reported that social media offered a "unique new teaching opportunity to instructors" (p. 114). Of the students surveyed by Rhoades et al., 85.2% had Facebook accounts. Facebook is the largest online social network with more than 500 million active users

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worldwide, with 50% of its users logging on every day (Facebook, 2010). Though it could be a boon for college educators, Thompson (2007) noted that it would take time for higher education to catch up to the capabilities offered by Web 2.0 technology, specifically its two-way communication capabilities.

Social media's impact in education is beginning to be researched. Head and Eisenberg (2010) used focus groups and a survey to study student use of Wikipedia for coursework. Wikipedia is an online encyclopedia that has its content created by its users without the filters of a traditional encyclopedia. The majority of surveyed students used Wikipedia even if they were explicitly told by instructors to not use Wikipedia. The students understood the limitations of Wikipedia and circumvented them by only using the site at the beginning of the research process. Wikipedia was used to get background on their topics. The students then went to more academic sources, which are the sources the students cited. Wikipedia was not being used as a replacement for scholarly sources but instead as a supplement to find those sources.

Holmberg and Huvila (2008) documented a case of Second Life being used as part of a distance education course in Finland. Second Life is a three-dimensional world that allows its users to navigate it as avatars. Unlike alternative online environments, Second Life offers the ability to more closely model a real world learning environment; the students and the educator can be in the same physical location in the Second Life world, complete with chairs, desks, and a classroom. The majority of learners reported that barriers for asking questions and participating in discussions were lowered when using Second Life. Compared to other online environments, respondents said the site was more fun and lessened the psychological distance between students.

Because YouTube is being increasingly used in classrooms, health education faculty members' use and perceptions of the site were assessed (Burke et al., 2009). YouTube was seen as a free source that could help the learning process. All of the faculty members who used YouTube reported that it was an effective teaching tool. The majority of the YouTube users were using the site for in-class discussions and providing informational materials. Negatives related to YouTube use were time spent tracking down appropriate videos and making sure the videos would work in the classroom.

Because society has adopted social media so quickly and in ever-increasing numbers, educators are beginning to discover social media as an instructional tool. The purpose of this exploratory study was to determine how social media was being used in colleges of agriculture. The objectives of the study were to:

    1. Describe if and for what purpose instructors are using social media.

    2. Describe instructors' interest for using social media to present educational information.

    3. Describe changes instructors expect educational social media use to have on students.

    4. Describe instructors' perceived importance of social media for students' future careers.

Methods

The population of interest in this study was university instructors in agriculture. The sampling frame comprised instructors who were members of the American Association for Agricultural Education (AAAE) and/or attendees of the Southern Association of Agricultural Scientists (SAAS) annual conference. The two groups were approached through separate avenues. AAAE members were approached through the AAAE listserv, and SAAS attendees' email addresses were used from their most recent attendance of the SAAS conference. This created two sets of responses and corresponding response rates.

AAAE is an organization "dedicated to studying, applying, and promoting the teaching and learning processes in agriculture" (American Association for Agricultural Education, 2010, para. 1). SAAS brings together individuals in agriculture from education and industry "for the purpose of improving or developing their capabilities relating to educational activities in service to the public arena" (Southern Association of Agricultural Scientists, n.d., para. 1) with sections for agricultural communications, agricultural economics, agricultural education, agronomy, animal science, biochemistry, horticulture, plant pathology, and rural sociology. These organizations were used for the study because their memberships consist of instructors at the collegiate level.

There were 729 usable email addresses for SAAS and 202 respondents, for a 27.7% response rate. For AAAE, there were 593 usable email addresses on the AAAE listserv and 192 respondents, for a 32.4% response rate. Two response rates are being reported because it was not possible to match non-respondents' email addresses that could be on both lists because the addresses for the AAAE listserv were not available. Of the 338 total respondents, 98 were members of both groups, 19 reported they were members of neither group, and 23 did not respond to the question. Only those who taught college courses and completed the questionnaire were included in the study, leaving 232 participating instructors as the final sample.

Recommendations by Dillman et al. (2009) were used for contacting potential participants. Three waves of emails were used to contact potential participants in fall 2009. Participants were sent emails until the number of responses gained from each contact was not substantial enough to warrant further email solicitation. The emails provided a brief introduction to the survey and asked recipients to follow a link in the email to an online questionnaire.

Early respondents were compared to late respondents to help assess the representativeness of the

results for non-responders. Lindner et al. (2001) include comparing early and late respondents as a way of handling non-response error. Early respondents were operationally defined as the first 50% of respondents, and late respondents were defined as the last 50% of respondents. The groups were not significantly different, indicating the results could be generalized past the sample for all items.

The questionnaire was developed from questionnaires that assessed social media use by communicators in agriculture (Rhoades and Aue, 2010), that addressed technologies students reported they should know for future careers (Irani and Telg, 2002), and that addressed faculty perceptions of the effects of student Internet use (Jones and Johnson-Yale, 2005). Descriptive statistics were used to describe the participants' educational use and preferences for social media. The social media types addressed in the study were Facebook, non-Facebook social networking sites (e.g., MySpace), blogs, microblogs (e.g., Twitter), wikis, online forums, and video-sharing sites (e.g., YouTube).

Content validity was assessed by a panel of experts comprising agricultural communications faculty members from three universities (Dooley, 2001). A pilot test was also used to help ensure the validity of the instrument. Reliability was assessed post hoc using Cronbach's Alpha. The scores by section were 0.83 for preferences for delivery of instructional information, 0.78 for changes social

media would cause, and 0.91 for what social media students should know for future careers. The study was approved by the University of Florida Institutional Review Board, and all participants provided written consent.

Results and Discussion

The majority of respondents (62.1%, n = 144) have used social media in class before. How social media were used depended on the social media type. There were three usage options available to participants: assignments, out-of-class discussions, and communication. Assignments could include having the students create or view social media content for a grade. Discussions could include using the social media as a means of discussion or topic of discussion. Communication was a means for instructors to contact students and give them information related to the course and to have students interact with the instructor.

Online forums were the most widely used social media type for all uses, with discussion being the highest (42.7%, n = 99) (Table 1). Video-sharing sites were the next most-used social media type, with assignments (26.7%, n = 62) and discussion (25.4%, n = 59) being the way they tended to be used. Facebook (28.4%, n = 66) and microblogs (7.8%, n = 18) were mostly used for communication. The most prevalent use for wikis was for assignments (17.7%, n = 41),

Table 1. Participant usage of social media by type and purpose for use (N = 232)			
		Out-of-class	
Social Media Type	Assignments (%)	Discussions (%)	Communication (%)
Online forums	33.2	42.7	33.2
Video-sharing sites	26.7	25.4	6.0
Facebook	4.3	9.9	28.4
Blogs	13.4	16.8	6.5
Wikis	17.7	10.3	9.1
Microblogs	3.9	4.7	7.8
Non-Facebook social networking	0.4	1.7	3.0

[z]Participants were able to select multiple purposes for each social media type; therefore, totals do not accumulate to 100%.

[y]Survey administered fall 2009 to a national sample of college agriculture instructors.

Table 2. Participant agreement for wanting to deliver instructional information through social media (N = 232)					
		Mostly Disagree		Mostly Agree	
Social Media Type	Disagree (%)	(%)	Neutral (%)	(%)	Agree (%)
Online forums	7.8	6.1	20.0	37.4	28.7
Video-sharing sites	19.9	13.0	26.8	30.3	10.0
Wikis	28.4	16.8	31.0	17.7	6.0
Facebook	32.9	24.7	19.9	16.5	6.1
Blogs	27.6	18.5	31.0	17.7	5.2
Microblogs	46.1	18.1	26.7	6.9	2.2
Non-Facebook	53.2	24.2	18.6	3.5	0.4

[z]Participants responded once for each social media type. Due to rounding, totals may be slightly above or below 100%.

[y]Survey administered fall 2009 to a national sample of college agriculture instructors.

and the main use for blogs was discussion (16.8%, n = 39).

Social media were used more for out-of-class discussions than for assignments and communication, though the category was not consistently highest for different social media types. How social media were used varied by type. For example, Facebook was used mostly for communication, while wikis were used mostly for assignments. These trends of different social media types being used for different purposes are consistent with the uses shown by Burke et al. (2009), Head and Eisenberg (2010), and Holmberg and Huvila (2008), which utilized specific social media for specific purposes. A more in-depth analysis would be necessary to understand why specific social media are used for specific purposes, though it could conceivably be based on capabilities that differ among the different social media types.

For the most part, participants did not want to deliver instructional information through social media (Table 2). The majority of participants indicated they disagreed or mostly disagreed with the statement "I would like to give instructional information to students through [social media type]," for Facebook, microblogs, and non-Facebook social networking sites. The majority of those who responded to the question (66.1%, n = 152) agreed or mostly agreed that they would like to give instructional information through online forums. For video-

sharing sites, more respondents agreed or mostly agreed (40.3%, n = 93) than disagreed or mostly disagreed (32.9%, n = 76) with the statement.

Non-Facebook social networking sites and microblogs were the social media types participants least wanted to use. For non-Facebook social networking sites, the majority of participants disagreed or mostly disagreed (77.4%, n = 179) with wanting to deliver instructional information through that medium. Respondents also disagreed or mostly disagreed to deliver instructional information through microblogs (64.2%, n = 149) and Facebook (57.6%, n = 133).

Understanding that instructors are generally neutral or opposed to using social media to deliver instructional information is important, but understanding how they arrived at that stance is also important. While the question should be answered empirically, possible explanations include instructors' lack of knowledge regarding social media, discomfort with technology, social media not being able to provide what the instructors need, or other factors related to the instructor and social media.

More participants expected student productivity (37.4%, n = 86) and amount of communication with students (78.7%, n = 181) would increase as a result of social media in education than those who expected they would decrease (Table 3). In contrast, more participants expected the quality of student work

Table 3. Changes participants expect from social media in classes (N = 232)					
	Major Decrease (%)	Moderate Decrease (%)	No Change (%)	Moderate Increase (%)	Major Increase (%)
Amount of communication	3.5	6.1	11.7	62.6	16.1
Quality of communication	10.0	25.8	32.3	27.9	3.9
Student productivity	7.0	13.5	42.2	35.2	2.2
Quality of student work	8.7	18.3	59.0	13.5	0.4

[z]Participants responded once for each social media type. Due to rounding, totals may be slightly above or below 100%.

[y]Survey administered fall 2009 to a national sample of college agriculture instructors.

Table 4. Participants' perception of how important it is that students know how to use social media for future careers (N = 232)					
Social Media Type	Not important (%)	Probably not important (%)	Neutral (%)	Probably important (%)	Important (%)
Online forums	5.7	6.1	16.1	41.7	30.4
Video-sharing sites	8.7	12.1	26.0	35.5	17.7
Blogs	10.4	11.7	25.2	35.2	17.4
Facebook	13.9	19.9	16.0	32.0	18.2
Wikis	10.9	13.1	27.1	31.9	17.0
Microblogs	18.6	20.3	25.5	22.1	13.4
Non-Facebook	21.2	28.1	22.5	19.9	8.2

[z]Participants responded once for each social media type. Due to rounding, totals may be slightly above or below 100%.

[y]Survey administered fall 2009 to a national sample of college agriculture instructors.

(27.0%, n = 62) and quality of communication (35.8%, n = 82) to decrease than those who expected it to increase as a result of social media in education. These results are similar to the results from Jones and Johnson-Yale (2005) that showed instructors reported that Internet use had increased communication. Like the Jones and Johnson-Yale (2005) finding that instructors were more likely to believe Internet use had hurt and not helped student work, more participants in the current study expected the quality of student work to lessen than those who expected it to improve. As noted in the introduction, the perceptions that instructors have related to the relationship between Internet use and quality of student work are incongruent with students, the majority of whom reported that Internet use has helped their education (Jones, 2002).

As for importance for social media in future careers of students, the majority of participants reported online forums (72.1%, n = 166), video-sharing sites (53.2%, n = 123), blogs (52.6%, n = 121) and Facebook (50.2%, n = 116) were at least probably important for students to know (Table 4). More participants perceived non-Facebook social networking (49.3%, n = 114) and microblogs (38.9%, n = 90) as not important than as important. Though not a majority, more participants reported wikis (48.9%, n = 112) were at least probably important than those who reported they were probably not important. Based on these results, instructors see the significance of social media for students' future career successes, especially blogs, online forums, Facebook, and video-sharing sites.

Summary

Social media are an increasing part of society and education. As such, understanding instructors' views on social media in education is important. The current study assessed college agriculture instructors' uses and preferences for social media in education. While the majority of instructors were using social media in education, they were mostly opposed – with the exception of online forums and video-sharing sites – to using them to deliver instructional information. While instructors expected the amount of communication with students to increase if social media were implemented into education, they did not expect increases in the quality of communication, quality of student work, or student productivity. Aside from microblogs and non-Facebook social networking sites, more participants perceived that it was at least probably important that students know how to use social media for future careers.

Social media are being used in class for varying purposes, which indicates that many instructors are purposefully using social media. They are not being indiscriminately applied to random settings. The effectiveness and appropriateness of these applications was not assessed in the current study but should be in future studies. Appropriateness refers to the capabilities of the technology and how it is being applied. Effectiveness refers to the ability of implementations to affect educational success.

Though the results from this study indicate instructors do not want to present instructional information through most social media, that does not mean that doing so is right or wrong. It is an indication of preferences. The effectiveness and appropriateness of social media use in education should be addressed to make that assessment. The next step for understanding social media's place in education is to assess students' usage and preferences for social media. Knowing how both instructors and students view social media in education provides a more thorough picture than only knowing one group's perspective. As for future careers, employers' perception of the importance of social media for their organizations should be addressed.

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