

Social Media: An Opportunity for Engaging Undergraduates

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Abstract

The rise of online social media within the past decade has had a profound influence on the way we connect with others and will likely continue to be a meaningful component of students' lives, campus culture, and the college experience. This large-scale study of students at four-year colleges and universities examines the engaging and disengaging use of social media sites (SMS) on campuses. Additionally, this study examines how SMS use varies by student characteristics and relates to other forms of educationally effective engagement. Results indicate that SMS use cuts equally across many, but not all, student characteristics. In addition, SMS use can be both a substantive distraction from engagement as well as a tool for increased positive engagement.

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The rise of online social media within the past decade has had a profound influence on the way we connect with others (Casey & Evans, 2011; Junco & Cole-Avent, 2008). In higher education, social media's impact has ranged from a significant distraction during classes (Junco, 2012), to a way for students to form on-campus connections with other students (Junco & Cole-Avent, 2008; Nelson Laird & Kuh, 2005), to a means of deepening learning through online interactions with faculty, staff, and class material (Nelson Laird & Kuh, 2005; Mazer, Murphy, & Simonds, 2007; Tay & Allen, 2011). While the intersection of social media and learning in higher education is an emerging field of study, its exploration is important because social media will likely continue to be a meaningful component of students' lives, campus culture, and the college experience (Junco & Cole-Avent, 2008).

Tay and Allen (2011) note that a specific definition of social media is "elusive," (p. 154) as it is based in content co-created, consumed by, and exposed to multitudes of users without a central authority. For the purpose of this study, we operationally defined social media as "a membership-based online or mobile platform used primarily for entertainment, communication, and connection with others."

Despite difficulties in defining it, social media has had a significant impact in the lives of today's college students. In their 2010 quantitative survey of nearly 37,000 undergraduate students at 127 universities in North America, Smith and Caruso (2010) found that 99% of students own a computer and 90% of them use social media websites. They also found that 87 to 97% of undergraduates have a Facebook account and spend nearly two hours a day on the site. Casey & Evans (2011) state that widespread acceptance of social media in the broader culture has legitimized its use in classrooms.

Although these findings support the idea that social media is a part of college students' lives, Junco and Cole-Avent (2008) remind us that social media use is not necessarily equitable. Compared to their peers, students of lower socioeconomic status (SES) frequently have less access to computers and fast Internet connections at home. This lack of access may hold low-SES students back from participating fully in social media before college and put them behind the curve once they matriculate. Further, technology use by college students has been found to vary by gender, SES and race in smaller studies (Junco, 2012), but larger studies have not compared social media use alongside SES factors (Nelson Laird & Kuh, 2005).

Junco and Cole-Avent (2008) state that students often do not draw distinctions between online communication and face-to-face communication, and are more likely to be forthcoming with personal information and opinions online than in person. In addition, Tay and Allen (2011) note that skills of collaboration, participation, communication, and developing co-created learning materials – skills similar to those used in navigating social networking sites – can be facilitated through online learning. These two findings indicate that social media can be leveraged on campuses to increase learning and engagement.

Moran, Seaman, and Tinti-Kane (2011) surveyed a sample of over 1,900 faculty members at institutions across the country, finding that almost two-thirds have used social media at least once in the classroom and that faculty reported viewing social media as a useful tool for collaborative learning and teaching. Similarly, Tay and Allen (2011) found that social media allows students to be constructivists within their own learning, collaborating with professors and peers to shape their experiences with the course material. This level of interaction with the course material can assist in moving students away from learning “what to know” and towards “how to know” (p. 154), and more deeply engage them with the material.

Finally, Junco, Heiberger and Loken's (2011) study found that deeper discussions of class material took place between students using Twitter as a discussion platform as opposed to a control group of in-class discussants. Twitter allowed for candid questions of panelists in class sessions, quick formation of in-person study groups, and had a positive effect on the grades of students who participated in the experiment group.

Social media also has limitations not associated with traditional classroom teaching tools. It is possible that not all students learn as well in online formats as in traditional class formats, and social media likely does not eliminate the challenges inherent in group work (Tay & Allen, 2011). In addition, Junco's (2012) survey of more than 1,700 undergraduate students at a four-year public institution in the Northeastern U.S. found that 28% of undergraduate students reported using Facebook during class and 13% reported using Facebook somewhat frequently or very frequently during class. Use of Facebook during class at every level of frequency led to lower GPAs.

Purpose

Given the potential for social media's use as an engagement and learning tool, this study examines which was more pervasive: positive or distracting use of social media on campuses. Additionally, this study explores the relationships between use of social media sites and other forms of educationally effective engagement. To that end, this study was guided by the following research questions:

1. How much does students' use of social media contribute to select aspects of engagement and select aspects of disengagement?
2. How much does students' engaging and disengaging use of social media vary by student characteristics?

3. How much does students' engaging and disengaging use of social media relate to other forms of engagement?

Data source

The data for this study comes from the 2014 administration of the National Survey of Student Engagement (NSSE). NSSE was designed to measure the time and energy that students invest in activities that relate to student learning and development. NSSE 2014 was administered to first-year and senior students at 713 four-year colleges and universities, with an average response rate of 32%. A short set of experimental items about social media use was appended to NSSE at forty-four institutions, yielding 5904 first-year and 7850 senior respondents.

Sample

The students in this study represented a variety of majors with the largest proportions in Business, Health Professions, and Arts & Humanities. Students were mostly enrolled full-time, were not taking any courses online, and had mostly A or B grades. Most first-year students were living on campus, and most seniors were living off campus. Around half of seniors started college at another institution, and around half were first-generation students. Three in five identified as women, and most were of traditional age. Most students were U.S. citizens, and around two-thirds identified as White. For more sample details, see Table 1. Respondents were from a variety of institution types. A quarter (25%) were from doctoral research universities, a third (35%) were from Master's colleges and universities, 13% were from bachelor's-granting institutions, and a quarter (27%) were from non-classified or special focus institutions. Nearly half (47%) were from publicly controlled institutions, and a third (29%) were from private institutions.

Measures

Questions from the core NSSE survey, including student characteristics and NSSE's ten Engagement Indicators (see nsse.iub.edu for more details), were examined in relation to use of social media sites (SMS). The focus of this study is on a subset of items in the SMS experimental item set which asked students how much their use of SMS contributed to forms of engagement and disengagement. This engagement included understanding course materials and ideas; learning, studying, or completing coursework with other students; connecting to people who are different from you in terms of race, social class, religion, or political beliefs; and understanding controversial issues from multiple perspectives. These items were averaged to create an "Engaging Use" (EU) scale ($\alpha=.804$). Disengagement included SMS distracting students from completing their coursework, paying attention in class, participating in campus events and social activities, and doing group work with other students; as well as feeling intimidated by other students (e.g., harassed, hazed, or bullied). These items were averaged to create a "Disengaging Use" (DU) scale ($\alpha=.844$).

Analysis

To answer the first research question, descriptives of items in the SMS experimental item set were examined to determine how much students' use of SMS contributed to select aspects of engagement and disengagement. To answer the second research question, OLS regression models were examined to determine which student characteristics predicted students' engaging and disengaging use of SMS. Student characteristics examined included all characteristics in Table 1. Institution-level controls included Carnegie classification and private/public control. To answer the third research question, a series of OLS regression models, with all student- and institution-level characteristics as controls, were used to determine the strength of the

relationship between engaging or disengaging SMS use and other forms of engagement. All variables were standardized before entry into these models so that coefficients can be interpreted as effect sizes. All results are reported separately for first-year (FY) and senior students (SR).

Results

Most substantially, both first-year and senior students reported that SMS distracted them from completing their coursework. Only a quarter (23%) of first-years and third (32%) of seniors said SMS use distracted them from completing their coursework “Very little.” The next two most substantial consequences of SMS use were connecting to people who are different from them and understanding issues from multiple perspectives. The least substantial consequence of SMS use was feeling intimidated by other students, followed by distracting students during group work with other students and distracting students during campus events and social activities. Most students (FY: 84%, SR: 89%) reported they felt intimidated “Very little.” For more details on the descriptives of these items, see Table 2.

When student characteristics were examined to predict increased engaging or disengaging use of SMS, very few differences were found. Although statistically significant predictors exist, the magnitude of most relationships was trivial. However, international students, particularly in their first-year, were more likely to have engaging uses of SMS (FY: Std. $\beta=.120$, $p<.001$; SR: Std. $\beta=.068$, $p<.001$). Older students were less likely to have both engaging (FY: Std. $\beta=-.099$, $p<.001$; SR: Std. $\beta=-.181$, $p<.001$) and disengaging (FY: Std. $\beta=-.137$, $p<.001$; SR: Std. $\beta=.226$, $p<.001$) uses for SMS. For more details on these student characteristic predictors, see Table 3.

For both first-year and senior students, the strongest relationships between aspects of engagement in effective educational practices and engaging uses of SMS were Reflective and Integrative Learning (FY: Ustd. $B=.251$, $p<.001$; Ustd. $B=.247$, $p<.001$), Collaborative Learning

(FY: Ustd. $B = .222, p < .001$; SR: Ustd. $B = .239, p < .001$), and Student-Faculty Interaction (FY: Std. Ustd. $B = .246, p < .001$; SR: Ustd. $B = .240, p < .001$). This suggests that students using SMS in engaging ways are also participating in more of these effective educational practices. The strongest relationships between aspects of engagement in effective educational practices and disengaging uses of SMS were Collaborative Learning (FY: Ustd. $B = .133, p < .001$; Ustd. $B = .154, p < .001$) and Student-Faculty Interaction (FY: Ustd. $B = .111, p < .001$; Ustd. $B = .151, p < .001$). This suggests that students using SMS in disengaging ways are also participating in more of these effective educational practices.

Conclusions

Echoing Smith and Caruso's (2010) finding that the vast majority of college students interact with SMS daily, we found that the use of SMS affects students universally. Exceptions are international students who do more engaging use, and older students who do less engaging and disengaging use. In addition, our results support Junco's (2012) finding that SMS distracts student attention from coursework. Most significantly, we found that students who use SMS are more likely to have higher levels of student/faculty interaction and collaborative learning, regardless of whether students feel distracted by SMS use or not. This may suggest that students using SMS for engagement are connecting with peers and faculty to support their learning, while students who are distracted by SMS must seek out help from peers and faculty to compensate for class and study time lost to SMS. However, more research is needed to explore this suggestion. This study cannot speak to the assertion that SMS use varies by SES because NSSE does not capture SES information beyond first-generation status.

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33
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Table 1 Select Student Characteristics

		First-year (%)	Senior (%)
Major	Arts & Humanities	11.5	12.8
	Biological Sciences, Agriculture, & Natural Resources	11.3	8.9
	Physical Sciences, Mathematics, & Computer Science	6.0	5.9
	Social Sciences	9.8	11.9
	Business	14.4	18.4
	Communications, Media, & Public Relations	4.1	4.0
	Education	9.8	10.0
	Engineering	6.5	5.5
	Health Professions	14.4	10.3
	Social Service Professions	4.5	5.4
	All Other	3.8	6.5
	Undecided, undeclared	3.8	.3
Enrollment	Not full-time	3.5	16.6
	Full-time	96.5	83.4
Online courses	No courses taken online	88.5	73.5
	Some courses taken online	10.0	18.1
	All courses taken online	1.5	8.3
Grades	Mostly A grades	44.9	49.8
	Mostly B grades	44.7	44.1
	Mostly C grades or lower	10.4	6.0
Transfer status	Started here	90.7	51.7
	Started elsewhere (transfer)	9.3	48.3
First-generation	No	54.7	50.3
	Yes	45.3	49.7
Gender identity	Man	33.5	36.0
	Woman	64.8	61.9
	Another gender identity	.4	.3
	Prefer not to respond	1.3	1.8
Age	19 or younger	88.1	.8
	20-23	6.2	60.5
	24-29	2.4	14.4
	30-39	1.6	11.5
	40-55	1.5	11.2
	Over 55	.2	1.7
International student	No	93.9	95.7
	Yes	6.1	4.3
Racial/ethnic identification	Asian, Native Hawaiian, or Other Pacific Islander	5.5	4.2
	Black or African American	11.8	9.1
	Hispanic or Latino	6.5	7.3
	White	63.1	65.7
	American Indian, Alaska Native, Other, Multiracial	9.9	8.6
	I prefer not to respond	3.3	5.2
Living on campus	No	28.9	78.7
	Yes	71.1	21.3

Table 2 NSSE14 Social Media Item Descriptives

		First- year	Senior	First-year	St. Dev.	Senior	St. Dev.
		%	%	Mean		Mean	
During the current school year, how much has your use of social media sites contributed to the following:							
Your understanding of course materials and ideas	1 Very little	57.0	64.0	1.68	.92	1.56	.86
	2 Some	24.1	21.6				
	3 Quite a bit	12.7	9.3				
	4 Very much	6.3	5.1				
Learning, studying, or completing coursework with other students	1 Very little	42.3	48.0	1.92	.96	1.84	.97
	2 Some	30.7	27.7				
	3 Quite a bit	19.4	16.4				
	4 Very much	7.7	8.0				
Connecting to people who are different from you in terms of race, social class, religion, or political	1 Very little	34.4	41.1	2.13	1.02	2.01	1.03
	2 Some	31.1	28.1				
	3 Quite a bit	22.0	19.5				
	4 Very much	12.5	11.4				
Understanding controversial issues from multiple perspectives	1 Very little	36.8	42.5	2.08	1.02	1.97	1.01
	2 Some	30.0	27.8				
	3 Quite a bit	21.5	19.6				
	4 Very much	11.6	10.1				
Distracting you from completing your coursework	1 Very little	22.6	32.3	2.34	.99	2.18	1.03
	2 Some	35.2	31.5				
	3 Quite a bit	27.4	22.5				
	4 Very much	14.7	13.7				
Distracting you from paying attention in class	1 Very little	58.0	66.0	1.66	.91	1.53	.85
	2 Some	24.1	20.5				
	3 Quite a bit	12.0	8.2				
	4 Very much	5.9	5.3				
Distracting you during campus events and social activities	1 Very little	58.5	71.6	1.61	.85	1.43	.77
	2 Some	26.2	17.8				
	3 Quite a bit	10.6	7.0				
	4 Very much	4.7	3.5				
Distracting you during group work with other students	1 Very little	64.6	72.2	1.52	.82	1.40	.75
	2 Some	22.8	18.6				
	3 Quite a bit	8.5	5.9				
	4 Very much	4.2	3.4				
Feeling intimidated by other students (e.g., harassed, hazed, or bullied)	1 Very little	83.8	89.3	1.26	.67	1.17	.55
	2 Some	8.7	6.0				
	3 Quite a bit	5.0	2.8				
	4 Very much	2.5	1.8				

Table 3 Coefficients and Significance for Predictors of First-Year and Senior EU and DU

		First-Year EU		Senior EU		First-year DU		Senior DU	
		Std. β	Sig.	Std. β	Sig.	Std. β	Sig.	Std. β	Sig.
(Constant)			.000		.000		.000		.000
Major (compared to Business)	Arts & Humanities	.028	.094	.032	.021	-.050	.003	-.037	.007
	Biological Sciences, Agriculture, & Natural Resources	-.049	.003	-.051	.000	-.055	.001	-.034	.010
	Physical Sciences, Mathematics, & Computer Science	-.037	.016	-.062	.000	-.041	.007	-.032	.011
	Social Sciences	.036	.025	-.002	.876	-.041	.012	-.013	.328
	Communications, Media & Public Relations	.059	.000	.078	.000	.016	.271	.024	.042
	Education	.030	.062	.048	.000	.008	.637	-.006	.672
	Engineering	-.041	.009	-.068	.000	-.046	.003	-.018	.139
	Health Professions	-.008	.648	-.011	.428	-.020	.245	-.002	.877
	Social Service Professions	.010	.503	.018	.144	.019	.197	-.002	.863
	All Other majors	-.028	.051	-.018	.148	-.038	.008	-.031	.012
Undecided majors	-.012	.402	.012	.295	.014	.321	.025	.021	
Full-time enrollment		.036	.013	.015	.238	.021	.161	.040	.002
Online courses	Some online courses	.060	.000	.032	.006	.071	.000	.029	.011
	All online courses	-.001	.959	-.037	.003	.009	.506	-.014	.261
Grades	Mostly B grades	.079	.000	.071	.000	.093	.000	.076	.000
	Mostly C grades	.046	.001	.024	.038	.075	.000	.045	.000
Transfer student		.009	.544	-.068	.000	.032	.024	-.093	.000
First-generation student		.027	.047	-.012	.315	.021	.123	-.014	.222
Gender Identity	Men	-.049	.000	-.045	.000	-.033	.018	-.027	.019
	Another gender identity	.056	.000	.032	.004	.007	.600	.028	.011
	Prefer not to respond to gender identity	-.019	.182	-.010	.424	-.019	.183	-.012	.305
Age		-.099	.000	-.181	.000	-.137	.000	-.226	.000
International student		.120	.000	.068	.000	.040	.004	.043	.000
Racial/ethnic identification	Asian, Native Hawaiian, Other Pacific Islander	.084	.000	.085	.000	.068	.000	.065	.000
	Black or African American	.093	.000	.065	.000	.026	.063	-.005	.646
	Hispanic or Latino	.046	.001	.033	.004	.007	.607	.016	.158
	American Indian, Alaska Native, Other, Multiracial	.053	.000	.026	.021	.005	.719	.013	.254
	Prefer not to respond to race/ethnicity	.027	.056	-.021	.081	-.005	.723	-.016	.171
Living on campus		-.013	.349	.004	.767	.046	.001	.010	.398
Carnegie Classificatio n (compared to Baccalaureat e)	Doctoral Universities	.002	.873	-.006	.648	.028	.059	.010	.475
	Master's Colleges and Universities	.031	.065	.029	.048	.048	.004	.032	.025
	Other	-.016	.233	.017	.144	-.040	.003	-.020	.075
Private Control			-.015	.341	-.029	.024	-.021	.176	-.018

Table 4 Coefficients and Significance for Relationships between Forms of Engagement and EU and DU

	First-year EU		Senior EU		First-year DU		Senior DU	
	Unst. B	Sig.	Unst. B	Sig.	Unst. B	Sig.	Unst. B	Sig.
Higher-Order Learning	.166	.000	.186	.000	.024	.074	.007	.577
Reflective & Integrative Learning	.251	.000	.247	.000	.051	.000	.053	.000
Learning Strategies	.155	.000	.143	.000	-.005	.728	-.014	.269
Quantitative Reasoning	.243	.000	.187	.000	.104	.000	.080	.000
Collaborative Learning	.222	.000	.239	.000	.133	.000	.154	.000
Discussions with Diverse Others	.196	.000	.174	.000	.033	.016	.008	.557
Student-Faculty Interaction	.246	.000	.240	.000	.111	.000	.151	.000
Effective Teaching Practices	.117	.000	.088	.000	-.022	.099	-.025	.059
Quality of Interactions	.098	.000	.110	.000	-.050	.000	-.037	.003
Supportive Environment	.157	.000	.207	.000	.017	.191	.078	.000