Effects of Social Media Usage on Social Integration of University Students

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Social media is important for college students to expand social capital. This study examines how different uses of social media contribute to students' social capital and social integration. The findings show that communicative use, academic collaboration, and self-disclosure on social media significantly predict bridging capital, but they are not positively related to bonding capital. Both bridging and bonding social capital are significant predictors of social integration. This study provides insights about how to use social media to promote students' social integration during their transition to college.

Keywords: social media, social integration, social capital, academic collaboration, self-disclosure

INTRODUCTION

In today's society, social media has become popular among college students and is an almost indispensable part of daily life. Social media refers to "internet based applications that allow the creation and exchange of content which is user generated" (Kaplan & Haenlein, 2010). Social media includes not only social network sites but also discussion forums or publishing platforms. Examples of social media and internet-based applications include Facebook, YouTube, blogs, and discussion forums. Social capital is defined as social resources that people accumulate through their relationships with others. Social media has been found to contribute to social capital by positively impacting social interactions and network building among college students (Ellison, Steinfield, & Lampe, 2007; Valenzuela, 2008). Social media facilitates students' transition to college by providing them with informational and social support while connecting them with their peers (Li & Chen, 2014; Gray et al., 2013). Social media offers a unique opportunity to promote socialization to the college environment (Yu, Tian, Vogel, & Kwok, 2010). Therefore, these tools may be well-suited for addressing social factors because they are designed to maintain relationships and serve as a "social lubricant" (Ellison et al., 2011). The concept of social capital provides a theoretical framework to examine the nature and the value of social integration (Brown et al., 2005). There is strong evidence that social capital positively affects student achievement and prevents students from dropping out (Coleman, 1994). Students who discontinue their undergraduate education often feel disconnected from peers, professors, and administrators at their institution (Harper & Quaye, 2009). As social media is becoming increasingly ubiquitous among students, many

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educators and administrators are aware of the benefits of using social media for academic purposes (Hughes, 2009). Unfortunately, there is scant research on how social media can be used to facilitate students' social integration during their transition to college life.

A study by Galindo et al. (2012) is among the earlier works linking social media to student retention. Retaining students is important for an institution to carry out its mission. A high rate of attrition not only leads to fiscal problems for colleges, but also causes institutions to fail at achieving their goals. Tinto's (1997) interactionist model of student persistence theorized that dropout was less likely to occur if a student was socially integrated. Social integration refers to the "extent to which a student feels connected to the college environment, peers, faculty, and others in college and is involved in campus activities" (Brooman & Darwent, 2013, p. 2). Social integration involves both ''an active form of citizenship and a subjective sense of belonging that results from being part of mainstream social networks and engaging in meaningful social and occupational activities within the community" (Nieminen et al., 2012, p. 14). Tinto's retention model pointed out that social integration is critical to student retention. That is, students who are socially integrated into the campus community generally develop a strong commitment to the institution, and they are less likely to depart from the institution. Given the urgent need to improve student retention, it is necessary to examine the potential effects of social media use on their social integration. Social network sites provide students with social support which further affects student adjustment to college (Gray et al., 2013; Utz & Breuer, 2017). Obviously, social media provides a new platform for students to establish and/or maintain relationships between social network members including their peers. Extensive literature has focused on the relationship of social media use and social support (Ellison et al., 2007; Seo, Kim, & Yang, 2016, Wen et al., 2016). A number of studies also found that the use of social media leads to social capital (Ellison et al., 2007; Valenzuela et al., 2008; Chan, 2013; Chen & Li, 2017). However, there are few studies about whether and how institutions use social media to engage students and facilitate social integration.

In addition, literature reviews indicate that social media use creates different forms of social capital (Chan, 2013; Chen & Li, 2017). Social capital can be classified into bonding and bridging capital (Putnam, 2000) according to two aspects: tie strength and type of resources. Bridging social capital refers to the capacity to access resources through heterogeneous social relationships and networks which connect individuals to people with different background and lifestyles, providing useful information, new perspectives, and other forms of instrumental support. Bridging social capital might expand one's social horizon. However, it does not provide much emotional support (Ellison et al., 2007; Johnston et al., 2013; Williams, 2006). People who possess more bridging social capital usually have more information at their disposal, as well as access to more opportunities (Burke et al., 2011; Johnston et al., 2013). In contrast to bridging capital deriving from weak ties, bonding capital tends to come from members bound with strong ties through homogeneous social networks. Bonding capital refers to the value of and resources from strong ties through homogenous social network characterized by a high level of trust and intimacy, such as family members and close friends, providing mutual and emotional support (Putnam, 2000). Bonding capital involves more sustained support, especially emotional support, from individuals with whom one shares an intimate and reciprocal relationship (Liu & Brown, 2014).

Numerous social media studies have confirmed that social media use is positively related to bridging social capital and bonding social capital (Ellison et al., 2007; Kim & Kim, 2017; Chen & Li; 2017). In higher education, social media plays a growing role in the social lives of college students. A lot of social media studies have focused on the effect of social media on academic outcomes and the social well-being of students. In particular, Ellison et al. (2007) showed that social media use is positively associated with social

capital, satisfaction with campus life, and support for the university. Yu et al. (2010) found that social network sites enable students to learn about their peers and college, which further leads to satisfaction and affiliation with the university. Deng and Yuen (2011) also argued that blogs could be used to connect students, nurture social support, and promote self-expression. Despite the widespread use of social media and evidence highlighting its role in social capital cultivation, how social media use in higher education is related to social integration remains unknown. It is in this context of developing a better understanding of the effects of social media use on social integration that we were interested in examining how different uses of social media impact college students through the lens of social capital, and how social capital helps students acclimate better to college social life for retention purposes.

This study distinguishes social media use by communicative use, academic collaboration, and self-disclosure. Communicative use refers to the degree to which people contact friends, acquaintances, and family members through social media (Chen & Li, 2017). Academic collaboration refers to the extent to which people collaborate and accomplish academic activities on social media. Self-disclosure refers to the extent to which people reveal themselves via social media, including personal profile information, feelings, and location (Chen & Li, 2017). Few studies on the social implications of using social media have focused on students' social integration. This study intends to fill the gap and use a social capital framework to understand whether communicative use, academic collaboration, and self-disclosure on social media would lead to social capital and social integration as the major outcomes, and how it would do so.

The paper is organized as follows: Section 1 gives a brief introduction; section 2 presents literature review and proposed hypotheses; section 3 briefly discusses research method; section 4 provides an analysis of the results; section 5 offers discussion; and section 6 concludes the paper.

LITERATURE REVIEW AND HYPOTHESES

COMMUNICATIVE USE ON SOCIAL MEDIA AND SOCIAL CAPITAL

With the growth of social media platforms and the proliferation of internet access, more and more students become reliant on social media for various needs such as communication, making friends, and sharing information. Emerging as a new avenue of communication, social network sites have become an important communication tool in higher education (Akcaoglu & Bowman, 2016; Chromey, Duchsherer, Pruett, & Vareberg, 2016). Social media tools have been extensively used by students for communication with peers in their courses (Ophus & Abbitt, 2009; Subrahmanyam, Reich, Waechter, & Espinoza, 2008). College students are motivated to utilize social media to maintain strong ties with friends and to strengthen new ties with new acquaintances (Ellison et al., 2007; Tong & Walther, 2011; Wen et al., 2016). The intensity of Facebook use is strongly associated with higher levels of social capital outcomes (Valenzuela, 2008; Ellison et al., 2011). WhatsApp usage strengthened the bonding social capital of students (Bano et al., 2019). In summary, communicative use on social media helps expand bridging bonds. Communicative use on social media also helps establish strong ties among members and coordinate social activities, such as meeting close friends and organizing group work (Cambell & Kwak, 2010). Social media allows relationship maintenance interactions to occur quickly and with multiple people at the same time. In fact, social media acts as an ideal interactive platform to maintain relationships with strong and weak ties (Tong & Walther, 2011). Thus, we propose the following hypotheses:

H1: Communicative use on social media is positively associated with bridging social capital.

H2: Communicative use on social media is positively associated with bonding social capital.

ACADEMIC COLLABORATION ON SOCIAL MEDIA AND SOCIAL CAPITAL

In addition to adjusting to a new living environment, college students must also adjust to the university-level academic environment (Gray et al., 2013). Social media can be used to facilitate students' transition to the academic environment through collaborative learning. Researchers and scholars have paid much attention to active collaborative learning due to the popular use of social media among college students. Social network sites have transformed into popular e-learning platforms for knowledge-sharing and engagement in collaborative learning. The transformation of personal learning environments to be a new pedagogical approach aiming at improving self-regulated learning, may be one of the most potential benefits that social media can offer (Dabbagh & Kitsantas, 2012). Collaborative projects (Wikipedia), blogs, and content communities (YouTube) are good examples of social media tools that can be used for the purpose of improving learning environments. Madge et al. (2009) examined the use of Facebook to improve the academic and social experiences of first-year students. The authors reported that a small number of students use Facebook for informal educational purposes, like discussing classwork and organizing meetings for group projects. Likewise, Lampe et al. (2011) investigated factors influencing the use of Facebook for ad hoc collaborative activities, such as organizing a study group or asking for help in a class. Such collaborative activities on social media often require prolonged interaction with other members over time, which impacts their social exchanges and social relationships (Gray et al., 2013). Yang et al. (2011) found that interactive blogs play an important role in the peer interaction among students leading to a better academic achievement. Some other studies include the use of Facebook and Twitter in the university classroom (Ainin et al., 2015, Tur, Marin, & Carpenter, 2017). These social media tools act as a critical mechanism for communication and collaboration among students (Al-Khalifa & Garcia, 2013). Such collaborative learning not only helps participants develop feelings of social presence and social belonging, but also provides them with the opportunity to build social networks and learning communities that create social capital (Conrad, 2002; Harris 2003). Based upon findings in literature stating that interaction with others could increase social capital, we speculate that academic collaboration on social media among college students can also be positively associated with both bridging social capital and bonding social capital. Thus, we propose the following hypotheses:

H3: Academic collaboration on social media is positively associated with bridging social capital.

H4: Academic collaboration on social media is positively associated with bonding social capital.

SELF-DISCLOSURE ON SOCIAL MEDIA AND SOCIAL CAPITAL

The concept of self-disclosure relates to social psychology and refers to information which an individual voluntarily reveals to other people (Greene, Derlega, & Mathews, 2006; Ignatius & Kokkonen, 2007). People want to be heard and affirmed. Social media makes it easier for them to express feelings and experiences to anyone who is willing to listen (Green, Wilhelmsen, Wilmots, Dodd & Quinn, 2016). Social networking encourages self-disclosure because it allows users to share information such as personal feelings and thoughts easily and instantaneously (Hollenbaugh & Ferris, 2014; Walther, 2007). For instance, when Facebook users upload photos, videos, and post updates, their "friends" will

be notified simultaneously through Newsfeeds. Young people are likely to disclose more on social media than in offline environments. Such disclosures, different from comments made in face-to-face interactions among a small group of peers, are normally broadcasted to one's entire virtual network. Online profiles allow people to present themselves and idealize their image. Self-disclosures on social media are especially instrumental in nurturing social capital, particularly during late adolescence (Subrahmanyam, Reich, Waechter, & Espinoza, 2008). Students can obtain more support from society and increase their social integration by sharing their inner views and outlooks with others through blogs (Ko & Kuo, 2009). There is a need for college students to make themselves attractive to potential network members in order to rebuild and reshape their social networks. Self-disclosure is a key factor in this process and is critical to building social capital, especially in early phases of relationships (Liu & Brown, 2014). Once the relationship is established, self-disclosure may become the basis of virtual interactions that serves to strengthen the relationship. Utz (2015) found that a higher level of intimate updates is needed if self-disclosure plays a significant role in maintaining relationship. The author also argued that positive and entertaining self-disclosures increased the feeling of connection, especially when viewing friends' updates. Chen and Li (2017) showed that self-disclosure on mobile social media contributed to bridging social capital and bonding social capital. Thus, we propose the following hypotheses:

H5. Self-disclosure on social media is positively associated with bridging social capital.

H6. Self-disclosure on social media is positively associated with bonding social capital.

USE OF SOCIAL MEDIA, SOCIAL CAPITAL, AND SOCIAL INTEGRATION

Previous studies have shown that social media plays an important role in the social integration process (Ewart & Snowden, 2012; Ko & Kuo, 2009; Wei & Gao, 2017). For example, Wei and Gao (2017) examined the effects of new urban migrants' social media use and their social integration and subjective well-being in China. They found that social media use contributed to new urban migrants' social integration, including their building of social identity and social networks. Due to the social nature of social media, social integration becomes a key focus of the majority of literature that connects the first year transition success and social media (Barnes, 2017). However, there is little research investigating the effects of social media use on social integration in higher education. The concept of social capital provides a framework to better understand the nature and the value of the social integration (Brown et al. 2005). Greater social capital enables people to be more resourceful and draw on resources from others within their social networks. These resources may take the form of personal relationships, information sharing, and group formulation (Ellison et al., 2007). Studies have found that social media use can increase social capital within university communities (Ellison, Steinfield & Lampe, 2007, 2011; Valenzuela et al., 2008; Bano et al., 2019) and make students feel less lonely (Mattanah et al., 2010). "Those who feel at home, who take part in extra-curricular activities, and who feel connected with fellow students and teachers, are more inclined to persist in their studies. Without social integration, it is more difficult to persist, and ultimately to graduate" (Severiens & Schmidt, 2009, p.60). Beyond personal characteristics, students' ability to develop meaningful connections is essential to their adaptation to college (Gray et al., 2013). Social media allows students to expand social capital through interaction with fellow students, faculty members, and staff on campus, which contributes to their social integration into campus community. Thus, we propose the following hypotheses:

H7. Bridging social capital is positively associated with social integration.

H8. Bonding social capital is positively associated with social integration.

METHODS

SAMPLE

We administered an online survey at a public state university in a northeastern state of the United States from November to December 2018 targeting students taking lower level business core courses. Prior to the data collection, the current study was approved by the Institutional Research Board (IRB). Undergraduate students in business core courses could voluntarily participate in the survey for extra credit. Before final data collection, we piloted the questionnaire on 13 undergraduate business students. Based on the feedback from the pilot study, some questions were modified to improve their clarity. As shown in Table 1, among a total of 224 respondents, 54.46% were female (n=122) and 45.54% were male (n=102). 57.59% of the participants were between the ages of 18 and 20. The results indicated that 99.11% of the respondents commonly access and use at least one social media platform. The most commonly used social media include Instagram, Snapchat, YouTube, and Facebook.

Table 1. *Demographics of full sample*

Items (Sample Size n =224)	Percentage
Gender	
Male	102(45.54%)
Female	122(54.46%)
Age	
18-20	129(57.59%)
21-30	82(36.61%)
31-40	10(4.46%)
40+	3(1.34%)
Race/Ethnicity	
White/Caucasian	128(57.14%)
Black/African American	32(14.29%)
Latino/Hispanic	45(20.09%)
Asian	19(8.48%)
First Gen. student	
Yes	96 (42.86%)
No	128 (57.14%)
Residence	
On Campus	103 (45.98%)
Off Campus	121 (54.02%)

MEASURES

All constructs are measured using multiple-item, five point Likert scales ranging from Strongly Disagree (=1) to Strongly Agree (=5).

Communicative Use

The items in this measurement were adapted from previous research on social media use (Chan, 2013, Chen & Li, 2017). Respondents were asked to indicate on a 5-point scale whether they used social media to engage in the following activities: (1) "To stay in touch with family and friends," (2) "To meet new people who share my interests," (3) "To stay in touch with my local community," and (4) "To contact people I wouldn't meet otherwise." The four items were averaged to create an index of communicative use (M=*2.86*, SD=*1.05*).

Self-disclosure

We borrowed six items from previous measurement scales to assess participants' self-disclosure (Chen & Li, 2017). Examples of the items include: (1) "I always find time to keep my profile up-to-date," (2) "I have a detailed profile on social media," and (3) "My profile tells a lot about me." The scores of six of the items were averaged to form a scale of self-disclosure (M=*2.44*, SD=*0.98*).

Academic Collaboration

We adapted seven items from previous measurement scales to assess participants' academic collaboration (Gray et al., 2013). Examples of the items include: (1) "Arrange a meeting for a group project," (2) "Help manage a group project," (3) "Discuss classes or school work," (4) "Arrange a face-to-face study group," and (5) "Collaborate on an assignment in a way my instructor would like." The seven items were combined into a single factor, and the items were averaged to create an index of academic collaboration (M= *2.99*, SD=*1.26*).

Bridging Social Capital

Four items were adapted from previous measurement scales to assess participants' bridging social capital (Ellison et al., 2007; Williams, 2006). Examples of the items are: (1) "Based on the people I interact with, it is easy for me to hear about the latest news and trends," and (2) "I am willing to spend time to support general community activities." The scores of four of the items were averaged to form a scale of bridging social capital (M=*3.31*, SD=*0.972*).

Bonding Social Capital

On a scale adapted from previous measurement scales (Ellison et al., 2007; Williams, 2006), bonding social capital was also measured with four items such as: (1) "When I feel lonely, there are several people I can call to talk to," (2) and "I am most comfortable with people and groups who share my values and beliefs." The scores of four of the items were averaged to form a scale of bonding social capital (M =*3.82*, SD= *0.911*).

Social Integration

We adapted three items from previous measurement scales (Finley, 2012). These items are: (1) "Overall, to what degree, do you belong here?" (2) "Overall, to what degree, are you fitting in?" and (3) "Overall, to what degree, are you satisfied with your social life on campus?" The scores of three of the items were averaged to form a scale of social integration (M=*3.53*, SD =*0.887*).

Statistical Analysis

A Partial Least Squares approach (PLS) was used to conduct the data analysis. PLS is appropriate for this study because the nature of the study is more exploratory than confirmatory. PLS has the ability to evaluate the reliability and validity of the instrument simultaneously, which enables factor analysis to be performed with hypothesis testing in one operation and analyzes measurement errors of the indicators as an integral part of the model (Gefen et al., 2000). In addition, PLS "involves no assumptions about the population or scale of measurement" (Fornell & Bookstein, 1982, p. 443). Thus, SmartPLS (Ringle et al., 2015) version3.0 was used to analyze the data and measure the structural model of this study. Moreover, we used 209 cases for data analysis because 15 records were not useful; for example, we deleted the records for the cases that people indicated that they were 30+. Furthermore, the VIF scores of the variable academic collaboration were high, which suggests multicollinearity issue. Thus, we used four out of seven items to measure academic collaboration, three out of four questions to measure communicative use, and five out of six items to measure self-disclosure due to low factor loading for certain items.

RESULTS

MEASUREMENT MODEL

The reliability and validity of the research instrument were first examined using item reliability, internal consistency, and discriminant validity. According to Chin (1998), individual item loadings were used to evaluate individual item reliability. The PLS factor-loadings, as shown in Table 2, indicate that the survey instrument was good enough for measuring each construct individually since all factor-loadings are above 0.7. We then checked Cronbach's alpha and composite reliability. As shown in Table 2, the Cronbach's alpha coefficients for the constructs are all above 0.7, which is acceptable according to Chin (1998). Thus, all the constructs demonstrate adequate internal consistency.

Table 2. *Factor loading and reliability indices*

Research construct	Items	Factor loading	Composite Reliability	Cronbach's alpha
Academic collaboration	AC1	0.898	0.947	0.926
	AC3	0.907		
	AC5	0.898		
	AC6	0.913		
Bonding social capital	BOSC1	0.832	0.891	0.839
	BOSC2	0.730		
	BOSC3	0.887		
	BOSC4	0.825		
Bridging social capital	BRSC1	0.857	0.915	0.875
	BRSC2	0.895		
	BRSC3	0.895		
	BRSC4	0.765		
Communicative use	CU2	0.848	0.840	0.726
	CU3	0.824		
	CU4	0.717		
Self-disclosure	SD1	0.743	0.895	0.854
	SD2	0.848		
	SD4	0.853		
	SD5	0.804		
	SD6	0.717		
Social Integration	SI1	0.842	0.870	0.775
	SI2	0.878		
	SI3	0.770		

Discriminant validity was also assessed by comparing the average variance extracted (AVE) values associated with each construct to the correlations among constructs (Staples, 1999). Discriminant validity is the lack of a relationship among measures which theoretically should not be related. In order to claim discriminant validity, the square root of the AVE values for each latent variable given in the diagonals should be larger than any correlations of latent variables (Fornell & Larcker, 1981). As shown in Table 3, the square roots of the AVE (diagonal values) are larger than any correlations of the latent variables. Thus, discriminant validity was adequately demonstrated.

Table 3. *Discriminant validity*

Construct	Academic Collaboration	Bonding-Social-Capital	Bridging-Social-Capital	Communicative Use	Self-disclosure	Social Integration
Academic Collaboration	0.904					
Bonding-Social-Capital	0.140	0.820				
Bridging-Social-Capital	0.337	0.424	0.854			
Communicative Use	0.487	0.147	0.496	0.799		
Self-disclosure	0.240	0.094	0.360	0.352	0.795	
Social Integration	0.213	0.431	0.401	0.183	0.150	0.831

STRUCTURAL MODEL

The SmartPLS was used to estimate the structural model. A resample of 2000 for bootstrapping module was conducted. The t-values for each construct in the model were generated, and the path coefficients between latent variables were estimated based on the proposed hypotheses.

HYPOTHESIS TESTING

The proposed hypotheses were validated using the structural model and the level of acceptance of the path coefficients advocated by Hair et al. (2011), whereby 0.1 path coefficient is the minimum to have an impact on the model.

Figure 1 illustrates support for the positive relationships for five out of eight proposed hypotheses. From the perspective of the use of social media, H1, H3, and H5 were supported. The findings indicate that communicative use on social media (b=0.372, p=0) significantly predicted bridging social capital; self-disclosure on social media (b=0.203, p=0.005) was also positively associated with bridging social capital, which is consistent with previous studies (Chen & Li, 2017). More importantly, academic collaboration (b= 0.108, p=0.073) was shown to be positively associated with bridging social capital. However, communicative use (H2), academic collaboration (H4), and self-disclosure (H6) through social media did not significantly predict bonding social capital; thus, H2, H4, and H6 were not supported.

Regarding social capital, bridging social capital (b=0.266, p=0.001) was found to be positively associated with social integration. Bonding social capital (b=0.319, p=0) was also found to be a significant predictor of social integration. Thus, H7 and H8 were supported. Both bridging and bonding capital positively affected students' social integration. That is, the strength of ties to academic communities and the social support that students receive can be instrumental for their transition to college.

The model explained 24.4% of the variance in social integration, 29.4% of the variance in bridging social capital, and 2.9% of the variance in bonding social capital. In addition,
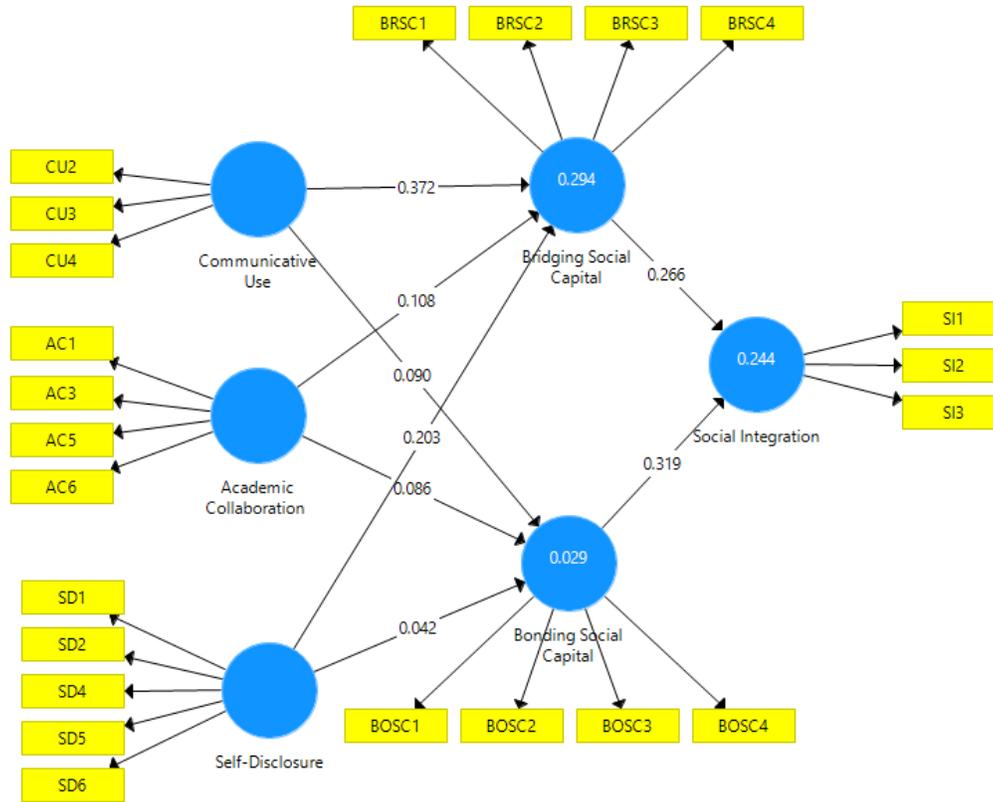
Figure 1. Proposed path model with coefficients

our research model achieves a SRMR of 0.067, which is the root mean square discrepancy between the correlations observed and model-implied correlations (Henseler, Hubona, & Ray, 2016). It indicates a good fit since it is less than the cut-off of 0.08.

Table 4. Hypothesis testing of the proposed model (*p<.10; **p<.01)

Hypothesis	Path relationships	Path coefficients	T Statistics	Results
H1	Communicative Use -> Bridging-Social-Capital	0.372	5.271**	Supported
H2	Communicative Use -> Bonding-Social-Capital	0.09	0.919	Not Supported
H3	Academic Collaboration -> Bridging-Social-Capital	0.108	1.793*	Supported
H4	Academic Collaboration -> Bonding-Social-Capital	0.086	1.146	Not Supported
H5	Self-disclosure -> Bridging-Social-Capital	0.203	2.806*	Supported
H6	Self-disclosure -> Bonding-Social-Capital	0.042	0.503	Not Supported
H7	Bridging-Social-Capital -> Social Integration	0.266	3.443**	Supported
H8	Bonding-Social-Capital -> Social Integration	0.319	4.115**	Supported

Finally, we check the robustness of the PLS results. We need to compare the parameter estimates of the alternative analysis to evaluate whether the results are similar to those generated by the PLS analysis. Previous empirical studies have compared the ordinary least squares (OLS) path analysis results with the PLS results (Klein & Rai, 2009; Peng & Lai, 2012). Thus, we decided to use the OLS regression to conduct the alternative analysis. We computed the average of the items within each construct and ran the OLS regression using these average values. The results of regression analysis are largely consistent with the PLS results (see Table 5).

Table 5. *Comparison of PLS results with the OLS regression results (*p<.10 and **p<.01)*

	PLS results		OLS regression results	
	Path Coefficient	T-stat.	Coefficient	T-stat.
Communicative Use -> Bridging-Social-Capital	0.372	5.271**	0.321	4.854**
Communicative Use -> Bonding-Social-Capital	0.09	0.919	0.064	0.903
Academic Collaboration -> Bridging-Social-Capital	0.108	1.793*	0.096	1.821*
Academic Collaboration -> Bonding-Social-Capital	0.086	1.146	0.073	1.277
Self-disclosure -> Bridging-Social-Capital	0.203	2.806*	0.186	2.91**
Self-disclosure -> Bonding-Social-Capital	0.042	0.503	0.033	0.48
Bridging-Social-Capital -> Social Integration	0.266	3.443**	0.244	3.955**
Bonding-Social-Capital -> Social Integration	0.319	4.115**	0.292	4.437**

DISCUSSION

This study highlights the importance of social media use on students' social integration. First, the findings show that the use of social media can influence students' social integration process through social capital. Second, the findings demonstrate that communicative use, academic collaboration, and self-disclosure are significant predictors of bridging social capital. However, these variables are not significantly associated with bonding social capital. Third, both bridging social capital and bonding social capital play important roles in predicting social integration. Since social integration is critical to student retention, social media could be used to address some of the social issues that students face during their transition to college. Therefore, the use of social media could be integrated in the transition experience to facilitate social integration in order to better retain students.

The noteworthy contribution of the present study is how social media use influences students' social integration through social capital. Reflecting on the positive relationship between communicative use of social media and bridging social capital, we consider that

college students may not hesitate to use social media to contact peers to get to know each other since they may perceive communication with others as a useful and important resource to improve college life (Kim & Kim, 2017). In addition, students often maintain a high level of active communication with their family and friends who may live far away. However, communicative use of social media is not significantly related to bonding social capital at the current stage of investigation. Thus, students are encouraged to use social media for communication purposes and to use social media to expand their social networks.

The findings also suggest a positive relationship between self-disclosure on social media and bridging social capital, but not bonding social capital, which makes sense in light of the aforementioned observation that social media helps to expand network size, especially among weak ties. Liu and Brown (2014) argued that self-discourse on social media is not sufficient to assure students of bonding capital because affirmation is required in the virtual environment that the information revealed about oneself is positively received by network members. Self-disclosure on social media may help students overcome barriers such as low self-esteem through emotional support and supports acts of "social grooming" (Tufekci, 2008). College students benefit from self-disclosure on social media by developing social capital. Self-disclosure is more important for students who are less socially adept and lack social support offline.

Another important finding indicates that academic collaboration on social media plays an important role in the development of bridging social capital, but not bonding social capital. Previous studies have shown that social media (such as Facebook and Twitter) facilitates learning and knowledge sharing among students, which positively affects learning outcomes (Prince, 2004,). Moreover, collaborative and cooperative learning promoted the quality of social interaction (Prince, 2004). McCarthy (2010) also found that social media is an ideal host for a blended learning environment to enhance peer relationships. Our findings further demonstrate that academic collaboration via social media facilitates the development of bridging social capital, which significantly contributes to students' social integration. Thus, we suggest that social media tools need to be implemented into teaching methods to encourage students to work collaboratively and expand beyond a classroom setting. For instance, faculty members may ask students to create blogs, or create an online learning community using social media. Such engagement with social media helps students build connection with their peers, develop social capital, and ultimately improve their social integration.

Furthermore, the findings that both bridging and bonding social capital significantly predict social integration could be a meaningful, practical resource for university administrators to develop school programs to better retain students through social media. Social capital matters for students for several reasons, including having fun, arranging activities, and finding friends (Giannakos et al., 2013). Social capital provides a means to overcome obstacles students face during their transition to college. Such obstacles include a lack of friends, feelings of loneliness, and low self-esteem. Social media supports a vibrant and multidimensional virtual community space, through which students can develop and maintain a local support network and develop a sense of belonging and connectedness. Thus, the theory of social capital could provide a useful framework for considering students' support networks and their relationship to students' social integration.

CONCLUSION

The relationship between social media use and social integration of college students is still under-researched. The findings suggest that different uses of social media contribute to bridging social capital, but not bonding social capital. It makes sense that the use of

social media helps students expand their social networks and establish relationships, but the relationships among college students need mutual trust and social support to develop bonding social capital (Kim & Kim, 2017). More importantly, the results show that both bridging and bonding social capital are significant predictors of social integration. The findings may shed insights onto how relevant university offices or administrators can better support students using social media. As social integration becomes increasingly important, given the diversity found in higher education, university social media teams, educators, and administrator should explore different uses of social media to provide various supports to students and help overcome the obstacles faced by students during their transition to college. For example, institutions can use social media networks such as Facebook to communicate campus news, make announcements, and share useful information with students. This promotes engagement between the institution and students, which may help tackle various student issues through the group interactions to facilitate social integration.

One interesting finding that academic collaboration plays an important role in building bridging social capital suggests that educators adopt a social media platform (such as Facebook) to promote collaborative learning. Academic collaboration on social media not only helps students overcome academic barriers, but also helps bring students closer to each other. Despite the concerns of using social media in the classroom, educators are encouraged to use social media to make students collaborate with their peers, which helps build social capital.

Nevertheless, the findings need to be interpreted cautiously due to some limitations. First, the findings may not be generalizable to other populations because this study was conducted with data collected from one public university. Thus, future research should include samples from other types of colleges and universities. Second, social media could have negative impact on students; spending too much time on social media may negatively affect academic outcomes. Lastly, future research should examine how demographic information, such as gender and on-campus residency, affects the use of media use and social integration.

NOTE

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