

How Universities can Use Social Media as an Informational Tool

Jacquelyn Gagnon

Central Connecticut State University

adamsjar@my.ccsu.edu

Sophia Gray

Central Connecticut State University

scgray@my.ccsu.edu

Leila Khalaf

Central Connecticut State University

leilakhalaf@my.ccsu.edu

Dr. Robert P. Schumaker

Central Connecticut State University

r.schumaker@ccsu.edu

Abstract

This research aims to determine how universities can successfully use social networking to improve communications with their students. The main goal is to answer questions regarding university students and their activity with social media networks (SMNs). The first goal is to gain knowledge of what SMNs students are accessing, how they are accessing them and how they are using them. The second goal is to give a better understanding of how students view a university's presence on these SMNs. Finding the answers will aid universities in better adapting their SMN presence to what their students expect. Because of today's undeniable use of social media by students, using the networks they already utilize will be a reliable way for universities to reach out to their students and provide them with useful information.

1. Introduction

When the terms social media or SMNs is used, many meanings can be derived. For the rest of this paper social media networks will be defined as websites where users go to create, share, exchange information, ideas, pictures and other data with other users. Previous studies have used SMNs to analyze information like how people interact, or how information is shared. This study will try to answer what SMNs students use, how students use them, what devices they use to connect, if they know about their universities presence, and how satisfied they are with the presence.

Past studies that have focused on SMNs have researched fields like how people in general interact with SMNs, and they have also focused on the psychological/emotional effects that SMNs can have on individuals. The results from studies focusing on how people interact with SMNs usually represent only a

percentage of the people studied with categories such as the number of people who post pictures, communicate with family, post status updates and other measurable interactions that can be done with SMNs. Studies that have focused on university students covered the effects of SMNs on a student's emotional state, and on how SMNs can be used as a learning tool, amongst others. There is a need for research pertaining to student reactions to interacting with their university's presence on SMNs.

We plan on studying student responses to their university's presence on SMNs, using a survey we hope to attain our two research goals. The first goal deals with how students currently interact with SMNs. One research question will explore what SMNs students prefer to use out of a list of seven SMNs; Facebook, Twitter, MySpace, myYearbook, BlackPlanet, hi5, and LinkedIn. Another research question will explore nine ways the students can use these SMNs; update status, socialize with friends/family, view pictures of friends/family, create/interact with events, acknowledge birthdays, play games, like other groups/companies pages, make purchases, and they will be able to list others as needed. Out of a choice of five devices, students will be asked to rate how much they use each device to access SMNs and may also choose to specify other devices. The list of devices includes home PC, school PC, work PC, smart phone, and tablet.

The first goal is to gain knowledge of what SMNs students are accessing, how they are accessing them and how they are using them. The second goal is to give a better understanding of how students view a university's presence on these SMNs.

The second goal concentrates on how students interact with their university's presence on different SMNs. This goal mainly focus's on the student reactions to how their university is using and maintaining their SMN pages, beginning with if the students were even aware of a university's presence on SMNs, to how satisfied they are with the presence being portrayed, and any additional feedback the may suggest for improvement.

Knowing how today's university students are interacting with different SMNs can help universities utilize these SMNs in ways their students can relate to. "Advances in computer technology and the Internet have changed the way America works, learns, and communicates. The Internet has become an integral part of America's economic, political, and social life."(Bill Clinton) This sentiment is still true today, as the web develops and students become interested in different networks, educational institutions can develop more ways to reach their students in a productive way. This study will shed some light on what students want and expect from their schools presence on these SMNs.

2. Literature Review

2.1 Statistics

With four out of five internet users visiting a SMN or a blog (Bennett, 2012), studies have shown that social networking is the fastest growing active behavior online with an increase from 26% of people in

2008 to 59% of people in 2011 managing their profile on a monthly basis (Hampton, et al, 2011). It is believed that there are currently over 2.8 billion social media profiles which represents about half of all internet users around the world. China emerges as the leader with 84% users, followed by Russia, Brazil and India (Arno, 2013).

A total of 39% of agencies said they would focus on Twitter, another 36% preferred You Tube, 21% were for LinkedIn and 18% for Google+ (Ping, 2012). As social media continues to grow, more and more groups and businesses are finding different ways to benefit from using them; such as a marketing channel, job search, share relevant information and learning. These allow companies to spot and track trends, improve customer service and increase sales (Bennett, 2012). Since 2009, the number of users accessing the web via a mobile device has doubled from 4.3% to 8.5% so it is safe to say this is not about to go away anytime soon.

2.2 Emotional Consequences

The Jacobson & Forste study collected responses from first-year college students through an online questionnaire and time-diary. The time-diary was a complex way to view student's use of electronic media, and how they multitasked. Educators initially expressed concerns regarding the adverse effects of social networking on in-person social behaviors. There was a negative relationship between use of electronic media and first semester grades. However the study also found a positive relationship between using social networking sites, cellular communication, and face to face interactions (Jacobson & Forste, 2011). The educators' original concerns were shown to be unfounded as the main supporting reason was the multitasking capability of the users, which allowed them to stay connected to their virtual network while they participated in an in-person event, as well as use the on-line networking capabilities to plan accordingly for offline gatherings, or inform others regarding public social events (Jacobson & Forste, 2011).

A study on the literature that is out there about SMNs indicates that SMNs could reinforce existing relationships, and caters to the need of building bridges between online and offline worlds (Perez-Latre, et al, 2001). In this way SMNs are more of a building tool for in-person relationships, and is less about degrading them.

Other than studies on the social-emotional effects of SMNs, the majority of the studies involving Facebook focuses on the psychological effects SMN sites bring out in people. Some are finding that "Facebook users tend to be more extroverted and narcissistic, but less conscientious and socially lonely, than nonusers (Ryan & Xenos, 2011). Others find that "spending a lot of time on Facebook is related to low self-esteem" (Kalpidou et. al., 2011), which is contradicting to the previous study that found many of the users to be more extroverted.

2.3 Life Status Determining the Use of Facebook

A change from the effects of “Facebooking” on a person's wellbeing and from the question of why people use it, a study from Illinois focuses on how people use the social media network Facebook. McAndrew and Jeong compiled a survey of men and woman about their activities on Facebook. They found that, “females, younger people, and those not currently in a committed relationship were the most active Facebook users”. This study focused on a person’s life status (e.g. age, sex, relationship status) as predictors for how people are more likely to use Facebook. They found that females spent more time on Facebook, and had more Facebook friends. Women and older people have been engaged in more online family activities; although it is unclear what age range “older people” refers to. They also found that “relationship status had an impact on the Facebook activity of males, but little effect on the activity of females” (McAndrew & Jeong, 2012).

2.4 User personality correlation with use

Studies regarding the influence of the users’ personalities can be very helpful targeting the right audience, as these studies show that social media group membership for individuals high on the trait of extroversion is substantially higher than the ones on the low extroversion side. Among the students it was found that the extravert individuals were more responsive to the social media features compared to the students with introversion personality characteristics (Isbulan, 2011). Even upon graduation, the extravert group appeared to be more active in social media and more actively visited the other pages, or updated their own statuses. These results support Ryan & Xenos findings (see 3.2 Emotional Consequences), that the majority of Facebook users are extroverts.

2.5 Studies on University Students

Earlier in section 2.3 we saw how one study used different life status (e.g. age, sex, relationship status) to determine how a person is more likely to use Facebook. Other studies have focused just on the sex status in undergraduate students. Using Facebook, a study was conducted on the differences between undergraduate men and women (Thompson & Lougheed, 2012). For most of their questions they found no significant differences between undergraduate males and females, however they did uncover that females spend a greater percentage of their total daily internet time on Facebook, and that they spend more time looking at other peoples profiles each day.

Studies on university students and their use of social media do not just stop at gender differences, they also encompass studies that deal with the relationship between frequency of Facebook use, participation in Facebook activities, and student engagement (Junco, 2012). Reynol Junco's article took previous studies that also focused on the relationship between Facebook and student engagement, and created his own study that filled in the gaps. The studies he looked at were limited by how they evaluated Facebook usage, and how they measured engagement. Junco decided to use a larger sample of college students and

break down the usage of Facebook into two categories: frequency of Facebook use, and participation in Facebook activities; Junco measured student engagement in three ways: 19-item scale based on the National Survey of Student Engagement, time spent preparing for class, and time spent in co-curricular activities (Junco, 2012). The results of his study indicated that there was a negative relationship between Facebook use and the engagement scale; however there was a positive relationship between Facebook use and time spent in co-curricular activities.

2.6 Social Media Academic purposes

2.6.1 Use of Social Media In Classrooms

Potentially, social media can be large and limitless virtual forums, which are great avenues to find the right target audience. Two-way communications has made social media even more appealing because organizations can improve their communication opportunities continuously, based on their recipients' feedback. Three attributes of social media that interest educators are the free framework, the opportunity to catalog the conversations, and the availability of the technology in classrooms or everywhere else (Taya & Allen, 2011).

There are many studies regarding the utilization of social media for academic purposes. If instructors and school officials understand how students use social media, these tools can be used for educational purposes. The goal is finding the right target audience like Taya & Allen pointed out, and then implementing strategies to enhance the effect of social media on these students in order to improve their learning capabilities. For example, one study attempts to find out if Facebook can be used as an effective educational tool, which will open up communication between teachers and students. If it cannot, is the reason for its downfall because it causes too much distraction for students, or because of some other issues (Fewkes & McCabe, 2012).

The Fewkes & McCabe study tries to answer two important questions: how are students using Facebook, and is there a change of pattern regarding the utilization of Facebook in the class room (as instructed) or elsewhere, as students browse on their own time. To answer these questions, a group of male and female secondary school students ages 16 to 18 from Ontario, Canada completed a survey. It was determined that 73% of the students in the pool, confirmed that they have used Facebook for educational purposes. The types of activities however, were different when students use social media in school vs. elsewhere. When in school, the use appeared to be more congruent with the school board's objectives to support educational activities however, this study alone cannot be conclusive as the study was not broad enough and did not include inputs from teachers and school officials (Fewkes & McCabe, 2012).

If researchers can figure out proper utilization of social media in education, then they can improve teamwork competencies among students, and enhance their managerial skills. They can also be taught

how to prioritize tasks, or divide projects into smaller sections to be performed by sub-teams. Offering instructions or even imposing some restrictions, however are expected from school officials to provide guidelines regarding use of multi-media social networking tools to improve their educational effectiveness (Taya & Allen, 2011).

2.6.2 Teacher education

In order to properly integrate social media into the classroom the teachers must be educated in social media and be on board. Ways to solve both of these hindrances that were mentioned in section 2.6.1 will be discussed here. “Among the number of issues related to education some people have researched students' reaction to educators' presence on Facebook and how student-Faculty relationships are influenced. Students are typically ahead of faculty in social media terms” (Perez-Latre, et al, 2001). The Perez-Latre article that was discussed earlier is a literature review of pre-existing literature out there on social networking and education. If students are typically ahead of faculty in social media terms then it is time for them to catch up.

For ways to help teachers and educators learn how to 'catch up' we can turn to an article which helps educators learn how to set up ways of communicating with students via Facebook. This article was not focused on colleges and universities solely, but instead covers educators in general (Burt, 2011). The author believes that educators have “an obligation as educators to model appropriate online behavior and learn right alongside our students”. This article makes several points about why Facebook should become a part of the classroom experience. He also discusses that some institutions have polices against sending friend requests to students, and offers educators some tools to use Facebook while adhering to those school polices. Step-by-step instructions are given on how to control the privacy settings for teachers who wish to communicate with students and parents via their personal pages, in addition to a detailed

Groups vs. Pages	Groups	Pages
Publish to users' live streams	✓	✓
Share photos, videos, and events	✓	✓
Include discussion forums and comments	✓	✓
Make group private and manage members	✓	✗
Allow/limit messaging between group members	✓	✗
Edit group docs wiki style	✓	✗
Group chat all at once	✓	✗
Maintain complete control of what is posted	✗	✓
Use widgets on your blog/website to promote	✗	✓
Choose from thousands of 3 rd party apps	✗	✓
Automatically publish blog posts and tweets	✗	✓
Access "insights" or user stats	✗	✓

Table 1: This table compares what can be done with a group Facebook page vs. what can be done with a normal fan type Facebook page. (Burt, 2011)

explanation on how to set up other accounts solely for student/parent/teacher communications.

There was also the option on how to create 'Fan' pages and the different uses that can come from them. The differences between creating group pages and fan pages each have their own merits, as well as downfalls which can be seen in Table 1 (Burt, 2011).

While Burt's article provides step-by-step instructions on how to set up these different pages, another article (Hartstein, 2011) helps schools identify materials of interest to post on their own pages. The main topics are about sharing school

news, what is happening, upcoming events, school announcements, using media to showcase school culture, sharing videos, using pages as recruitment tools for staff and students, getting feedback from the community, and notes on settings and privacy. In each of these topics, ideas are offered as well as specific situations for each scenario, e.g. these pages can share photos of students exhibiting the values the school encourages, celebrations of student work, field trips, activities, events, and recognition of individual students for excellence.

2.6.3 Business Communication Professional Skills

Sacks and Graves studied the concepts of size, quality, complexity, diffusion, and distance in social networking and the fact that these tools can be used to improve business communication skills and professional networking (Sacks & Graves, 2012). The objective of this study was to empower students by teaching them the principles of social networks, assisting them implement these principles to improve their current network, develop networking goals, and enhance their skills to achieve these goals. Throughout this literature review there have been different articles like (Isbulan, 2011) and (Taya & Allen, 2011) mentioning finding target audiences. When these target audiences are students, they can be taught to hone skills that are going to be useful in their field of work. Social networking is growing so fast that it is bound to be a part of many future jobs, teaching our students how to use these networks appropriately and professionally will be a skill they can carry with them.

3. Survey Design

The key item of our system is a survey which has been constructed to include open-ended questions, as well as choiced answers. While the choiced questions are narrow and the answers cover all possible fields,

the open-ended questions are structured yet leave quite a bit of room for different opinionated answers. This study was able to set up a survey via SurveyMonkey.com (SM) and reached participants through e-mail. As an incentive to attract as many participants as possible, there was a \$25 gift card to the campus bookstore being offered to one lucky participant who was chosen at random. The use of SM also helped that all of the results being collected, analyzed and digitized is in one place. We have constructed six research questions that are geared to help us achieve our two research goals. These questions will be answered through different questions on the survey.

The first question is, what SMNs do students use on a regular basis? We give students a predefined list of SMNs that include Facebook, Twitter, Myspace, myYearbook, BlackPlanet, hi5, and LinkedIn, there is also an other field that the student may select to give us another SMN. Knowing which SMNs students are using will give the university insight as to which SMNs they should be creating a presence in. The more students that use a specific SMN, the more significant, and the more necessary a universities presence will become.

The next thing we want answered is, how do students use the SMNs? This question isn't so easily answered. First we ask students to tell us how often they use each SMN. We give them the options of throughout the day, a few times per day, once per day, once or twice per week, once or twice per month or n/a. N/A is obviously for if they don't use that particular SMN. If we are able to obtain this information we can gauge how often the university should be posting updates on their page. If more students are logging on daily or multiple times a day, then we know that the university could post ongoing updates to students, and have more students see these updates and respond. However this alone doesn't completely cover the question of how students use the networks. Therefore we have another multi-part question asking students to rate eight actions one might be able to do on a SMN based on how often they do this action on each SMN. The list of actions include updating statuses, socializing with friends and family, viewing pictures of friends and family, creating and interacting with events, acknowledging birthdays, playing games, liking other group or company pages, or making purchases. Adding the knowledge of what students are doing on SMNs to how often they are on the SMN sites will give university's incites to what they should be offering on their page, based on what students like to view or participate in.

The last research question that will help us attain our first research goal involves asking students what devices they use most to access their SMNs. To answer this we gave students a list of different devices, a home PC, a smart phone, a school PC, a work PC, and a Tablet. We then asked students to give each device a rating and the choices were most used, moderately used, less than moderately used, seldom used or n/a. Knowing the answer to this question will let us know more about the students. If they check their SMNs mainly via smart phones, than we know that they check it on the go. If they check it in their spare time, they will probably be looking for quick posts, and things that won't take a long time to read. If they

check their SMNs on their home computers than we know that they are in a comfortable setting when checking their SMNs and posts or updates on events can be longer.

These first three research questions will help fulfill our first research goal which was to gain knowledge of what SMNs students are accessing, how they are accessing them, and how they are using them. Our second goal which is to give a better understanding of how students view a university's presence on these SMNs is a bit harder to attain. To begin reaching our goal we give students a list of university pages, then we ask for each one if the students have seen it, liked it, if they have refused to like it, or n/a. From this question we are able to see if students have refused to like a page then there is usually a reason behind it, bad information, or negative feelings about it, however if they choose seen it, we know that they have seen the page either on their wall via another student, or have come across the page, but for some reason haven't liked the page.

Knowing if a student has liked or not liked school pages only begins to fulfill our second goal. Now that we know what pages students like, we created a few questions to ask them what they liked and disliked about the page, along with what would they prefer to see. Getting this opinion from students gives universities an idea what the students want. The point of having a SMN presence is to interact more with students and to improve communications between students and the university. There is no better way to improve communication than to ask students directly what they want to see from their school.

After asking students what they prefer to see we asked them to rate specific actions the university as well as departments could take on their pages. The actions we put on our list are having cancellation and delay information, event photos, ongoing contests, links to other pages, and event videos. This question will tell us how students feel about specific things universities can place on their pages. Some of these actions were recommended by Burt and by Hartstein. Placing these questions after asking students for their feedback on what they like or dislike about the pages means that their answers to those questions won't be influenced by these ideas.

More than having just university or department pages, our research suggests that some classes can also have SMN pages. So we ask the students to rate different things a class page could offer. The choices differ from university or department pages because on a class page a professor could post and students could post questions they may have about homework or lectures. Answers to questions may also be posted on the page as well as videos and photos of presentations. We know many colleges may use other systems for posting assignments and collecting assignments, however using a SMN page is free, and if students are already using the SMN frequently, than receiving updates will happen faster than having the students log occasionally onto another file sharing network.

Lastly students are asked to rate the usefulness of the university pages. They are also asked if they have seen some of the pages in the past, how likely are they to go back to the pages, and if they have

never seen them, now that they know they exist, how likely are they to go view them. Knowing if students found the pages useful, if they plan to revisit, and if they plan on visiting for a first time will give university's an idea of what students want. If students want a strong university presence on SMNs than the response to if they plan to revisit the pages should be high. Putting together all of the responses on how students are reacting to their university's presence on SMNs will help achieve our second goal.

4. Method

The survey was sent to CCSU students from the Management Information Systems (MIS) and the Computer Science (CS) departments. Both qualitative and quantitative methods were used to evaluate the surveys. For the open-ended questions, the responses were categorized based on the main themes that are contained in the answers. These themes get turned into a coding system that can then be analytically looked at from a qualitative stand point. The choice questions were analyzed using a quantitative method, the likert scale, and for select questions were compared against each other using a pairwise t-test. This study reviews the sample population, demographics, and participants' habits regarding use of SMNs including Facebook. More specifically, the study tried to answer the six research questions mentioned in the system design: what SMNs students' use, how students use them, what devices they use to connect to them, if they know about the universities presence, what other feedback they have concerning the presence, and how satisfied they are with the presence.

From a total of approximately 300 e-mails sent to students, 27 responded with 89% being male and 11% female. 81% were undergraduates and 19% were graduate students. 29.63% were taking 12 – 15 credits, 14.81% taking 6 or 18 credits, 7.41% taking 3 credits and 3.70% taking 9 credits. The results show that 37% of the students who responded are 19 – 21 years old, 30% are 22 – 24 years old, 22% are 25 – 34 years old, and 7.41% are 45 – 54 years old followed by 3.70% who are 18 years old. 22% are currently not employed, only 18.52% work full-time hours of 40 hours or more, 25.93% works 11 -20 hours and 11.11% works less than 10 hours, 21 – 30 hours and 31 to 40 hours each.

The data collected in this study can be taken from being from only a small population of CCSU students to representing many students opinions. It can also be taken from being specific to CCSU and can be used more generally, applying to many colleges or universities.

5. Results and Discussion

Using the six research questions as a template we will review our findings on each question one by one. Remember that the majority of the students who responded were 19 to 24 years old. These students are mostly male and from our research we know that females are the ones who spend a greater percentage of their total daily internet time on Facebook, and they spend more time looking at other peoples profiles each day (Thompson & Loughheed).

5.1 What Social Media Networks do Students Use on a Regular Basis Of the 27 students who

responded, an overwhelming 21 of them (77.78%) have Facebook. As you can see in table 2, 37.04% have a Twitter account, 22.22% have a MySpace account, 18.52% have a LinkedIn account, and 18.52% of those who took the survey don't have a SMN account. Those who don't have any SMN account gave their reasons for not having one, most believe it is a waste of time and prefer to communicate with people in person.

SMN	Percentage
Facebook	77.78%
Twitter	37.04%
MySpace	22.22%
LinkedIn	18.52%
None	18.52%

Table 2: This table shows the student responses to which SMNs they have.

These numbers tell us that most students have a Facebook and or a Twitter account. Also we can see that less than 3.7% of people who have a SMN account, don't have a Facebook account. Knowing which SMNs students are currently using is important so we know which accounts should have a stronger university presence. After knowing which SMNs to target a university can begin to mold their presence to their student's needs. From previous research we know that to connect to students on Facebook universities should use group/fan pages and keep those pages updated on a regular basis.

5.2 How do Students Use SMNs?

Students were asked how often they check their social media account. As you can see in Table 3, from the 77.78% that said they use Facebook 42.86% say they check it a few times per day, followed by 28.57% who say they check it throughout the day (never log off), 19.05% check it once or twice per week, and 9.52% check it once per day or once or twice per month. In Table 4 we see that out of the 37.04%

Facebook Users	
How Often Check It	Percent
Few times per Day	42.86%
Throughout the Day	28.57%
Once or Twice per Week	19.05%
Once per Day	9.52%
Once or Twice per Month	9.52%

Table 3: This table shows the how often students use Facebook

who use Twitter 40% of them check it once or twice per week, another 40% check it at least once per day,

Twitter Users	
How Often Check It	Percent
Once or Twice per Week	40%
Once per Day	40%
Once or Twice per Month	20%

Table 4: This table shows how often students use Twitter

and 20% check it once or twice per month. 50% of the original 22.22% MySpace users say they check it once or twice per month, the other 50% chose N/A so presumably they check it less than once or twice per month, or not at all. From the 18.52% that have a LinkedIn account 60% check it once or twice per month, leaving 40% who check it anywhere from once

or twice per week to a few times per day.

From these statistics we can say that most students who have a Facebook account are checking it regularly, this lets us know that universities should be updating their posts there most often. As Twitter

was the second highest SMN, they should be updating Twitter at least weekly. LinkedIn or other SMNs can be updated less often, as students are not heading there nearly as often.

Students were asked to rate how often they update their status, socialize with friends/family, view pictures of friends/family, create/interact with events, acknowledge birthdays, play games, like other groups/companies/pages, and make purchases. They were given a 1-9 scale as to how often they do these activities. Shown in Table 5, 28.57% of Facebook users update their status's regularly, where only 30% of

Actions	Facebook	Twitter
Update Status	28.57%	30%
Socialize with Friends/Family	52.38%	20%
View pictures of Friends/Family	38.10%	20%
Interact with Events	19.00%	30%
Acknowledge Birthdays	52.38%	
Play Games	19.00%	
Like Other Pages	< 10%	
Make Purchases	< 10%	
Table 5: This table shows the percentages of people who regularly do these actions with these SMNs.		

Twitter users do the same. 52.38% socialize with friends and family regularly on Facebook, and 20% of Twitter users do this action regularly. For viewing pictures of friends and family 38.10% of Facebook users enjoy doing this activity, as well as 20% of Twitter users. Only 19% of Facebook users, and 30% of Twitter users

interact with events. Other activities are only regularly participated in by Facebook users. 52.38% acknowledge birthdays, 19% play games, and less than 10% like other pages and make purchases.

Higher percentages of people go to these sites to socialize, which includes acknowledging birthdays, to view pictures of friends and family, and to interact with events or update status's. Universities can use this information to mold their pages to show more pictures, and have more posts to promote socialization between the university and students. Knowing that the students are heading to these sites mainly to socialize textually and visually will help universities to know their target audience better, and to know how to appeal to them.

5.3 What Devices do Students Use Most?

Using a 5 point likert scale, students were asked to rate the devices they use to access SMNs. The results are as follows Home PC – 4.07, Smart Phone – 3.52, School PC – 2.31, Work PC – 2.2, Tablet – 1.7. From these results we can see that the Home PC and the Smartphone are the devices most used by these students to access their SMNs.

The differences between all of these results as you can see in Table 6, are significant differences. The least significant differences are the difference between using a School PC and a Tablet, and using a Work PC or a Tablet. Most students

access their SMNs via their Home Pc's. These are going to be the students who enjoy catching up with people in the comfort of their own home. Based on previous data, we can

Pairwise T-Test				
	Home PC	Smart Phone	School PC	Work PC
Home PC				
Smart Phone	0.0075			
School PC	0.0005	0.0005		
Work PC	0.0005	0.0005	0.0005	
Tablet	0.0005	0.0005	0.05	0.01

Table 6: Results of a Pairwise T-Test between all devices.

say that these students probably arrive home and check their SMN's daily, so if a school update their presence daily on SMNs like Facebook, it is very likely that students will see these posts once they are at home and logging onto their machines.

The second highest rated device used to check SMNs is a smart phone. These users will be different from the home PC users because they can check in anywhere. They are the on the go users, they may be at home, at the university, at a restaurant, or anywhere in-between when they are checking in. These are the students who would benefit most from having universities post last minute updates, and reminders about ongoing events.

5.4 Do Students Know About Their University's Presence on SMNs?

When the students were told what an activities network is they were asked if their school had one and if they were familiar with it. 17 of the students answered this question, of the 17 only 8 knew about their schools activities network and were familiar with it.

The students were also given a list of different university pages and were asked if they have liked these pages, seen them, or refused to like them. As shown in Table 25% of the students have seen the Activities Network page, and 18.75% have liked it, 17.65% have seen the Student Center page, and 17.65% have liked it, 13.33% have seen the bookstore page, and 40% have liked it, 12.50% have seen the Computer Science page, and 62.50%

have liked it, 20% have seen the Student Government Association page, and 13.33% have liked it. You can see the statistics of the other pages in the table. Most of the students surveyed were computer science(CS) majors, so getting results that an overwhelming 62.50% of them have liked the page, and another 12.50% of them have at least

Pages	Seen it	Like it
Activities Network Page	25%	18.75%
Student Center Page	17.65%	17.65%
University Pride Page	6.67%	13.33%
Library Page	26.67%	13.33%
Bookstore	13.33%	40%
Recreation Center	20%	6.67%
Learning Center Page	20%	6.67%
Computer Science Page	12.50%	62.50%
Student Government Page	20%	13.33%

Table 7: This table shows the percentage of students who have seen or liked each university page.

seen it isn't surprising.

What is useful about the students liking the CS page is the fact that that this shows that students would like their departments to have SMN pages. It further indicates that students would like the pages, and therefore would possibly like to see updates posted on the pages. What we can also take from these results, is that the university's presence in other areas, isn't as high. The reason isn't because students have refused to like the pages, but simply that they do not know they exist. Promoting these pages during orientation, or through posters on walls, would be a good way to get more students to visit these SMN pages and share it with their classmates.

5.5 What Feedback Do Students Give About The Universities Presence?

Students were asked for feedback on what they liked or disliked about the university pages. In response to this, one student said they liked the Activities Network page because it was, "Nice to know what's going on." There were many responses for the Computer Science page from, "Very informative," to it being a "good source for campus and CS information." When responding to what they dislike about these pages students indicated things like the "student center is too noisy," and the bookstore's "marketing tactics are very lowbrow and condescending." The dislike responses seemed to be in response to the place or thing itself, instead of about their social media pages.

It is important to note that these questions were posed before giving students specific activities that could be/ are offered through SMN pages. After asking those specific questions students were asked for their opinions of what should be added, or not added to the SMN pages. This question resulted in different answers more geared toward the pages, and not the place itself. Students responded with "continuously updated information about cancellations would be most important," and "having links to other pages would be very useful." These responses give a more clear view of what students are expecting from their university pages, instead of the responses they gave about what they liked or disliked about the pages. From these results we can see that the students want updated information about the functionality of the school, but to observe what other things they would like to see, viewing the results from the choice answer questions are a must.

5.6 How Satisfied Are Students With The University's Presence?

Using a five point likert scale we asked the students if university pages, and department page should include the following items listed in Figure 1. We also asked students about different activities concerning class pages. There were two common activities in for all three types of pages, as you can see in Figure 1. The common activities include being asked how they felt about cancellation and delay updates and having links posted to other pages.

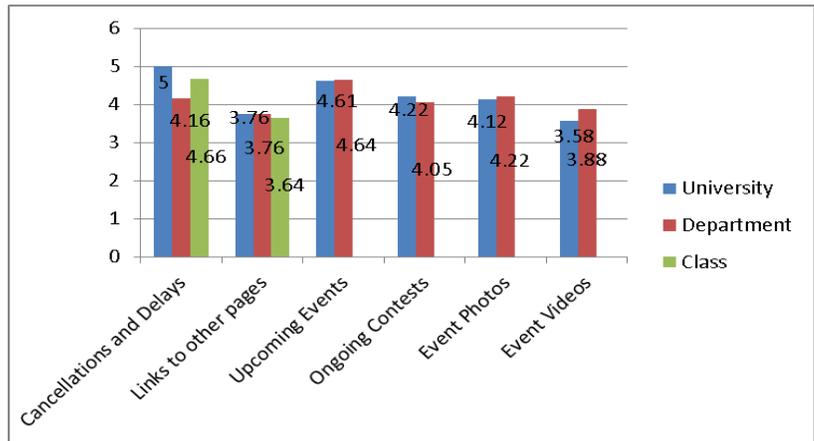


Figure 1: This bar graph shows the results of what students want posted on their university, department, and class pages.

From Figure 1 we can see that cancellation and delays rated a 5, 4.16, and a 4.66 for university, department, and class pages respectively. As shown in Table 8, between university and department pages in this category we have significant results (p -value < 0.0005). We have the same significant results between university and class pages. Department vs. class pages scored slightly lower, but still show a significant difference (p -value < 0.0025). These results are interesting because the overall response for each page type was positive, with absolutely no question about students wanting it on the university pages, sense it scored the highest possible score.

With regards to wanting links to other pages university, department, and class pages scored a 3.76, 3.76, and a 3.64 respectively.

	University vs. Department	University vs. Class	Department vs. Class
Cancellations and Delays	0.0005	0.0005	0.0025
Links to other Pages	0.4	0.0005	0.0005
Upcoming Events	0.015		
Ongoing Contests	0.02		
Event Photos	0.0005		
Event Videos	0.005		

Table 8: This table shows the results of pairwise t-tests

There is no statistical significance in how students voted when we look at the university vs. the department for this action. The results do however show a significant difference between those pages and class pages (p -value $<$

0.0005). When we are looking at the mean totals, we can say that for each page type students agreed that the pages should include links to other pages, but only by a small margin from them having no opinion about it.

Participants rated having upcoming events posted on a university page a 4.61 and on a department page 4.64 (p-value < 0.015). They rated having ongoing contests on a university page 4.22 and a department page 4.05 (p-value < 0.02). Having event photos posted on a university page rated 4.12 and on a department page 4.22 (p-value < 0.0005). Lastly students rated having event videos on university pages 3.58 and on department pages 3.88 (p-value < 0.005). All of these results are statistically significant, and all of the means are positive indications that students want these things on their university and department pages.

The students were asked a similar question about having SMN pages for classes. The scores as shown in Table 9 are as follows; school cancellations/ delay updates - 4.66, allow you to post questions – 4.55, post assignments – 4.5, post answers to questions about homework – 4.44, post videos/photos of group presentations – 3.65, and links to other campus pages – 3.64. Again the overall responses for all of these questions are positive. Although for posting videos/photos of presentations and having links to other pages score only slightly toward the positive side.

Actions	Class
Cancellations and Delays	4.66
Post Questions	4.55
Post Assignments	4.5
Post Answers to Q's	4.44
Videos/Photos of Presentations	3.65
Links to other Pages	3.64

Table 9: This Table shows the likert results about what students want posted on their class pages.

Students were also asked how useful they found the information on the pages, 5.88% thought it to be extremely useful. For those who were unaware of the page and now are, 11.11% were likely to share it with others. This question rated a 2.82, most of the students had no opinion on the matter which turned the question to the negative side. They were asked

	Spt Scale
How Useful	2.82
Satisfied with events	4
How Likely to go Back	2.75
How Likely to go Visit	2.16

Table 10: This table shows the likert scale results to questions about the university pages.

how satisfied they were overall with the events that are currently being posted, the question scored a 4.0, most of the students were satisfied with what is currently being posted. When asked how likely they are to revisit the pages again the score came back as a 2.75, most had no opinion as to if they revisit a university page. This had a negative impact on the total results,

students say they are not likely to revisit the pages again. We know that some of the students may have never seen the pages, so we asked if they were previously unaware of them, if they would now be more likely to go view them and share with others, this scored a 2.16, again most had no opinion either way, which turned the scale in a negative direction.

For Figure 1, when asked what they would like to see more of, 100% Strongly Agreed that Cancellation/delay updates were important, 61% strongly agreed that Reminders to upcoming events were important and 50% were for Ongoing contests and 88.89% had No Opinion. 47% thought the current

information being posted was moderately useful and the consensus was that the information being posted should not be redundant. 38.89% were moderately satisfied and only 5.5% were extremely satisfied.

From all of these questions we can say that students agree with what should be put on university pages, and are satisfied with the current events being posted by pages. Nevertheless when it comes to revisiting pages again, and rating the usefulness of the current pages, most students have no opinion on the matter, or are unsatisfied to the point of not wanting to revisit. We can take away from this that universities need to keep updating their pages with relevant information, post more pictures, and event reminders, and promote their SMN presence more at orientations or in different ways.

6. Conclusion and Future Directions

Overall the consensus is that far less students are aware of their University's SMN presence, and of the few who are aware, they are not overly impressed with it. Most of the students studied use Facebook, Twitter, and or LinkedIn. Most students check their Facebook account a few times per day, and most check their Twitter account a few times per week, while most check their LinkedIn account at least a couple times a month. Students use their home pc's and smartphones most to access their SMNs. We know that the majority of students don't know about their university's presence on SMNs and those who do know are not overall satisfied with it however, when asked for feedback, are reluctant to elaborate on what they dislike, even though they have no issues with elaborating on what they do like.

From all these answers we can say that universities should promote their presence on Facebook, Twitter, and LinkedIn to make more students aware of their presence. They should at least update their Facebook pages daily, their Twitter accounts weekly, and their LinkedIn accounts monthly. Students visit Facebook and Twitter to socialize textually and visually, so posting more updates, and pictures, will open more ways for universities to communicate with their students and vice versa. Students are checking their SMNs on the go, or in the comfort of their own home, so giving students reminders of events that are coming up the next day, and as it is happening could produce more students attending events. The last thing to take from all this data is that most students are unaware of the university presence on SMNs so promoting their pages at orientation, on bulletin boards, or in other ways would be useful to get more students to follow them on these SMNs.

In the future, a larger selection of students should be studied with varying majors. If this study were to be expanded on, it should concentrate solely on Facebook and Twitter as these were the two biggest SMNs students were currently using on a regular basis. Another direction researchers could take would be getting a group of students together showing them the university pages and having student feedback about the pages as they are viewing them.

7. References

Bennett, S., (2012), Twitter, Facebook and the Social Media Life Cycle. Retrieved on March 24, 2012, from http://www.mediabistro.com/alltwitter/social-media-lifecycle_b17744

Bennett, S., (2012), Twitter, Why Social Media Isn't A Waste Of Time. Retrieved on March 24, 2012, from http://www.mediabistro.com/alltwitter/social-media-waste-of-time_b17840

Burt, R., (2011), The Why and How of Using Facebook for Educators – No Need to be Friends At All!. Retrieved on February 1, 2012, from <http://thedublogger.com/2011/05/11/the-why-and-how-of-using-facebook-for-educators-no-need-to-be-friends-at-all/>

Fewkes, A., & McCabe, M., (2012), Facebook: Learning Tool or Distraction?. *International Society for Technology in Education* 28(3), 92-98.

Hampton, K., & Goulet, L., & Rainie, H., & Purcell, K., (2011), Social Networking Sites and our lives: How people's trust, personal relationships, and civic and political involvement are connected to their use of social networking sites and other technologies. Retrieved on January 23, 2013, from <http://www.pewinternet.org/~media/Files/Reports/2011/PIP%20%20Social%20networking%20sites%20and%20our%20lives.pdf>

Hartstein, D., (2011), How Schools Can Use Facebook to Build an Online Community. Retrieved on February 1, 2012, from <http://mashable.com/2011/04/26/facebook-for-schools/>

Isbulan, O., (2011), Opinions of University Graduates about Social Networks According to their Personal Characteristics. *The Turkish Online Journal of Educational Technology* 10(2), 184-189.

Jacobsen, W., & Forste, R., (2011), The Wired Generation: Academic and Social Outcomes of Electronic Media Use Among University Students. *Cyberpsychology, Behavior, and Social Networking* 14(5), 275-280.

Junco, R., (2012), The Relationship Between Frequency of Facebook use, participation in Facebook activities, and Student Engagement. *Computers & Education* 58(1), 162-171.

Kalpidou, M., & Costin, D., & Morris, J., (2011), The Relationship Between Facebook and the WellBeing of Undergraduate College Students. *CyberPsychology, Behavior & Social Networking* 14(4), 183189.

McAndrew F., & Jeong, H., (2012), Who does what on Facebook? Age, sex, and relationship status as predictors of Facebook use. *Computers in Human Behavior* 28(6), 2359-2365.

Pérez-Latre, F., & Portilla, I., & Blanco, C., (2011), Social Networks, Media and Audiences: A Literature Review. *Communication & Society* 24(1), 63-74.

Playle, T., (2011), Higher Education Network. Retrieved on March 2, 2013,
From <http://www.guardian.co.uk/higher-education-network/blog/2011/jun/01/universities-socialmedia-internal-communications>

Ryan, T., & Xenos, S., (2011), Who uses Facebook? An investigation into the relationship between the Big Five, shyness, narcissism, loneliness, and Facebook usage. *Computers in Human Behavior* 27(5), 1658-1664.

Sacks, M., & Graves, N., (2012), How Many “Friends” Do You Need? Teaching Students How to network Using Social Media. *Business Communication Quarterly* 75(1), 80-88.

Taya, E., & Allen, M., (2011), Designing social media into university learning: technology of collaboration or collaboration for technology?. *Educational Media International* 48(3), 151–163.

Thompson, S., & Lougheed, E., (2012), Frazzled By Facebook? An Exploratory Study of Gender differences In Social Networking Communication among Undergraduate Men and Women. *College Student Journal* 46(1), 88-98.