

# Social Networking Systems and Campus Life

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## Abstract

Social networking sites such as Facebook foster a sense of community in campus life. This technology has the potential to increase social capital and connectivity among students if properly managed. It also may raise the self-esteem and sociability of individual students, which increases the rate of social interaction amongst the entire student body. In order to investigate these beliefs in the context of student life, a multidimensional questionnaire was distributed to both residential and non-residential undergraduate students of a public liberal arts university in the Northeast. The survey instrument is based on a questionnaire used by Ellison, Steinfield and Lampe in a 2007 paper which was adapted however to the needs of this study. The instrument measures several constructs including bridging and bonding social capital, referring to the resources accumulated through the relationships between people. By limiting the administration of the questionnaire to juniors and seniors, we wanted to involve students who have had sufficient experience with campus life. The practical contribution of the research reveals aspects of social networks usage in a particular university environment as that has a value for improvement of the utilization of social networking sites in campus life. The theoretical value of the partial replication of a previous research on a similar topic is in providing validation for its model of variables and in demonstrating how the pace of changes in social networking sites over the last four years affects student perceptions about their impact.

**Keywords:** Social Capital, Social Networking Sites, Facebook, Community Informatics, campus life

## 1. INTRODUCTION

Social networking sites such as Facebook, LinkedIn, Twitter, MySpace and others are becoming increasingly important. While the

existing status of usage of social media is a starting point for investigating how it can be used for addressing wider organizational and national priorities, extensive research is needed to foster wider participation, to support

increasingly sophisticated interactions, and to address potential dangers (Pirolli et al., 2010). A college campus is an important environment to examine social networking sites usage and their effect on campus life.

Social networking sites allow individuals to present themselves, articulate their social networks and establish or maintain connections with others (Ellison et al., 2007). The largest network site in terms of its users is Facebook reached 550 million members in 2010, and in November of that year it accounted for 1 out of 4 American page views. Its orientation initially was only toward college campuses when it was started seven years ago but now it is used in so many ways that it has merged with the social fabric of American life and not just American but human life (Grossman, 2010).

Social networking sites use ideas from the broader field of community informatics (CI) to build a sense of community among individuals and that includes college students. Facebook is the primary social networking site used on college campuses today. Facebook is used in many different ways by students all over the world but one aspect of its use enables them to create a social identity which in turn creates a sense of increased social capital. The latter broadly refers to the resources accumulated through the relationships between people (Coleman, 1988). The usage of social networking sites such as Facebook has been shown to increase community involvement and social capital for students (see Ellison et al., 2007).

The field of community informatics however has not been linked directly so far to social networking sites research. In this paper we trace briefly the development of community informatics and show its links to social networking sites research.

This work was inspired by a recent journal article published by Ellison et al. (2007). The goal of this study is to determine the extent to which Facebook usage among college students and their satisfaction with life at Eastern Connecticut State University, a public liberal arts university in the Northeast, positively affect the formation of their social capital. Thus besides providing further evidence related to the theoretical findings of Ellison et al. (2007), it contributes in a practical way to a better understanding of the

factors that may affect campus life at the university. The theoretical value of the partial replication of a previous research on a similar topic is in providing validation for its model of variables and in demonstrating how the pace of changes in social networking sites over the last four years affects student perceptions about their impact.

This paper continues with a review of the related literature about community informatics, social networking and social capital, followed by presentation of the methodology that was followed and the results, a discussion and conclusion on the limitations of this work and possible extensions for future research.

## **2. AN OVERVIEW OF RELATED RESEARCH**

### **A Brief Introduction to the field of Community Informatics**

According to Rathswohl (2003), community informatics is the science and application of information and communication technologies (ICTs) to support human communities and their processes in the context of their developmental, social, economic, and cultural objectives. It is a technological field that is used to help communities and support their functioning. Community informatics can refer to virtual communities, or actual physical communities. For the purpose of this paper, we will be focusing on how social networking sites contribute to the formation of social capital within a particular university and hence we will be concerned with physical aspects of CI. CI is focused on conducting research about the relationship between the design of information and communication technologies, in order to determine the fit between the two and to see how well they can serve the communities they are implemented in. CI is focused also on the implementation of Information and Communication Technologies (ICT) projects in local communities (Stillman & Linger, 2009). Overall, community informatics (for a detailed review on its origins see (Petkova, Petkov, & D'Onofrio, 2006)) is concerned with the question of how information technology supports the interaction of physical communities but that can be extended also to virtual communities as well though the latter are outside the scope of this research.

Community informatics is a field that has emerged only in the last decade (see Gurstein, 2008). Initially it was promoted by the journal *Information Society* which started publishing special issues on that topic. Other related online publications are the *Journal of Computer-Mediated Communication* and the more recent *International Journal on Community Informatics*. The goal of community informatics is focused on solving community problems at the political, social, and cultural levels. In order to do this, the main concern must be on the relationship between people and technology (Stillman & Linger, 2009). A theoretical discussion of some of the theoretical links between social capital and social networking in light of community informatics research is presented in Williams and Durrance (2008). There is also attention focused on the digital divide and its role in the implementation of CI. The digital divide is a modern day reflection of historical social and economic divides that have beset our society for years (Pinkett, 2003). Not everyone has access to technology, which can hinder community informatics work. One way to help carry out the goals of community informatics, is through social networking.

### **Social networking sites and Facebook**

Social network sites (SNS) are web based services that according to Boyd and Ellison (2007) accomplish three things: (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. SNS's can be used to make new friends or to foster relationships with current friends.

Social Networking Sites are used widely on college campuses around the world. Some students are even using these sites before they get to college to meet classmates and break the ice (Read, 2004). The most widely used SNS on college campuses is Facebook (Aleman & Wartman, 2009). Through Facebook, students can "connect, meet, exchange information, exchange invitations to events and parties, form interest groups, and view and exchange photos and videos (Aleman & Wartman, 2009)." Facebook has been used in the 21<sup>st</sup> century college experience to enhance the social and extracurricular experience of undergraduate students around the world (Aleman & Wartman,

2009). It allows students to connect with a vast network of people, converse with friends, and share digital and cultural artifacts and ideas (Quan-Haase & Young, 2009).

Social Networking Sites have many different uses, but one of the most important and widely used is computer mediated communication. This refers to the use of the Internet to communicate with people. Social networking sites help students communicate with each other across many dimensions of space and time. The current generation of college students experience computer mediated communication on the Internet as part of their daily campus routine (Aleman & Wartman, 2009). The next paragraphs present an overview of Facebook, one of the most popular social networking sites used today.

Facebook was originally created out of a college dorm at Harvard. Its initial purpose was to bring college students together on different campuses. Since its creation in 2004, it branched out to include the general public. Its membership is growing at a rate of 700 000 people a day and if Facebook were a country it would be the third largest behind China and India (Grossman, 2010).

Facebook is used as a major communication tool between college students. The feature that is central to communication between users on Facebook is "the Wall." This wall functions as a multimedia message board in which friends share photos, messages, videos, links, and other communication (Aleman and Wartman 2009). When a student logs on to Facebook, they can write on a friend's wall, send someone a message, or even chat with them instantly. Whether it is a message passed from one classmate to another about an upcoming exam, or a post on a page to all members of a certain group, social networking sites are being used to relay the message of what is going on on-campus.

Students, faculty and administrators are using Facebook for a variety of reasons on college campuses (see Miler and Jensen, 2007; Grossman, 2010 and others). As stated above, students are using Facebook to connect with their friends and also to meet new ones. In recent years, Facebook has evolved to help serve other needs on campus. It is used to by many clubs and organizations on campus. At

the university where this study was conducted, Campus Activity Board is using Facebook to advertise events that are happening on campus. Clubs such as the social work club are using Facebook to raise awareness for certain causes, share upcoming events, post meeting minutes, and even share pictures of club members during events.

Although Facebook and other social networking sites may enhance the college experience for many, it has the potential to do harm as well. With many people looking at college students Facebook pages, there is potential for privacy problems to arise. Identity theft and the unwanted distribution of personal information are central problem with social networking sites and the Internet in general. Facebook provides their users with many opportunities to control what is distributed on the internet (Aleman & Wartman, 2009). It is up to the users of Facebook to filter the information that they make public. With employers and teachers starting to look at college students Facebook pages, it is important to post only information that is appropriate. Students need to keep in mind their privacy and the identity that they are revealing on Facebook.

### **Social identity and social capital**

Through Facebook, students are presenting an identity to people who view their page. The identity that is shown on Facebook has the potential to be different from a user's true identity. According to Zhao, Grasmuck and Martin (2008) "Identity is not an individual characteristic; it is not an expression of something innate in a person, it is rather a social product, the outcome of a given social environment and hence performed differently in varying contexts." This means Facebook users tend to present themselves in their profiles in a socially desirable way, leaving out some traits such as shyness (Zhao, Grasmuck, & Martin, 2008). What is presented on a Facebook user's profile and their social identity isn't always consistent with their personal identity. This can have privacy implications and negatively affect a person in their day to day lives. For example, if a college student posts pictures of themselves on Facebook partying and drinking when they do not ordinarily engage in this type of behavior, a possible employer who looks at their profile may not see them fit for the job.

On the other hand, Facebook has the potential to create an "identity in progress." Through this site, Facebook can enable users to construct and reconstruct their identity with the help of multiple channels of interpersonal feedback and peer acceptance (Kee & Park, 2009). The term "identity in progress" is used here to show that although a Facebook user may portray one identity, they may change and modify this identity based on the feedback they receive from their peers. Whether this identity is a true one, or an identity models for social desirability is left to question. As a result, the way in which we portray ourselves on social networking sites has the ability to directly or indirectly effect or everyday life. It also has the potential to affect the social capital of the communities we are a part of, both virtually and physically.

Social capital can be defined in many different ways. It can refer to the extent to which members of a community can work together (Pinkett 2003). According to Putnam (2000) it can be distinguished as *bridging* (linked to what are known to be weak ties between individuals who may provide useful information to one another but no emotional support) and *bonding social capital* (found between individuals in a tightly knit, close relationships such as family and close friends). Numerous studies have been conducted on the topic of social networking sites involvement and their effect on social capital. Pinkett (2003) conducted a study that showed participants of social networks have expanded their local ties and have a heightened awareness of community resources. Social networks are also important in bridging social capital and maintaining loose social ties. They are a cheap and easy way to maintain ties with people in one's social net (Ellison et al., 2007).

Social capital is important to local communities, especially college campuses. It has been linked to many positive social outcomes such as better health care and lower crime rates. Better health may be shown in the form of improved individual well-being and quality of life (Kee and Park 2009, 877). Low social capital can be linked to social disorder and a decrease in community involvement and low satisfaction with life (Ellison, Steinfield and Lampe 2007). Social capital can be seen to improve communities in the form of two components, structural and cognitive. Structurally, social capital includes networks, connectedness, associational life and civic participation. Cognitively, social capital enhances perceived support, trust, social

cohesion, and perceived engagement in civic activities (Theall et al., 2009). Therefore, social networking sites such as Facebook can be attributed to an increase in social capital and community involvement on both a structural and cognitive level.

Social capital is thought to be increased when an individual social network is diverse. According to Park and Kee (2009), "Individuals with a large and diverse network of contacts are thought to have more social capital than individuals with small, less diverse networks" (Park & Lee, 877). Social networking sites such as Facebook allow students to meet diverse individuals from many different networks and geographical locations that they may have not been exposed to otherwise. Facebook can be seen as a tool contributing to the diversity on campus.

### 3. RESEARCH METHODOLOGY AND RESULTS

#### Approach, research instrument and hypotheses

An empirical quantitative research methodology was applied in this study. Due to the replicative nature of the research the need for a pilot study was avoided. A survey was administered anonymously to all students after an approval by the Institutional Review Board. A short description of the study was provided. Participants were not compensated for their voluntary responses. The instrument and all associated scales used were adapted as a subset of the questionnaire used in a previous study conducted by Ellison et al., (2007). The instrument measured Facebook intensity, satisfaction with life at this university, bridging social capital and bonding social capital. The consideration of other issues like feelings about personal wellbeing and other types of social capital related to past experience (included in Ellison et al., 2007) was outside the scope of this research and hence we used a subset of their measures. By using a subset of an instrument that was developed and validated in a rigorous way (see details for the justification of the parts of the instrument in Ellison et al., 2007:1150-1155), we were able to reduce the work associated with the proof of its reliability and validity. The instrument itself is not shown for space reasons but its structure is clear from the tables with results. It can be obtained also from the corresponding author.

In a way similar to Ellison et al. (2007) and following the scope of our research, we explore the following hypotheses:

*H1: Intensity of Facebook use will be positively associated with student's perceived bridging social capital.*

*H2: Intensity of Facebook use will be positively associated with student's perceived bonding social capital.*

#### Demographics of the participants

A sample of 106 junior and senior undergraduate students was created by choosing classes from various majors keeping in mind the overall characteristics of the student population at this public liberal arts university in terms of enrollments in majors and student gender (see Table 1 for the demographic details of the sample). By limiting the administration of the questionnaire to juniors and seniors, we wanted to involve students who have had sufficient experience with campus life. Demographics for non-participants were not available. However given the fact that female students on campus are 60% of the student population and the general representation of population groups in it, we may conclude from the Gender and Ethnicity data about the sample that it reflects the composition of the student body at the university. The sample size is about 5% of the registered juniors and seniors on campus. The processing of the results was performed using SPSS v.18. The demographics of the sample are presented in Table 1 in Appendix 1.

The following sections provide results for the several constructs we measured with the instrument.

#### Facebook Intensity measure

The Facebook intensity scale measured two self-reported Facebook behaviors; how often students used Facebook and for how long. It included also a number of Likert-scale questions to determine the extent to which students are emotionally connected to Facebook and how engrained it is in their everyday activity (see Ellison et al., 2007:1150). Facebook Intensity (see Table 2 in Appendix 1) is calculated as the average for all the items in the scale (Ellison et al., 2007).

### **Satisfaction with life at the university**

The definition of the scale about satisfaction with life at the university was also based on the work by Ellison et al. (2007) adapted however in its wording to the conditions of the university of concern. It is the average of means of five items measured on a five point Likert-scale. Summary statistical results for satisfaction with university life are shown in Table 3 of Appendix 1.

### **Bridging Social Capital**

This scale measured the extent to which participants experienced bridging social capital which is believed to be better suited for linking to external assets and for information diffusion within the university environment (Ellison Et. Al., 2007). The scale included nine items measured on a five point Likert-scale. Bridging social capital is obtained as the average of those items (Ellison et al., 2007). The results on this scale can be seen in Table 4 of Appendix 1.

### **Bonding Social Capital**

This scale was comprised of four items measured on a five point Likert-scale that measured the bonding of social capital among university students. Bonding social capital is obtained as the average of those items (Ellison et al., 2007). Note that their scale included an additional item regarding job referencing which was not included in our instrument. Statistical results for bonding social capital are shown in Table 5 of Appendix 1.

We explore further the results for Facebook Intensity, Satisfaction with the university, Bridging Social Capital and Bonding Social Capital by gender of the respondents (see Figure 1 in Appendix 1). They show higher values for women respondents on all four indicators.

Another perspective can be obtained by comparing the results for students residing on campus and commuters (see Figure 2 in Appendix 1). They show that students living on campus have higher values for all four indicators which can be associated with the positive impact of campus life.

The first two hypotheses defined above were explored through multiple regression analysis

with backward elimination. The latter involves starting with all candidate variables and testing them one by one for statistical significance, deleting any that are not significant. Note that we investigated for the effect of possible interaction between Facebook intensity and Satisfaction with campus life as well. Some of the SPSS output from the multiple regression models for bridging and bonding social capital are presented in Appendices 2.1 and 2.2 respectively.

On the basis of the multiple regression results we come to the conclusion that demographic factors and the interaction between Facebook intensity and Satisfaction with campus life did not affect both bridging and bonding social capital as the significance levels for the calculated Beta coefficients were not acceptable. Another conclusion is that both Facebook intensity (Beta = 0.150,  $p=0.044$ ) and Satisfaction with campus life (Beta= 0.700,  $p=0.001$ ) affect bridging social capital. Therefore we can conclude that we can accept the first hypothesis, that Intensity of Facebook use will be positively associated with student's perceived bridging social capital.

The second hypothesis cannot be accepted however since the only significant variable left for predicting Bonding Social Capital after backward elimination was Satisfaction with the university campus life. Therefore we cannot accept the second hypothesis.

## **4. DISCUSSION OF THE FINDINGS**

While the general tendencies in our findings are similar to those from the study at Michigan State University (MSU) in Ellison et al (2007), we may note that there are some differences based to a degree on the fact that Facebook usage in 2010 is much bigger than what it was in 2006-2007 when their survey was conducted. Another factor is that two variables used in Ellison et al. (2007), the student income and a measure of personal wellbeing were not included in our instrument. Thus comparing our results with those in Ellison et al (2007) we found that MSU students indicated in 2007 that they spent on the average around 10 minutes a day on Facebook while ECSU students spent in 2010 on the average approximately 30 minutes a day. Accordingly the average number of friends exceeds 240 in this study while for the 2007 results at MSU that number was around 170.

Another difference is that Ellison et al (2007) accepted both the first and the second hypothesis on the basis of their data while we could not do that for the second one. We may point that this has probably an explanation in the fact that Bonding Social Capital is mostly dependent on deeply emotional close ties with family and close friends which are not likely to be affected directly by SNS usage.

There are some demographic factors that showed varying impact on our results for certain constructs (satisfaction with university life, Facebook intensity, bridging and bonding social capital). Women at the university of concern in this study are using Facebook at a higher rate than men. Women also have a higher value of bridging social capital than men. These findings are consistent with hypothesis 1. Another conclusion is that data for on campus residents in our study on all constructs have higher values compared to off campus residents. Living residentially in the campus community makes students have a higher rate of Facebook use, satisfaction with life at this university and bridging and bonding social capital.

Further differences are observed in several tables in Appendix 1 starting with Table 6, showing the differences in the dimensions of Facebook Intensity Usage from this study and the one at MSU completed in 2007 and described in Ellison et al. (2007).

Table 6 shows quite comparable values for the various indicators with slightly higher values for ECSU which can be explained by the greater maturity of Facebook users in 2010 compared to 2007.

In a similar way we may compare our results for the other measures obtained by Ellison et al. (2007). Thus Table 7 (Appendix 1) shows data about the dimensions of students' satisfaction with their life at each school.

On some of the dimensions of satisfaction with life at ECSU the values are slightly lower compared to the same ones for MSU. The differences are minor but still the reasons deserve to be investigated further in a future study.

Table 8 and 9 in Appendix 1 compare data for the bridging and bonding social capital between ECSU and MSU. MSU data show slightly higher

values for both bridging and bonding social capital compared to ECSU. Once again this could be investigated further. A possible explanation could be related to the size of the respective school and its overall standing, MSU being a nationally recognized research university while ECSU is a masters institution ranked within the top 100 in the North according to US News and World Report during 2010 and 2011.

## 5. CONCLUSION

In a way similar to Ellison et al. (2007), our findings indicate that Facebook usage is a significant factor in campus life at the university of concern. Our findings supported the hypothesis that it contributes to building bridging social capital but differed from those of Ellison et al. (2007) as the hypothesis that Facebook affects bonding social capital by students was rejected. That may be due partly to the nature of bonding social capital which is associated with family and close friends. Such relationships may not be associated with any need for online communication.

The impact of Facebook on social capital has implications on many components of the university. Thus, the university's division of student affairs can integrate the use of Facebook to create lasting relationship among students. This can lead to a higher participation in events that this department organizes as well as in the activities of other departments such as student clubs and student government associations. Facebook can be used to create a stronger sense of community among students which in turn will lead to higher levels of participation. When students feel more connected, it is possible that other administrative departments such as academic affairs will also see positive benefits.

The replication of most of the research conducted by Ellison et al (2007) in another environment four years later has a value in confirming the validity of their theoretical model. The comparisons of results for the different student populations at two points in time given the fast dynamics of social networking sites usage provide further insights. Thus we observe that the indicators associated with Facebook usage intensity in 2011 are larger in values than those in 2007.

Possible limitations of this research are related to the fact that the sample could be bigger

which usually provides for greater confidence in the findings from the survey. Another limitation is similar to that for Ellison et al. (2007) as this survey was administered within a single university. However that is also strength for the research as it points to the relevance of its findings for a particular community of students, faculty and administrators and thus its findings can be used to pursue improvements in the way how social networking site like Facebook are integrated into the life of the university and its students.

Extensions for future research may include an investigation of self-esteem of students and its relationship to Facebook usage as well as the impact of Facebook on maintained social capital (for students it is associated with high school relationships) in a way similar to Ellison et al. (2007). We did not consider the latter as the goal was to investigate rather the impact of Facebook usage on bridging social capital associated with campus life at the university of concern and on bonding social capital. A similar approach to the one followed here may be applied to professional or local communities that can be helped through the use of technology (see Ellison et al., 2007:1165). Future work may also include replication of this survey in subsequent years. That will allow comparisons of the findings on the factors affecting the use of social networking sites on campus, students' bridging and bonding social capital and the perceived quality of campus life in general in a more comprehensive longitudinal study.

As a whole, we may conclude however that this study fulfilled its goal to investigate the possible impact of Facebook usage on students' social capital, and indirectly on campus life, at the university of concern - a relevant issue for its stakeholders.

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## 7. REFERENCES

- Aleman, A. M., & Wartman, K. L. (2009). *Online Social Networking on Campus*. New York: Routledge.
- Boyd, D. M., & Ellison, N. B. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer Mediated Communication*, 13 (1), 210-230.
- Coleman, J.S. (1988) Social Capital in the Creation of Human Capital, *American Journal of Sociology*, 94 (supplement), S95-S120.
- Cronk, B.C. (2004). *How to Use SPSS, A Step by Step guide to Analysis and Interpretation*, Pyczak Publishing, Glendale, CA.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The Benefits of Facebook "Friends": Social Capital and College Students' Use of Online Social Network Sites. *Journal of Computer-Mediated Communication*, 12, 1143-1168.
- Grossman, L. (2010). 2010 Person of the Year, Mark Zuckerberg, *Time Magazine*, December 27-January 3, 46-75.
- Gurstein, M. (2008). Community Informatics: What is in a name? *Journal of Community Informatics*, 4 (3).
- Kee, K. F., & Park, N. (2009). Is There Social Capital in a Social Network Site?: Facebook Use and College Students' Life Satisfaction, Trust, and Participation. *Journal of Computer-Mediated Communication*, 14 (4), 875-901.
- Miler, S. E., & Jensen, L. A. (2007). Connecting and Communicating With Students on Facebook. *Computer in Libraries*, 27 (8), 18-22.
- Petkova, O., Petkov, D., & D'Onofrio, M. (2006). What Lies Beyond Virtual Community Informatics - Expanding A Research Agenda. *Journal of Information Technology Theory and Application*, 8 (1).
- Pinkett, R. (2003). Community Technology and Community Building: Early Results from the Creating Community Connections Project. *The Information Society*, 19, 365-379.
- Pirolli, P., Preece, J., Schneiderman, B. (2010). Cyber infrastructure for Social Action on



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- National Priorities. *IEEE Computer*. (11): 20-21.
- Putnam, R.D. (2000). *Bowling Alone*. New York, Simon & Schuster.
- Quan-Haase, A., & Young, A. L. (2009). Information Revelation and Internet Privacy Concerns on Social Network Sites: A Case Study of Facebook. *Communities and Technologies, Proceedings of the fourth international conference on Communities and technologies* , 265-274 .
- Rathswohl, E. J. (2003). Introduction to the Special Series on Community Informatics. *Informing Science Journal* , 6.
- Read, B. (2004). Back-To-School Blogging. *The Chronicle of Higher Education* , A35-A36.
- Stillman, L., & Linger, H. (2009). Community Informatics and Information Systems: Can They Be Better Connected? *The Information Society* , 25, 255-264.
- Theall, K. P., DeJong, W., Scribner, R., Mason, K., Schneider, S. K., & Simonsen, N. (2009). Social Capital in the College Setting: The Impact of Participation in Campus Activities on Drinking and Alcohol-Related Harms. *Journal Of American College Health* , 58 (1), 15-25.
- Williams, K. and Durrance J.C., (2008). Social networks and social capital: rethinking theory in community informatics, *Journal of Community Informatics*, 4 (3).
- Zhao, S., Grasmuck, S., & Martin, J. (2008). Identity Construction on Facebook: Digital Empowerment in Anchored Relationships. *Computers in Human Behavior* , 24, 1816- 1836.

## Appendices

### Appendix 1. Statistical Results

<b>Table 1. Sample Demographics (N=106)</b>		
<b>Mean or % (N)</b>		
Gender	Male	42% (40)
	Female	58% (56)
Age	18-20	27% (29)
	21-23	50% (53)
	24-26	10% (10)
	27-29	3% (3)
	30 or older	10% (11)
Ethnicity	White	78% (82)
	Hispanic	9% (9)
	African American	6% (6)
	Native American	1% (1)
	Asian	3% (3)
	Other	4% (4)
Year in School	Freshman	2% (2)
	Sophomore	0
	Junior	44% (47)
	Senior	54% (57)
	Graduate	0
Major	History	17% (18)
	Business Information Systems (BIS)	21% (22)
	Social Work	38% (40)
	Accounting	6% (6)
	Theater	1% (1)
	English	7% (7)
	Communications	3% (3)
	Education	1% (1)
	Sociology	1% (1)
	Business Administration	6% (6)
Home Residence	In State	97% (103)
	Out of State	3% (3)
Campus Residence	On Campus	40% (42)
	Of Campus	60% (64)
Facebook Members		95%

<b>Table 2. Summary Statistics for Facebook Intensity</b>		
<b>Individual Items and Scale<sup>1</sup></b>	<b>Mean</b>	<b>S.D.</b>
<b>Facebook Intensity</b>	3.77	1.03
Facebook is part of my everyday activity	3.68	1.30
I am proud to tell people I'm on Facebook	3.25	.974
Facebook has become part of my daily routine	3.56	1.20
I feel out of touch when I haven't logged onto Facebook for a while	3.04	1.30
I feel I am part of the Facebook community	3.37	1.12
I would be sorry if Facebook shut down	3.34	1.26
Approximately how many total friends Facebook friends do you have? 1= 10 or less, 2= 11-50, 3= 51-100, 4=101-150, 5=151-200, 6= 201-250, 7= 251-300, 8=301-400, 9= more than 400	6.88	2.22
In the past week, on average, approximately how much time PER DAY have you spent actively using Facebook? 1= 0-14, 2= 11-50, 3= 30-44, 4= 45-64, 5= 65-74, 6= 75-84, 7= over 85 mins	3.08	1.84

<sup>1</sup> Individual items ranged from 1= strongly disagree to 5= strongly agree, scale conducted by taking the means of each item

<b>Table 3. Summary Statistics for Satisfaction with University Life</b>		
<b>Individual Items and Scale<sup>1</sup></b>	<b>Mean</b>	<b>S.D.</b>
<b>Satisfaction</b>	3.44	.751
In most ways my life at the university is close to my ideal	3.35	1.02
The conditions of my life at the university are excellent	3.52	.879
I am satisfied with my life at the university	3.72	.848
So far I have gotten the important things I want at the university	3.59	.903
If I could live my time at this university over, I would change almost nothing	3.05	1.08

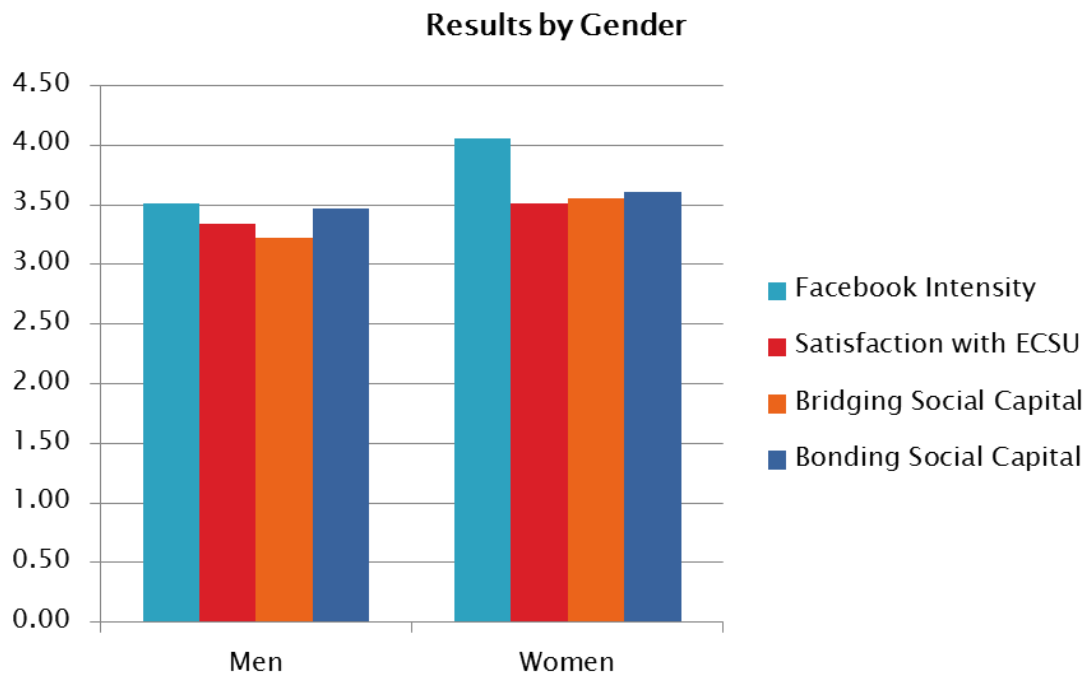
<sup>1</sup> Individual items ranged from 1= strongly disagree to 5= strongly agree, scale conducted by taking the means of each item

<b>Table 4. Summary Statistics for Bridging of Social Capital</b>		
<b>Individual Items and Scale<sup>1</sup></b>	<b>Mean</b>	<b>S.D.</b>
<b>Bridging Social Capital</b>	3.41	.782
I feel I am part of the university community	3.48	1.07
I am interested in what goes on at this university	3.41	.983
This university is a good place to be	3.87	.757
I would be willing to contribute money to the university after graduation	2.83	1.09
Interacting with people at the university makes me want to try new things	3.49	.969
Interacting with people at the university makes me feel like a part of a larger community	3.51	.969
Interacting with people at the university reminds me that everyone in the world is connected	3.45	.977
I am willing to spend time to support general university activities	3.28	.983

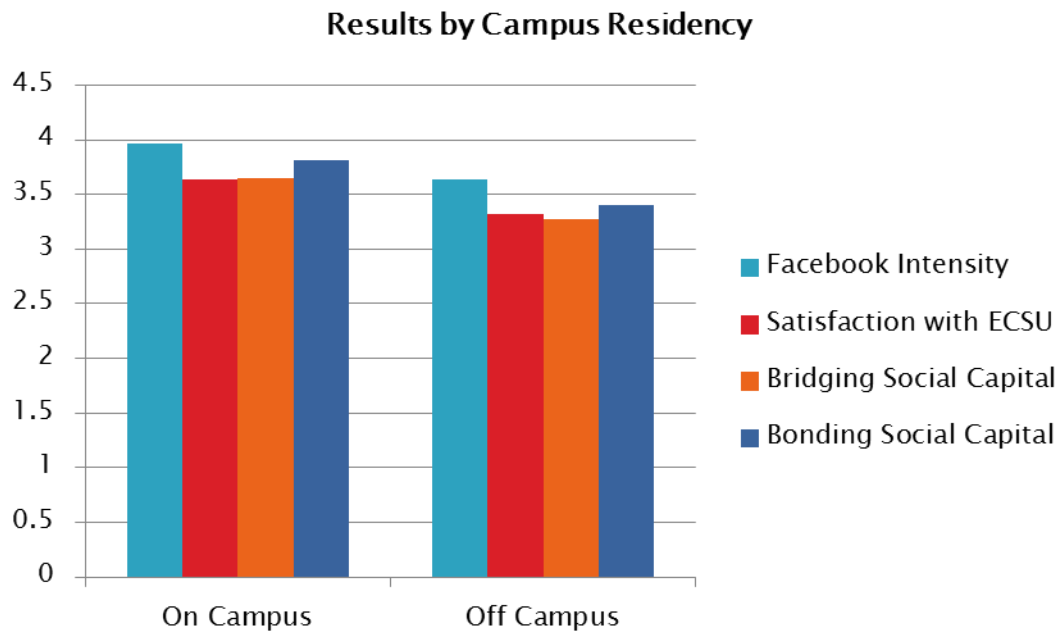
<sup>1</sup> Individual items ranged from 1= strongly disagree to 5= strongly agree, scale conducted by taking the means of each item

<b>Individual Items and Scale<sup>1</sup></b>	<b>Mean</b>	<b>S.D.</b>
<b>Bonding Social Capital</b>	3.56	.802
There are several people at this university that I trust	3.70	.948
If I needed an emergency loan of \$100, I know someone at the university I can turn to	3.23	1.15
There is someone at the university I can turn to about making very important decisions	3.87	.829
I do not know people at the university well enough to get them to do anything important	3.45	1.11

<sup>1</sup> Individual items ranged from 1= strongly disagree to 5= strongly agree, scale conducted by taking the means of each item



**Figure 1. Results for Facebook Intensity, Satisfaction with the university, Bridging Social Capital and Bonding Social Capital by gender of the respondents**



**Figure 2. Results for Facebook Intensity, Satisfaction with the university, Bridging Social Capital and Bonding Social Capital by campus residency of the respondents**

**Table 6. Summary Statistics for Facebook Intensity in Our Study and the Ellison et al (2007) study at MSU**

Individual Items and Scale <sup>1</sup>	Mean ECSU	Mean MSU
<b>Facebook Intensity</b>		
Facebook is part of my everyday activity	3.68	3.12
I am proud to tell people I'm on Facebook	3.25	3.24
Facebook has become part of my daily routine	3.56	2.96
I feel out of touch when I haven't logged onto Facebook for a while	3.04	2.29
I feel I am part of the Facebook community	3.37	3.30
I would be sorry if Facebook shut down	3.34	3.45
Approximately how many total friends Facebook friends do you have? 1= 10 or less, 2= 11-50, 3= 51-100, 4=101-150, 5=151-200, 6= 201-250, 7= 251-300, 8=301-400, 9= more than 400	6.88	4.39

<sup>1</sup> Individual items ranged from 1= strongly disagree to 5= strongly agree, scale conducted by taking the means of each item

<b>Individual Items and Scale<sup>1</sup></b>	<b>Mean ECSU</b>	<b>Mean MSU</b>
<b>Satisfaction</b>	3.44	3.55
In most ways my life at the university is close to my ideal	3.35	3.42
The conditions of my life at the university are excellent	3.52	3.54
I am satisfied with my life at the university	3.72	3.85
So far I have gotten the important things I want at the university	3.59	3.74
If I could live my time at the university over, I would change almost nothing	3.05	3.18

<sup>1</sup> Individual items here and in the next two tables ranged from 1= strongly disagree to 5= strongly agree, scale conducted by taking the means of each item

<b>Individual Items and Scale<sup>1</sup></b>	<b>Mean ECSU</b>	<b>Mean MSU</b>
<b>Bridging Social Capital</b>	3.41	3.81
I feel I am part of the university community	3.48	3.78
I am interested in what goes on at the university	3.41	3.98
This university is a good place to be	3.87	4.22
I would be willing to contribute money to the university after graduation	2.83	3.35
Interacting with people at the university makes me want to try new things	3.49	3.74
Interacting with people at the university makes me feel like a part of a larger community	3.51	3.81
Interacting with people at the university reminds me that everyone in the world is connected	3.45	3.65
I am willing to spend time to support general university activities	3.28	3.70

<b>Individual Items and Scale</b>	<b>Mean ECSU</b>	<b>Mean MSU</b>
<b>Bonding Social Capital</b>	3.56	3.72
There are several people at the university that I trust	3.70	3.22
If I needed an emergency loan of \$100, I know someone at the university I can turn to	3.23	3.75
There is someone at the university I can turn to about making very important decisions	3.87	3.98
I do not know people at the university well enough to get them to do anything important	3.45	3.78

**Appendix 2.1. Linear Multiple Regression Analysis for Bridging Social Capital with Backward Elimination- partial listing of results produced with SPSS v.18.**

**Coefficients for the last model after backward elimination (predictors: (Constant), intensity, satisfaction)**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
7	(Constant)	.526	.318		1.653	.102
	Satisfaction	.718	.075	.700	9.557	.000
	Intensity	.110	.054	.150	2.046	.044

**Excluded Variables**

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
7	Res 1	.021 <sup>f</sup>	.277	.782	.030	.943
	Grade	-.068 <sup>f</sup>	-.922	.359	-.098	.966
	Ethnicity	.071 <sup>f</sup>	.963	.338	.103	.975
	SatisfactionbyIntensity	-.076 <sup>f</sup>	-1.029	.306	-.110	.977
	Gender	.078 <sup>f</sup>	1.037	.303	.110	.934
	Res 2	-.121 <sup>f</sup>	-1.610	.111	-.170	.915

f. Predictors in the Model: (Constant), intensity, satisfaction  
 Dependent Variable: bridging social capital

**Appendix 2.2. Linear Multiple Regression Analysis for Bonding Social Capital with Backward Elimination - partial listing results produced with SPSS v.18.**

**Coefficients for the last model after backward elimination (predictors: (Constant), satisfaction)**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
8	(Constant)	1.338	.319		4.197	.000
	Satisfaction	.651	.091	.606	7.187	.000

**Excluded Variables**

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
8	Res 1	.046 <sup>g</sup>	.540	.590	.057	.999
	SatisfactionbyIntensity	-.007 <sup>g</sup>	-.086	.932	-.009	.997
	intensity	.044 <sup>g</sup>	.515	.608	.055	.989
	Gender	-.015 <sup>g</sup>	-.170	.865	-.018	.988
	Ethnicity	.076 <sup>g</sup>	.893	.374	.095	.981
	Res 2	-.101 <sup>g</sup>	-1.155	.251	-.122	.925
	Grade	-.121 <sup>g</sup>	-1.434	.155	-.151	.987

