

THE EFFECTS OF FACEBOOK USE ON COLLEGE
STUDENTS' INTERPERSONAL DEVELOPMENT

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CHAPTER I

INTRODUCTION

General Introduction

In a world where information is moving almost beyond that of comprehension, keeping up to date on all of the world's events, calendar appointments, emails, weather and other items is critical. In the early 21st century, the Internet saw the dawn of a new era of information sharing: social media (O'Reiley, 2007). Rather than focusing on pertinent news or other industry-generated information, social media is focused on the generation of content created by users, more commonly referred to as User Generated Content or UGC. This content has its roots in the public rather than in industry commerce or business. Its vitality is dependent on a continued stream of users continually logging in, pointing, clicking, uploading, commenting, sharing, tagging, and creating content within their portals to the Internet. When this study was originally conceptualized in mid to late 2009, there was an understanding that the volatility of social media as a subject matter could present some interesting challenges. In the time since its inception, social media has constantly been evolving to meet the desires of its current users, while also attracting new users. While compiling components of this study's literature review during late 2009 into 2010, social media is beginning to explore another arena of interest for its users; the investigation of "places." By the time the study is complete, it is completely likely that still another wave of interest might push social media into another new venue.

One of the demographics of Internet users that have largely accepted social media into their lives is traditional aged college-age students (Ellison, Lampe, & Steinfield, 2008). Such students in many cases can be seen living in two worlds, in the physical and in the realm of social networking websites such as Facebook. In most cases, these students will live somewhat parallel lives, accurately representing themselves in both realms, in other cases; they may be two totally separate identities, living almost a “second life” in the social networking realm. Social media and its subsequent social networking sites seem to be integrating themselves into the college environment, and the converse is becoming increasingly true, where many colleges are integrating social media into their classrooms (Munoz, 2009) and campuses (Trescott, 2009). However, the concern to be addressed is whether or not social media is positively impacting college students, their development, and/or the university environment.

College student development is based upon a collection of cognitive, socio-cultural, and psychological theories that relate closely to an individual's growth throughout the college experience. Examples include Chickering and Reisser's (1993) vector based model, Nevitt Sanford's (1967) model of development involving challenge and support, and William Perry's model of cognitive development (Lochrie, 1989). Social networking sites will likely have the most influence on a student's growth in the psycho-social realm, but may have further-reaching implications into the cognitive and psychological areas as well. The following study will build a knowledge base regarding Facebook and social media and examine the role it plays in a college student's development.

Purpose of Study

This study seeks to assess students' usage of Facebook and how it impacts primarily their psychosocial development, specifically their development of mature interpersonal relationships along the lines of Arthur Chickering and Linda Reisser's vector based model (1993) of student

development. This study will take into account the relevant findings in research being done on the use of Facebook and student development theory related to interpersonal development and derive a series of questions intended to give resolution to the to-be-stated hypothesis. Current bodies of work have been tuned towards more general outcomes for students, such as the development of relationships (Chickering & Reisser, 1993), social capital (Ellison, Lampe & Steinfield, 2007), identity development (Erikson, 1968), usage characteristics, and more. This study aims to establish a link between of student development theory and student's use of social media.

Research Questions

The primary research question of this study is as follows:

Q1-Does Facebook usage impact college students' development of mature interpersonal relationships?

Q1a-Is there a difference in the impact of Facebook use on the development of mature interpersonal relationships between males and females?

Q2-Do sex or "heavy" or "light" Facebook use impact the development of interpersonal relationships?

These questions are formulated in order to take one of the next logical steps in the research on college student development. By exploring student's use of social media and linking it with the proposed developmental aspects of Arthur Chickering and Linda Reisser's model (1993), this study is aimed to establish a link that can be further explored by expanding bodies of research in both arenas.

Hypothesis

The following hypotheses will be examined with the data analysis resultant of this study:

H1₁: Social Networking Sites such as Facebook impact college student's development of interpersonal relationships.

H1₀: Social Networking Sites such as Facebook do not impact college student's development of interpersonal relationships.

H1a₁: There is a difference in the impact of Facebook use on interpersonal development between females and males.

H1a₀: There is not a difference in the impact of Facebook use on interpersonal development between females and males.

H2₁: There is a significant difference in interpersonal development based on the "weight" of Facebook use among college students (with the top 25 percent being "light" and the top 25 percent being "heavy").

H2₀: There is not a significant difference in interpersonal development based on the "weight" of Facebook use among college students (with the top 25 percent being "light" and the top 25 percent being "heavy").

and

H2₁: There is a significant difference in interpersonal development based on the sex of college students.

H2₀: There is not a significant difference in interpersonal development based on the sex of college students.

Significance of Study

As will be discussed in the forthcoming review of relevant literature, the benefits that Facebook and social media use can have on students' developmental processes should promote colleges, universities and their administrative staff to support and engage students through use of the website. While some faculty and administrators might argue the amount of time spent on Facebook is growing at a staggering rate, the reported reality of the situation is students are not spending time on Facebook, but that they are instead *integrating* Facebook into their daily tasks, making it part of their *routines*. It can be compared to other aspects of life that students and people in general make part of their lives. When kids are younger, they may watch Saturday morning cartoons, or arrive home from school and watch a few television shows before they head off to athletic practice; Facebook is becoming this sort of time in a student's life (Hicks, 2010).

As faculty and administrators, the idea may seem somewhat counterproductive, with students in class updating their status, browsing albums, or tagging pictures. But if they step back and view it as a powerful communication tool, then one of the ways that this trend might be turned in a more productive direction would be to integrate the university and its courses into that which students are integrating into their lives (Hicks, 2010). This way, rather than having students completing the aforementioned activities during class, they might be browsing classroom discussion topics, reviewing the course roster to put together study groups, or instant messaging other students in the course to discuss the professor's lecture material. Professors could also engage students on a different level. Whereas many students are often intimidated to interact with professors during their physical office hours, the idea of virtual office hours might allow for students to engage with a professor on a less teacher-student tone, but more of a friend-friend level. While this might appear demeaning to the professional, it becomes a question of what they desire for their students. If the answer to that question is more "face" time, then "Face" book might be the best avenue to gain access to the students rather than set the expectation of coming

to actual office hours. However, if the answer were classroom engagement, providing a live feed of student discussion of the subject matter through Facebook during the lecture periods would likely provide an interesting tool for both teachers and students. Finally, if teachers expect their students to remove themselves entirely from their electronics during lecture or discussion periods, then they must rigidly defend this position and provide other levels of engagement for their students during the class to avoid the possibility of student interest withdrawal.

From the perspective of the administration, the view that must be recognized is that Facebook and other forms of social media have embedded themselves in today's society and they are likely not to be removed in the near future. Professional athletes and Hollywood celebrities have Facebook and Twitter accounts to keep their fans tuned into their daily lives and social events (Johnson, 2009). Gatherings are no longer put on people's calendars; they are Facebook events, and students often brag or boast about the size of their "friend" networks or who they might have "friended" in recent history. Administration must recognize these trends and strive to make their university environment a desirable destination for students not only in the physical world, but in the digital realm as well (Trescott, 2009). Because so much information gathering is done utilizing the Internet in today's era, a university that presents an impressive digital front will likely garner much more interest than those who have a limited online presentation. As connected as students have become, it is more possible that future students will network with a university's existing students before they apply in order to weigh one institution against another (Trescott, 2009). A university that can support its current students through this channel can allow those resources to be quickly disseminated to incoming students with minimal effort on the part of the university.

Administrators must also realize that Facebook can be utilized as a valuable resource when looking at individual students. By extending their virtual network to include their employees or those students with whom they interact on a regular basis, it can keep the upper

levels of the administration informed on trending topics in the student population so they may prepare adequately to address these issues as they spread to the rest of the institutional population.

Another aspect of this resource that can be drawn upon by administrators is the ability to tie into alumni networks. Those who have graduate with a positive experience at the university could be tapped via Facebook to promote fundraising efforts, and thanks to the level of interconnectedness, a single alumnus or alumnae could lead to its own micro network, providing a compounding effect for the universities' foundations to explore when seeking out new donors.

A final stance that can be taken for the utilization of Facebook by colleges and universities is on the aspect of budgetary benefits. While it may sound a bit far-fetched, the utilization of Facebook; a completely free service; for many of the same features offered by the commercial solutions such as WebCT and Blackboard, may hold a good deal of financial benefit for institutions. In a time of economic hardship in both the public and private sectors, a penny pinched in any aspect of institutional operation can be a very valuable penny indeed. Rather than spending tens or even hundreds of thousands of dollars on these commercial products, often on a *yearly* basis, like Seton Hall University, who spent \$75,000 for some 6,000 Blackboard users, or the University of South Dakota System that spent \$275,000 to serve WebCT to 25,000 users (Angelo, 2002), why not scale back these online classroom operations to a minimum and promote the utilization of a resource that students already engage in their daily routines. Moves such as this could have many positive repercussions for the university: a scaling back of IT operations by removing these services, an offering of a more "open" online university environment; one where students and professors could interact on a more regular, casual basis, a monetary savings for the university in software and upkeep costs, and likely, a student body that is more engaged in class offerings. By integrating another wealth of resources into a student's "life platform," the university serves both itself and its students to a much higher degree.

Limitations of Study

It is anticipated that this study will be limited in both its scope and scale. Due to the relative newness of the subject matter, limited proven instruments and research tools are available for measuring Facebook use; though the measure used had adequate psychometric properties. The study will be limited in its scope to students of Oklahoma State University. Due to limitations in funding and the need to use verified instruments of measure, the Mature Interpersonal Relationships Task of the SDTLA will be utilized instead of the entire set of tasks from the SDTLA.

Definition of Terms

Student Development Theory- a body of theory and research related to how students in post secondary education environments gain knowledge and experience the world. Theories are often divided into subcategories including psychosocial, cognitive, person-environment and others.

Social Media- a group of Internet based applications that build on the ideological and technological foundations of Web 2.0, that allow for the creation and exchange of User Generated Content (Haenlein & Kaplan, 2010)

Web 2.0-considered the platform for social media. Rather than simply listing information on personal web pages or online encyclopedias (Web 1.0), Web 2.0 presents content in blogs, wikis, and other collaborative “live” projects (Haenlein & Kaplan, 2010)

User Generated Content-published information that is publicly accessible on a social media outlet, creative in nature, and must be created outside of professional/commercial routines and practices (Haenlein & Kaplan, 2010)

Social Network-social structure composed of individuals (nodes) who exchange information, messages and other communications through relationships

Social Networking Site-a website allowing for the development of social networks through varying forms of Internet communication

SDTLA-Student Development Task and Lifestyle Assessment, an assessment designed to “facilitate development of life purpose, mature interpersonal relationships, and academic autonomy as well as establishment of healthy lifestyles” (SDTLA, 2010)

Summary

The examination of social media as a life platform is not a new concept, nor is student development theory. However, the implication that social media use by college students’ influences their development, specifically in the realm of interpersonal relationships, is an emerging one. This study, through an examination of literature relevant to both student development theory and social media, as well as a study conducted utilizing the Facebook Intensity Scale and the Mature Interpersonal Relationships Task of the Student Development Task and Lifestyle Assessment will seek to establish the connection between these two subject matters and build a framework for future research into them. The information resulting from this study could allow faculty, staff and students of the educational community to determine how best to work with members of the online generation.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

Introduction

The following chapter provides an integrative review of relevant literature and its relationship to the subject matter. This literature will be used to establish a context for the research to be completed. This review consists of literature related to relevant college student development theories, a brief overview of the student population, a profile of the evolution and use of Facebook and some other forms of social media, a look at institutional adoption of social media, and a conclusive summary to relate all sections.

Psychosocial Student Development (Chickering and Reisser)

Arthur Chickering and Linda Reisser (1993) suggest psychosocial development takes place in a vector-based model, which includes seven key vectors, some being broken down into other, more specific aspects. In a sequential form, Chickering and Reisser's vectors are as follows: developing competence, managing emotions, moving through autonomy towards interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity. The key aspects in each vector will be outlined.

Developing competence involves a student's development in three different aspects: interpersonal, physical and intellectual competence, as well as the sum of these parts (Chickering & Reisser, 1993). While each of these different aspects is quite pertinent to the overall development of the student, the interpersonal aspect is that which will be most affected by the different flavors of social media. As social media contains content that is created by peers, for peers, the impact on the physical aspect is almost nonexistent. The development of intellectual competence is likely limited within the realm of general Facebook usage, however, when utilized in the right context, such as a classroom supplement or medium (Munoz, 2009), the possibilities expand. Students striving to develop interpersonal competence should look to make keen choices in the arenas of timing, medium of communication, content, target of communication, and the intentionality of communication skills (Chickering & Reisser, 1993). Facebook and other forms of social media lend themselves well to students developing interpersonal competence by providing a great number of ways for students to communicate. Social media is "always on" so timing becomes a non-issue. Social media provides many mediums of communication as well as many forms of content with which to communicate. Text, pictures, video, and applications are just a few ways in which students can reach out to each other.

While it is logical to break each of the respective "tines" of the competence "pitchfork" down, the most important aspect is the collective "handle," for without this unifying factor; the "tines" mean nothing. The student's overall sense of competence comes from the interaction of each of these elements as to how they are able to articulate themselves in any number of situations.

The managing emotions vector examines how students learn to deal with and direct their emotions. More complicated than simply developing a student's competence, because of the volatile nature of emotions themselves, students' development along this vector can be seen in as they first develop an awareness for their feelings, learn to control each of them through

appropriate expression or integration, and developing a healthy emotional balance (Chickering & Reisser, 1993). While students may become deeply invested in their Facebook accounts and struggle with the balance of what happens online and in reality, it is highly likely that social media does little to contribute to the emotional development of students.

When it comes to student's development through autonomy towards interdependence, they start to realize personal uniqueness, pressing through the issues of emotional independence, instrumental dependence and overall interdependence (Chickering & Reisser, 1993). One of the first steps in growth along this vector involves parental separation, which is accompanied by increased dependence on peers and alternate authorities. Social media coupled with other technology has allowed for students to have a varying degree in which they want to make this break. Because Facebook and similar sites allow for the customization of privacy options, it becomes the choice of the student to decide how "in the loop" they wish to keep their parents or other members of their family and support network. Students can choose to let their support network all the way in, pick and choose what they see and what they don't, or simply lock them out altogether.

Once students develop a balanced set of peers and a sense of stability, they are able to move into a more instrumentally independent state, where they are able to establish these support mechanisms in new and different environments. When students achieve a certain degree of independence, they will begin to realize that they are part of a larger whole, and due to the interdependent nature of society, they cannot receive the benefits of this society without contributing. Facebook and other social media provide means for students to establish a great many different types of networks. By integrating themselves into these different networks, the students should gain a better understanding of how they might fit into the larger whole, being interdependent of those people and networks surrounding and connecting them.

As students surround themselves with a supportive group of peers, some are likely to become more significant than others, becoming “best” friends or moving towards a more long lasting relationship. At this point, Chickering and Reisser’s vector of developing mature interpersonal relationships comes into play. When these types of relationships are formed, students are more at ease with themselves and learn how to better articulate all of the growth they have achieved on prior vectors.

Developing mature interpersonal relationships is composed of two key components: tolerance and appreciation of differences and capacity for intimacy. As students develop a tolerance and appreciation of differences they tend to gather a sense of empathy for those around them, being able to better understand how and why their peers make the decisions that they do. Students will either go through ethnocentric or ethnorelative stages when presented with a difference. In ethnocentrism, the student will downplay the differences and focus on similarities between different people, and in ethnorelativism, students will accept and work to integrate a better understanding of these differences into their perception of diversity. Because Facebook can provide a great deal of information to students, they may choose to surround themselves with others whom they perceive to be similar, rather than seeking out difference. Conversely, students may also seek out others who are different in order to gain a better appreciation of those inherent differences.

As students transform their most significant friendships into mature interpersonal relationships, those relationships will take on much more intimate characteristics. As students become more intimate in their relationships, the nature of disclosure rises in importance and the investments become more significant. Some of these intimate, mature interpersonal relationships will develop into lifetime relationships or perhaps life partnerships. Students who have developed these types of relationships will be able to balance their time between friends, their partner and by themselves (Chickering & Reisser, 1993). Developing relationships are closely

monitored by the members of one's social network, be it online or offline. In common language, many relationships are not considered "official" until they are "Facebook official" meaning that the information has been posted online for a student's peers to view and comment on (Gershon, 2010).

One of the more critical components of a student's development in college is their identity formation. Erikson (1968) suggests that students develop facets of their identity through the resolution of different life crises, forming strength in their egos and building their self-esteem. As students go through these numerous crises in their college careers and beyond, their identities are constantly reconstructed, allowing development of a better sense of what they, as individuals, hold as significant. Students will likely face the development of their identity in many aspects during college, including but not limited to physical, sexual, gender, social, political, racial, ethnic, religious, spiritual and self-identities. Coincidentally, when students generate profile information to populate their Facebook or other social media accounts, they are often given the option to provide most, if not all of this type of demographic information. As students develop in this multi-directional vector, they will become more confident in self, feel more useful to those around them, and be able to identify the critical components of self that best serve each situation.

Perhaps one of the most critical components of Chickering and Reisser's vectors of development for college students is that of developing purpose. Purpose is said to be derived from a set of priorities in vocational plans and aspirations, personal interests and interpersonal and family commitments. Developing a clear perception of professional aspirations is important for students to gain a sense of direction in this vector, for without a desired target, all efforts will be shots in the dark. Students who develop a mature sense of these aspirations will be driven and directed throughout their college careers as compared to their peers. Students should also seek to figure out what professional career best serves their personal interests. A student is likely to be quite avocational towards a career path that is not congruent with their personal or professional

interests and aptitudes. Students must also take into consideration personal and family ties and commitments when determining their vocational route. Perhaps these mature relationships are much more important to a student than having their “dream job.” Each of these different components must be weighed as a student develops their sense of purpose (Chickering & Reisser, 1993).

While Facebook provides an immense amount of connectivity for students to be able to network with each other, establishing a more “professional” presence could be a challenge for some. Fortunately, other social networking sites have been established for this exact purpose. Sites like LinkedIn allow students and other professionals or corporations to form networks in order to promote further development of professional networks and purpose.

Chickering and Reisser’s final vector of development is closely tied to that of developing purpose. Developing integrity consists of a sequence of stages: humanizing values, personalizing values and developing congruence. The humanizing of values often arises from conflict of points of view. Rather than holding onto a polarized point of view or a peer group that holds such views, it is often better to distance oneself from these situations and accept the grey area between contrasting points of view. To move along this vector, students will often utilize an internalized system of values and principles considered by them to be integral. This system will likely go through challenges and changes throughout students’ college careers and the rest of their lives. Eventually, these values and principles will be clarified, allowing them to be utilized as a set of guiding forces for the students to develop congruence between their actions and societal norms. When students develop this sense of congruence, they are said to have matured well along each of Chickering and Reisser’s vectors to a point where they will be able to integrate well into society. The nature of this vector moves beyond what is really possible with social networking sites at the current time. While the resources provided by these sites and their users might aid in the

clarification of ideas and concepts, the possibility of *people*, much less students, being able to develop integrally through the use of a website is a long shot indeed.

While the possibility exists to examine the impact of student development along several of these vectors, the existing research and instruments to measure this development are limited. The present study will focus on the *social* aspect of student's development by examining the current trends in students' development of mature interpersonal relationships as well as their general usage of Facebook.

Student Profile

The first point to examine is the determination of the demographic of students who consume and produce social media on college campuses across the country. While the traditional college-age student is identified as being aged 18-24 by some authorities (LAO, 2009), the actual average of college students continues to change (Edvisors, 2009). According to the College Board's Annual Survey of Colleges (2007), only 16 percent of college students fall into the traditionally-accepted 18-22 age range, with the majority of students over the age of 25. It is pertinent to designate the desired age demographic that will be examined. For the purposes of this study, the "traditional" group of college age students recently removed from their high school environments will be taken into consideration, those who are essentially 18-22 years old, as previously mentioned. The study will sample the student body of a large, state institution rather than looking into the diverse array of institutional types present in the United States Educational System. The eventual broadening of this line of research to include students from these different types of institutions is quite possible. While the average age of college students is quite relevant, the future introduction of several student development theories are not as pertinent to those students who are not of traditional age, as they have been separated from the hardships,

developmental challenges, and environmental influences that typically effect those who are attending college as young adults.

Social Media Profile

Due to its prevalence and popularity among most modern users, the social networking website Facebook will be the focal point of commentary and discussion. A great many more social media outlets may be acknowledged, including but not limited to: MySpace, Twitter, Windows Live, LinkedIn and more, but the most prevalent site (Ferner, 2011) will be exemplified so more far-reaching conclusions can be drawn. As of the middle of 2010 there were over 500 million active Facebook users (Zuckerberg, 2010), up from just over 350 million users in late 2009 (Zuckerberg, 2009). This number of users dwarfs any of its peers nearly three to one in most cases. While there are obvious differences in the structure, layout and usage of each of the aforementioned social networking outlets, Facebook continues to integrate new features into its existing platform in order to take on some of the more unique functions these other websites may utilize. While Zuckerberg is confident that Facebook will eventually reach 1 billion users worldwide (Barnett, 2010), he also acknowledges some “unnatural” growth from Twitter, the microblogging website whose functionality was integrated into Facebook in the form of real time status updates after it failed to acquire Twitter in 2008.

In order to gain a better perspective on the overall gender differences of US users on Facebook, Smith (2009) provides a few different infographics. What is provided by this information is that as of mid-2009, women outnumbered men on Facebook in every age bracket (13-17, 18-25, 26-34, 35-44, 45-54, and 55-65) by one million or more. Based on the provided information, the user growth during the 30 days prior to the collection of data shows a greater number of women joining Facebook than men. In some age brackets, women were joining at a rate of almost two to one. However, the men show a higher rate of growth in one of the age

brackets: 55-65. Ironically, the group of users that showed the lowest rate of growth for both males and females was the 18-25 age group, the “college age” users. As of this post (2009), women outnumbered men 1.35 to 1.

The reason for focusing this study on only Facebook rather than including multiple forms of social networking sites like Twitter, LinkedIn and others was simple: network size and depth. Facebook has been likened to a wedding party where users build upon relationships with family and friends, whereas Twitter is likened to a big social event where there are no significant relationships built, but many brief friendships to be had (Tagtmeier, 2010). Facebook also provides a great deal of privacy controls for its users, allowing them to tailor the availability of their content to each of their friends, whereas Twitter content is either public or private, with a switch for each follower. Similarly, Facebook has many more facets for users to add content to, pictures, albums, interests, friends, groups, videos and much more, whereas Twitter is much more simple, allotting users 140-character “tweets” to relay events, information, pictures or other information to their followers and microblog. Another interesting development between these two services lies in Facebook’s recent inclusion of the ability to link Twitter accounts to a user’s Facebook profile’s status updates, with each mirroring the other (Tagtmeier, 2010).

Junco, Heiberger, & Loken (2010) find that the use of Twitter in the classroom for assignments provided the opportunity for students to connect with each other across boundaries that may have been insurmountable before connecting over Twitter. The study states that classroom discussion conducted over Twitter often moved into extracurricular interests which provoked the connection of students to each other. The study also references several relationships that were forged through the use of Twitter in the classroom, which suggests that there are opportunities for connection and subsequent communication through Twitter. However, these relationships are not detailed.

Another key distinction between the two services is the level of activity involved with each. While the lines between mobile and desktop are continually blurred with the rise of internet-connected smartphones, Twitter is much more lightweight and activity driven, with users posting their activities on the run via text message or mobile browser. Facebook is a more involved service that privies a large number of activities for users to engage in. While many of these activities have been ported to various mobile phone platforms, they are often limited with regards to the depth that can be experienced on a full-fledged laptop or desktop computer. It is because Facebook allows for more involved interpersonal relationship development on the site rather than the casual status updates or conversations of Twitter, that it was selected as the primary platform of examination for this study.

Changes in Facebook over time

Facebook started as a social networking site for students by students. Originally developed by Harvard student Mark Zuckerberg as a way to share pictures and interact with students from across his local campus. Facebook quickly extended from its Harvard roots to include other area schools, the Ivy League, and eventually the entire United States college and university system. Within two years, high school students could register, and shortly thereafter, its education specific ties were cut, allowing anyone with a registered email address to join. Since its inception, the site has been free to use due to its advertising supported ecosystem, similar to that of other web giants like Google.com. In 2007, the company reached a milestone 30 million users, being the largest, “education-focused” social networking site (Phillips, 2007). But the question to be asked remains: in today’s open architecture, where any individual with an email address can join, does the focus on education remain? Or is Facebook simply a social networking site with roots in the educational market? That is a distinction that can likely be left up to its users.

The Ellison, et al. study is keen to point out several changes to Facebook in recent history, expanding the audience to which Facebook is available, as well as further developing core functionality of the website. New feeds were introduced, allowing actions on the site to be posted to a continuously updating timeline; the “Applications” platform premiered, leading to the development of new games, functionalities, and features; and enhanced privacy controls were implemented (Ellison, et al., 2008), allowing users to customize which user or users could see different components of their profiles. Each of these changes allows for users to customize the way they interact with both their friends and the website itself.

Facebook as a social networking platform presents businesses with a unique advertising opportunity. This platform allows for developers, commercial businesses or independent individuals to create unique ties to users and offer online shopping, which can subsequently be shared among other users within ones network of friends (Vara, 2007). Another door this opens is to the games market. While the Microsoft’s Xbox 360 and Sony’s Playstation 3 play host to more “real” networked games, the casual gamers looking for a quick fix or brief session with their friends can utilize Facebook. The final arena worth examining within Facebook as a development platform is that of virtual or digital “gifts” that can be sent from one user to another. Some free, some costing users a small fee, what each of these different components break down to is a departure from spending time shopping or playing games with friends in the physical world and moving those actions into the digital world.

Usage and trends

There are a great many small-scale studies that examine the users of Social Media and how they utilize these sites. Larger, nationwide studies with representative sample sizes appear to be short in supply. The following compiles a few of these more localized studies.

To look at the environment pre-Facebook, a 2004 study finds a sample of 51 students who reported through a three to five day communication log, with their primary means of voluntary online social interaction being email, chat, and instant messaging. It is noted that of the majority of voluntary social interactions, 64%, were done face-to-face with Internet and phone interactions ranking well behind at 16% and 18%, respectively. This study also reveals that 64% of students surveyed utilized all three of the aforementioned means of communication on a daily basis (Baym, Zhang, & Lin, 2004). If this study had been completed in today's world of social media, it would be interesting to see how much interactions would have changed and what would qualify as an interaction. There were 862 interactions from 51 students surveyed (Baym, et al., 2004). What would these numbers look like with the rise in technology and communication channels?

A study produced by Ellison, et al. examines gender, age, ethnicity, year in school, residency, Greek involvement, Facebook usage and the changes of use and perception of Facebook over a longitudinal timeframe. From years 2006 to 2008, the study achieves response rates just above 20%. The study shows a positive relationship between certain kinds of Facebook use and the creation of social capital, based upon its randomized sample of undergraduate students, an average age of 20, a distribution of about one male to two females, about 80% white, and about 90% Michigan state residency. Importantly, this study shows a Facebook member percentage of 94% in 2006 and 2007 rising to 96% in 2008. Another characteristic to point out was the insignificant role that gender or time spent at MSU played in the results of the study.

This study also goes into greater depth, examining the changes over time in user interaction, reasons for usage, attitudes, and perceptions. Most reported Facebook was a way for them to maintain brief contact with persons whom they had relationships within the physical world. The study looks at a series of questions that gauge users' interaction with the website and their opinions of it, receiving feedback on items like "Facebook is part of my everyday activity,"

“I use Facebook to get useful information,” and “My Facebook use has caused me problems.” Nearly all of these response items showed significant differences through out the duration of the study, all changing by about 20%. While some items reflected the positive usages of the website, such as gathering information on university events or meeting new people, the increase in users indicating they spend time on Facebook when they should be doing other things or the increasing number of problems caused for its users, is disturbing (Ellison, et al., 2008).

Another body of research looks at the usage of social media websites (including Twitter, Youtube and others) in college students at the University of New Hampshire. There were 1,100 students surveyed to find that “heavy” users and “light” users showed little difference in their academic performance, with about 64% getting “high” grades. This study, soon to be published in book form, actually finds that rather than being a distraction or detractor from work to be done, that social media is actually becoming more a part of student’s behavioral processes (Hicks, 2010). Whereas those who have recently graduated from college into the workforce and those currently in the workforce get absorbed into the “void” that social media can create, the high school and traditional college-age students have integrated the usage of social media and other related technologies into their productivity processes and other daily routines.

To contrast the University of New Hampshire study, Karpinski (2009) finds that Facebook users report GPAs of 3.0-3.5 while non-users reported 3.5-4.0. This study also found that Facebook users averaged one to five hours of studying per week, where non-users reported 11-15 hours per week. This study found a usage rate of 85 percent among undergraduate students and 52 percent. This lower usage rate among graduate students could account for the higher rate of studying and GPA due to the typical higher intensity of graduate programs. Also, though graduate students typically maintain GPAs of 3.5 or higher, their Facebook use did lead to lower GPAs. The findings showed that 79 percent of Facebook users did not feel their use impacted

their academic performance. Karpinski does point out that there are possibly other factors involved, such as personality traits, in the determination of students' academic performance.

Components from a study of freshman students at the University of North Carolina-Chapel Hill reinforce the legitimacy of the rapid rate of adoption previously outlined in this review. Of the students incoming in the 2005 fall semester, 85% already had a Facebook account, with this number steadily growing to 94% over the course of the first semester (Stutzman, 2006). Incoming freshman had an average of 46 individual friends with a total social network of 144, 319 "friends." Over the course of the semester, this number grew to 373,651, representing an average growth of about 65 new "friends" per student. The study also examines the different components of students' lives that they may share in their profile creation, with the most popular facets being birthday and hometown at well over 90% of the sample sharing down to just 16.4% of the sample revealing their mobile phone number. The caveat researchers hold that is ever present, in any of these studies however is users are truthfully reporting information in their profiles. Another indicator drawn from this study is one of rapid network growth, which can be seen through the expression of photos. Over the course of the second half (eight weeks) of the semester, the number of photos and people "tagged" in photos grew from 9,783 to 78,413, nearly nine-fold, a staggering rate of growth.

In an examination of whether or not first-year students use Facebook to expand their online social networks or to reinforce face to face relationships, it was found that this sample was extremely likely to keep in touch with old friends, new acquaintances, or people in classes. The study did not indicate the sample utilized Facebook to "socially browse" for new "friends" online (Ellison, Lampe & Steinfield, 2006). So essentially this study reinforces the idea that people do not browse for new people to meet, but instead seek to learn more about individuals they have already built relationships with socially. Other points of interest from this study include the indications that by midway through their first year, 95% of respondents were users of Facebook,

with 69% being online for 30 minutes or less and 12% spending over an hour per day on the site. Also, the mid-year survey indicated students believed their profiles accurately represented themselves.

Another broader study of Facebook found that users typically spent around 20 minutes per day utilizing the various features of the site, with about two thirds of these users accessing the site *at least* once during the day (Ellison, et al, 2007). Based upon information from today, three years after the website opened its doors to “the rest of the world,” usage statistics, which Facebook actually tracks, come close to holding true, and that over 200 million users of Facebook’s 400 million active users log into the site *daily* (Facebook, 2010). Average daily use has increased from the 20 minutes per day reported in 2007 to nearly an hour. The globalization of Facebook has led to what was once a completely domestic population, to a user base that is only 30% domestic in present day. Facebook’s average use appears to be continually accelerating, growing almost tenfold in the last three years alone, where it only grew at an average rate of around 10 million users per year over its first three years of existence.

A study comprised of 92 Georgetown University students collected weeklong usage characteristics in a diary type measure followed up by a more in-depth survey. As a separate component of the survey, students’ demographic information was collected based upon their profile page. The survey found that users spent nearly a half hour per day utilizing the sites various functions. Peak traffic times occurred in the evenings. Based upon a series of open-ended questions and Likert scales, the survey finds that most students use Facebook as a way to communicate with friends. On the subject matter, the trending number of friends was found to be over 350. Consistent with other studies, a high percentage (77%) of students found all of their Facebook friendships to be rooted in the “real” world, rather than originating online (Pempek, Yermalayeva, & Calvert, 2009).

This study continues to highlight the different components of the users identities they contribute to the site. Characteristics range from favorite music, to religion, to school, to relationship status and more. Of the 15 items on the survey, over 60% of the students included 11 or more of them. The leading rationale for the inclusion of characteristics appeared to be that it “expresses who I am” closely followed by “Facebook had a place to insert it.” In an interesting finding, traditional (Arnett, 2000; Erikson, 1963) indicators of identity such as religion, political ideology and work were included in students’ profiles less often than media preferences in music, books and movies (Pempek, et al, 2009).

Regarding other usage characteristics, the study found that nearly half of the sample “lurked” or “creeped” on the site “quite a bit,” choosing to simply read and browse instead of actively using the site. To compare, about half of the sample said that they “performed activities” such as posting information or pictures “some” of the time as opposed to about 20% who said they were active “quite a bit.” As much use as the site sees, it is interesting to note that 45% of the students surveyed said they could “live without it.” The study concludes in finding when utilized with academic and professional goals, Facebook can provide a very creative and multifaceted tool for communication in the information age. But, that the current trend is towards information gathering through “lurking” and the creation of a digital profile or identity through the site (Pempek, et al, 2009).

Another more recent (2011) report found that the daily use of Facebook seems to be increasing. Based on a 183-student sample, Kujath (2011) found that students used Facebook 1.2 times per day totaling 31.5 minutes each use, yielding a total overall time spent of 39.1 minutes per day. Interestingly enough, this study includes Myspace use statistics as well. There was a 52 percent overlap in students using both Facebook and Myspace with the latter being used more heavily, at over an hour per day. Studies show that students have spent approximately 20 minutes on Facebook in 2007 (Ellison, et al.) to 30 minutes in 2009 (Pempek, et al.) to nearly 40 minutes

in 2011 (Kujath). If this trend continues, students could be spending an average of over an hour on Facebook per day in two to three years. Again, similar to the Ellison, et al. study, no significant differences were found regarding age, gender or class standing.

One of the more complete datasets drawn directly from Facebook reveals the responses of 96.1% of the bounded population of 2008. This data set itself is a natural research instrument, providing near complete network data, longitudinal data, data on multiple social relationships and cultural data (Christakis, Gonzales, Kaufman, Lewis, & Wimmer, 2008). The longitudinal component of data is still in process, as the researchers have only collected the first “wave” of data as of this writing, but once complete, should provide a picture of the changes college students go through during the typical four-year career. The dataset examines 3 different types of relationships: Facebook friends, Picture friends, and roommates/dormmates/groupmates. The study indicates that .4% of the designated “friend” relationships are limited to online interaction and also, 99.9% of users have at least one friend on the site. The average number of friends per user was found to be around 109. This is about 16.5 times larger than the average number of “picture” friendships. “Picture” relationships are defined by users “tagging” each other in pictures. A subset of students reveals that 95% of the population has at least one tie to another through these “picture” friendships. Finally, several relationships can be identified by housing or living arrangements. Groups of these living relationships range in size from 1-6 users and include users who shared a building, room or apartment in common during the first wave of data collection.

The Christakis, et al. (2008) dataset is also able to gauge students’ racial and ethnic backgrounds through the analysis of a pair of aspects of the students’ profiles. Based on the students profile pictures and listed involvement in student clubs or organizations, a good judgment of race and ethnicity can be derived. Socioeconomic status was another statistic the study tries to examine. Through the utilization of zip codes in combination with an areas

socioeconomic data from the 2000 census, there is approximately a 75% indication of socioeconomic status for the student population.

Another study suggests that rather than contributing to different sites or online bulletin boards, that many teenage users simply “lurk” on other users pages, reading posts, looking at pictures and gathering other information. Many users bill this as “creeping” or “stalking” each other on social media sites (Suzuki & Calzo, 2004). The nature of social media suggests that nearly all users contribute, but in this study, a great many simply “lurk.”

The aforementioned 2007 Ellison, Steinfield & Lampe investigates Facebook as a means of accumulating “Social Capital,” a term which broadly refers to the resources accumulated through relationships built with people (Coleman, 1988). Social capital is referential to a number of different fields and applicable in many different facets of society. In general, a community that has a high degree of social capital, that is, investments in the relationships with people that then become resources, will function much more highly than communities that do not develop these resources. The study goes on to say that more “traditional” forms of social capital have been declining in general society, but the advent of social networking sites has given rise to a new avenue of developing social capital resources (Helliwell & Putnam, 2004).

This study continues to discuss the investment of individuals into Facebook as a means to develop more online social resources. The authors hypothesize that the intensity of Facebook usage will have a positive impact on individuals’ apparent bridging social capital, the intensity of Facebook use will positively influence individuals’ supposed bonding social capital, and the intensity of Facebook use will positively effect individuals’ perceived maintained social capital. In a survey of 286 students closely representing the Michigan State University population, the authors found that 94% of their sample were members of Facebook having whom reported having between 150 and 200 Facebook friends. The users also indicate that nearly all users remained in

touch with high school friends and that college friends and classmates have seen their profiles, suggesting that there is a significant “offline component” to the sample’s use of Facebook (Ellison, et al., 2007).

Preconceived usage trends

In order to better understand how college students arrive at college with the abilities, wants and needs to utilize social networking sites to connect with their friends, we turn to a study that analyzes teens and their Internet and social media usage. In a recent study, Amanda Lenhart examined these trends in teenagers ages 12-17, or, essentially, junior and senior high school-aged kids. The study noted that since the year 2000, American teens Internet usage grew from approximately 73% to 93% in 2008, which represented a significant 20% increase. Of this Internet usage in teens, nearly 90% accessed the Internet from home, 77% at school and 60% in libraries, with 63% having accessed the Internet daily. The study found that 95% spent face time with their friends, 88% spoke to friends via landline, and 67% via cell phone. It is anticipated that teenage cell phone ownership will continue to rise as it has in years past, from 45% in 2004 to 63% in 2006 to 71% in 2008 (Lenhart, 2009). In accordance with this trend, it is assumed that daily cell phone usage will continue to increase.

Social networking site usage among teens is something that is also likely to increase with age. Some 65% of teens that access the Internet have some sort of online profile representing just over 60% of the total teenage sample. Profile creation almost doubles as teenagers grow older, with just 38% of 12-14 year olds having a profile, compared to 77% of 15-17 year olds. Usage of social networking sites for this demographic primarily consists of commenting, message posting, and private messaging. As suspected, usage is accelerating as teenagers progress toward college (Lenhart, 2009).

Institutional utilization of social networking sites

While somewhat dated due to many of the new privacy features put into place by Facebook, Beguja's (2006) study examines the fact that many university officials can police or monitor students through their postings to the social networking site. At a university where nearly 80 percent of the student population has a registered user profile with Facebook, Bugeja notes that universities' continued investments in Internet technologies have not been paying the dividend they were hoping. Where many officials hoped these dollars would pay off in bridging the gaps between faculty, university resources, and students, they are finding that these technological investments are being utilized to browse the Internet during class, instant message, or shop (Begueja, 2006).

In contrast, some instances of the utilization of Facebook in higher education have been mixed or positive. Many institutions implement "older" web technologies such as email, chat rooms, message boards and interactive classrooms into their educational infrastructure. Some faculty have embraced these resources to better connect with their students, some simply use these means to disseminate course materials, and still others have yet to even establish an online presence for their course offerings. Interestingly enough, Facebook presents many of the oft-utilized features of online classrooms like D2L (Desire 2 Learn), and other similar programs like Blackboard. The difference being, rather than having to log into a separate university run service, the Facebook offerings can be quickly accessed from student's already active profiles they regularly browse (Muñoz, 2009). Facebook's application environment and robust interface allow for course interactions to be far less limited than they would be by the confines of many university systems. But is this lack of structure and bounding beneficial? Another item for consideration is that if colleges and universities continue to trend towards usage of Facebook for course offerings, is there a continued need for commercial solutions to online classrooms? Due to the rapid, near seamless and more importantly; in this era of continued educational budgetary

concerns; free development of Facebook as an online classroom, many schools may turn to this alternative rather than spending thousands of dollars on the commercial packages.

Educationally, teachers and other faculty members use Facebook or other social networking sites to create community, which is a component of student education. While the conclusion was drawn that students who engage in “web-enhanced” classes typically outperform those who participate in traditional lecture classes (Munoz, 2009), the question of interpersonal interaction and communication skills tends to be a focal point. Due to the rapidity with which information can be shared through Facebook, among other venues, it is possible that the learning process and class assignments can be made more focused and rapid themselves. Also, teachers can use Facebook as an evaluative tool to reflect on what they themselves have learned and what instructional practices proved effective in the “classroom” (Munoz, 2009).

In addition to the benefits of relationship development pointed out in their study, Junco, et al. (2010) were primarily focused on student engagement through the academic use of Twitter. They found implications that the use of this social media channel improved contact between students, promoted relation outside material to class discussions, allowed for prompt feedback, and promoted inclusion. While the study points out that these results were attained through the channel of Twitter, there is a possibility that some may have occurred through regular classroom interaction. Social media did allow for the faculty researchers to more actively engage students than they might have been able to do in the traditional classroom arrangement. If this level of engagement can be attained in the academic environment, it is quite that social engagements such as campus programming or group facilitation might benefit from increased utilization of similar social media resources.

Due to Facebook opening its doors to the rest of the world, its original focus of connecting those in higher education has moved to become less of a priority. To ensure that

Facebook maintains some degree of connection to its roots, the “Facebook in Education” page was created (Trescott, 2009). This page allows for the provision of resources to educators through Facebook. There is a “Courses” application allowing educators to manage student rosters, and manage schedules, “Flashcards” which serves its named purpose, and others available to academics desiring to use them. Several examples of specific school usages include athletics and presidential event sharing, scheduling of virtual office hours, student and alumni event scheduling (Roblyer, McDaniel, Webb, Herman & Witty, 2010), online class discussion boards, and sharing of university resources and information. So, while Facebook may have started letting any and all comers join its user base, there is still a definite enthusiasm for building upon its base in education.

With regard to alumni, Facebook and other channels of social media provide an excellent means for institutions to remain connected to their graduates. Hall (2010) discusses how MBA alumni seek to enhance their connections with fellow graduates in order to keep up with current events, community developments, and their former peers. The establishment of network groups for various schools (business, agriculture, etc.) and class years for alumni present very gainful opportunities for institutions seeking to maintain connections with their graduates.

Identity and relationship construction

The Internet has allowed for students to create virtual extensions of themselves, or an extension of their identity, even a new identity altogether in some cases. When students are constrained to the physical world, they cannot pretend to be something they are not. They are limited to their sex, race, looks, etc. (Goffman, 1959). When given the near unlimited resource of the Internet, identity construction can almost become a sort of mix-and-match of characteristics that one would want to assume, as the only way these items could be discredited or verified would be through physical interaction (Bargh, Fitzsimons, & McKenna, 2002).

Different strategies of identity construction are utilized by students when creating their Facebook profiles. A study on virtual identity creation sets a continuum from explicit to implicit profile creation. It details each of the different points along the continuum as being visual, enumerative and narrative. Those who create a visual self will build their profile through pictures and wall posts, being very superficial and brief. Users of this type will often be more concerned with their outward appearance and what people think in this regard instead of allowing other users and friends to delve into their personal thoughts and ideas (Grasmuck, Martin, & Zhao, 2008).

The second group of people categorized in the study profile themselves through their “cultural self.” These users will utilize the descriptive features of their Facebook profile to identify their different interests relating to music, books, quotes, activities, hobbies and other aspects of their culture. It is often through these listed interests or common groups that new “friends” can be made in the arena of Facebook. While most users as a whole will typically identify some items in each of these “like” or “interest” categories, the enumerative group will go to great lengths to see that their cultural tastes and influences are precisely outlined (Grasmuck, et al., 2008).

A final group identified by the study consists of those users who utilize the “about me” to draw interest from their audience. These users will typically only divulge a minimal amount of information with a draw for others inquisition, posing their personas from a “wouldn’t you like to know” perspective. In some cases, users can be seen somewhere in between each of these nodes along the continuum rather than falling completely into one area (Grasmuck, et al., 2008). Due to the “grey” nature of human interaction, there really is no distinct set of categories to put these varied profiles into, but this study does provide a good scale to rank identity creation. On a point of interest, a valid point examination would be the evolution of one’s profile throughout different

phases in one's life. One would likely move up and down this scale as they proceeded throughout their high school, college and professional lives.

This study continues to evaluate the level of connectedness that users have throughout the social networking site. As a whole, users tended to portray a socially acceptable picture of themselves through their utilization of pictures and comments. In order to legitimize their sociability, users tend to try to extend their "networks" to great lengths, claiming numerous friends both on campus and off campus. Within each user's network, a certain level of privacy was viewed as well. Though minimal, some users went to lengths to see that certain components of their profiles were protected from the general public or the whole of their friend network, saving some pieces for specific individuals only. The far-reaching message of these profiles was that students want to portray a positive image of self through the utilization of Facebook. While there were some who deviated from this, opting for a more bleak portrayal of self, most were insistent on the desirable characteristics of self and a relatively detailed representation of it (Grasmuck, et al, 2008).

Torres, Jones & Renn (2009) point out that rising technologies such as Facebook and other social networking sites create new venues for identity expression. They point out that there are limited quantitative studies that explore the role that these outlets play in the lives of college students. Martinez Aleman and Wartman (2009) find that online identities kept consistent with "in-person" identities yield better congruence with online friendship groups and "real" groups.

Summary and Relationships of Literature Reviewed

The literature review contained in this paper attempts to discern several components of Facebook and how students and institutions interact with it. While each and every case is totally different, the overall trends are quite apparent: college students are using Facebook and other social media extensively. With usage characteristics outlined both prior to and throughout

Facebook's rise to dominance in the social media market, it can be seen that college students have made this website a part of their daily lives; many having done so in a significant manner. With literature suggesting that some students might spend 10% or more of their waking hours interacting with the site, it is possibly impacting their cognitive, socio-cultural, psychological, and identity development processes. Whether this is in a positive or negative influence has yet to be seen because a great many of the college students who have used Facebook since its inception are just now entering the workplace and society in general. The far-reaching connotations of the social media generation have yet to be felt by the world.

On the subject matter of psychological development, the theories of Nevitt Sanford (1967), Arthur Chickering, and Linda Reisser (1993) become quite relevant. Both aspects of Sanford's theory of challenge and support in the college environment can be seen in students' use of Facebook. Facebook can provide a great deal of support in both the social realms and academic realms. Due to the high level of connectedness of today's college students, they are never truly alone. When one might feel isolated or unsupported as a member of a social group, they need simply to log into Facebook and strike up a conversation with one of their friends who comes along. Based on the indications most students will spend in the vicinity of 30 minutes on Facebook per day (Ellison, et al., 2006) and that students tend to hold numbers of friends averaging above 100 (Ellison, et al., 2007), it is more likely than not a student seeking "companionship" even in this remote form, will be able to find it.

Because students can quickly determine the interests of those they are living with through face to face conversation or, more specifically, further research in Facebook, commonality can quickly be established, allowing for students to tailor their conversations or engagement tactics to best suit each of their relationships in the physical world. Because of this ease of engagement, students will typically be able to strike up a conversation with most of their "friends," allowing for the feeling of interest and possible enthusiasm to be felt by the other party. Based upon these

feelings, Facebook can become a valuable support mechanism for its users, allowing them to always remain abreast of each of their friends' situations. And, even if "friends" have only just met; in person or online; these new acquaintances would be able to gauge the amount and type of support needed through a brief analysis of the other's profile or brief interaction with common network connections.

While Facebook may be used as a personal support mechanism, challenges can arise. Though these challenges can often be user imposed, they persist nonetheless. Noting that some users have a network numbering in the thousands, the sheer volume of information that can be amassed from a single day of activity within that network could be staggering. Trying to remain up to date with all of the nodes in such an expansive network could consume much of one's time and efforts of any given day. The user must decide when, how and to what extent they will consume the day's information. At a slightly more specific or localized level, some users will create their own set of micro-management tasks that should be regularly addressed in order to progress. Many users engage in Facebook-based games or other activities that almost require this regular attention (O'Neill, 2011).

Faculty can also utilize Facebook in order to provide challenge and support to their students. As outlined in the literature reviewed, some faculty members at various institutions have started to implement online classroom functions through Facebook, while others will fully utilize the site itself in conjunction with other social media to conduct regular course instruction. This possibility of social media was likely not one foreseen by students at the inception of the site, but it appears it may continue to become a more prevalent use. By utilizing this channel, faculty members can provide a more flexible resource to their students than a completely physical, traditional classroom-based course. It could allow professors to issue assignments and set up schedules and class groups to challenge their students while providing a new avenue for

support through “virtual” office hours or the provision of extra online resources relevant to coursework.

With regard to Chickering and Reisser’s vector-based theory of development, Facebook can likely be seen as an accelerant to several key vectors in the early phases of a student’s development. If looked at from a cyclical perspective, Facebook seems to fit before Chickering and Reisser’s third vector “Moving through autonomy toward interdependence” and becomes fairly irrelevant after the fifth vector: “Establishing identity.” As college students establish a Facebook account, they are likely trying to establish ties with friends who have supported them throughout their high school careers before they are all completely separated by the divergence of interests that college presents. Once at college, they are able to recognize a “freedom from continual and pressing needs for reassurance, affection or approval from others” (Chickering & Reisser, 1993) and realize that they can support themselves through a new type of interconnected network consisting of new, more mature relationships than that of high school. This is likely the reason behind the rapid growth in first-year students’ friend networks evident on Facebook.

Segueing to Chickering and Reisser’s next vector, “Developing mature interpersonal relationships” is quite a logical step for students to make as they move into adulthood. Whereas students in high school or recently removed might have had extremely limited exposure to diverse populations, the college environment readily presents a great deal of new types of people to the student to grow to know and understand. Through the exercise of these new friends and companions, a student is able to decide with whom he is going to build long-lasting relationships. The advent of Facebook allows for students to more closely examine the profiles of their friends and groups to determine with whom they will be more compatible in the long-term, mature level.

Facebook’s impact on students holds true in one final vector of Chickering and Reisser’s theory “Establishing identity.” While one could argue the development of student identities takes

place during the creation of a profile, the development of the students' true identity is something that a profile is likely dependent upon. A student's Facebook profile will not stay the same throughout the duration of a student's career, but instead grows and changes with the student as they move along a path of self-discovery. It is through the assimilation of friends, relationships, activities, experiences, education and other factors that a student truly defines a sense of self that can be reflected both corporally and digitally. It is in this vector, among others, that the cyclical pattern of Chickering and Reisser's developmental process stumbles. As most of the vectors concern processes that are ongoing throughout a student's collegiate or university career and beyond, the development of identity is itself an ongoing, likely never-ending process students will not cease until some point of complete self-actualization.

Perhaps the most pertinent arena Facebook impacts students' lives in the different facets of social development theory. Due to Facebook's nature of being a social networking site that allows users to profile themselves, it is only fitting that Facebook takes a role in student's social identity development. The reviewed literature reveals that most users' profiles accurately and positively represent their respective users. Essentially, students will create an extension of themselves through Facebook, allowing them to exist in two different realms. While the possibility of the scenario in the introduction presents itself, wherein a user would create an alternate identity to live through vicariously, the vast majority will paint as accurate of a picture as they can in order to make this profile extensible and able to reach other possible friends.

Theories of Chavez, et al. (2003) examine how individuals move to develop their own individual concept of diversity. The components of these theories seem conglomerates of cognitive and psychological theories, which can be further applied, to diversity concept development. In a combination of Chickering and Reisser's "moving through autonomy toward interdependence" vector with Perry's dualistic mindset, we can arrive at a point that would be just out of reach of a student at the "unawareness/lack of exposure to the other" dimension. Facebook

might not even be on this student's agenda, but for most of those who have at least limited exposure to the site, they will be able to move into a dualistic, somewhat interdependent frame of mind. As students gain exposure, be it with Facebook or other means of exposure to culture, they are able to step into a more "dualistic awareness" mindset and develop an understanding of differences. When students move to this point, and begin to start the "questioning/self exploration" dimension, Facebook can begin to reveal unforeseen perspectives to the student that would line up with Chickering and Reisser's "establishing identity" vector, which is arguably present throughout all phases of student development. As students begin "risk taking/exploration of otherness" they gain a better understanding of not only the diversity around them, but also their own diversity concept, a component of their identity. As students move into the final dimension of their diversity conceptualization, "integration/validation," they will start to reflect these concepts and ideals in their self-concept, and likely their Facebook profile, as they reach out to others who share similar points of view and interests. Though the empirical evidence is lacking, the combination of other student development theories can help make this dimension-based model of diversity conceptualization more defensible.

While some extensive data sets can outline general trends and patterns in students' identity development through Facebook, each student will be a truly unique case. There are not going to be any carbon copy student profiles on Facebook. Each student will share a unique degree about him or herself and extend their network so far as they choose. They will identify with numerous other members of their networks on some issues but not others. They will consider the points of view of different individuals or the collective ideals of groups to which they claim membership, only to develop their own individualized set of opinions which they will learn to stand by. Students will develop a true sense of what it means to be themselves, or, their identity, with or without the usage of Facebook and its peers. While Facebook seeks to help

students and others with this task, it is up to the individual to utilize the vast amount of resources they have available to develop into the student, or perhaps, the individual they are to become.

CHAPTER III

METHODOLOGIES

Introduction

The applicability of theory to practice in Student Affairs is typically drawn in shades of grey. With a great deal of the generally accepted foundational theory of Chickering and Reisser (1993) starting to show its age, this study seeks to establish ties to one of the most popular modern mediums of relationship development and communication: Facebook.

Design of the Study

This study has been developed to examine the influence of college students' use of social media (primarily Facebook) on the development of their interpersonal relationships. Through the utilization of the Student Development Task and Lifestyle Assessment in tandem with the Facebook Intensity scale, a correlational study will be assembled in order to determine how much and why students use social media as well as gauge their current development of interpersonal relationships.

This study will determine whether there is a connection between students' use of social media and the development of their interpersonal relationships. Due to fact that most student development theory, including Chickering and Riesser's vector based model, was developed during a time period when social media had yet to be developed, theorists were unable to account for any impact that it could have upon student's developmental processes. This study will

explore the possibility of students' interpersonal relationships being impacted by social media use, thus tying social media into student development theory.

Participants

This study surveyed 200 participants from several groups and student organizations across campus after the College of Education Human Subjects research pool (the SONA system) yielded only two completed responses out of six registered respondents over the course of 12 data collection times with the capacity of 25 participants each over the course of two weeks. After the SONA system sample proved inadequate, a convenience sample of students was constructed from an array of different organizations across campus. Due to the ubiquity of social media usage as established in the review of literature, there was little trouble in finding students who were able to adequately complete the survey. The participants were treated in accordance with the guidelines established by the IRB for Human Subjects at Oklahoma State University. Statements of Informed Consent are provided on pages 80 and 81 in appendices.

The sample was constructed through referencing Oklahoma State University's database of student organizations and selecting several organizations which would establish a somewhat "representative" sample of the campus population. The sample consisted of 32 completed responses from fraternity members from Pi Kappa Alpha, with approximately 40 present during survey administration and 75 registered members (80 percent present response, 43 percent overall group response); 31 completed responses from sorority members from Alpha Delta Pi, with approximately 60 present during survey administration and 158 registered members (52 percent present response, 19 percent overall group response); 79 completed responses from students from Residence Hall Associations, with approximately 90 present with approximately 100 registered members (88 percent present response, 79 percent overall group response); 17 completed responses from The Off-Campus Student Organization, with 17 present during survey

administration and 19 registered members (100 percent present response, 89 percent overall group response); 27 completed responses from the African American Student Organization, with approximately 45 present during survey administration and 31 registered members (60 percent present response, overall group size smaller than present response); six completed responses from students from a graduate course in higher education of eight present and nine registered students in the class (75 percent present response, 66 percent overall group response); six responses were solicited by personal interaction with student staff members with a 100 percent response rate, and the two completed responses from previously outlined participants from the SONA system. Overall approximate response rate for those present during survey administration was 75 percent (200/268). Any approximations are due to constantly variable reported membership over the course of the semester or variable recorded attendance at meetings.

Of this sample, there were 91 males and 109 females; a mean age of 21 with a standard deviation of 2.7 years; 75 freshman, 43 sophomores, 47 juniors, 19 seniors, and 15 other; 119 lived on campus, 1 at home with parents, 3 at home with spouse or spouse equivalent, 9 in on campus apartment, trailer or house (not with parents), 29 in off campus apartment, trailer or house (not with parents), and 37 in fraternity/sorority house; 35 were black or African American, 3 Hispanic, Latino, Latina or Mexican-American, 4 Asian or Pacific Islander, 8 Native American, 141 white, Caucasian, or European, and 6 bi-racial or multicultural and 2 other.

Materials

The surveys provided to participants will be divided up into three portions. The first portion will be the questions from the SDTLA Mature Interpersonal Relationship Task. This portion of the survey consists of 47 questions addressing two subtasks: Peer relationships and tolerance. The peer relationships subtask examines the quality of each participant's peer relationships, while the tolerance subtask questions the level of tolerance that each participant has

for those with different characteristics (race, background, beliefs, cultures, appearance, etc.) around them. Survey items are divided into several different types. The first segment is demographic information, the second is a series of true false questions, the third and fourth are four-point scales, and the fifth and final segment provides multiple-choice responses for the participants. The assessment is “composed of statements shown to be typical of some student and designed to collect information concerning students’ attitudes, feelings, attitudes, aspirations and relationships.” It is “designed to help students learn more about themselves and for colleges to learn how to assist students more effectively” (Winston, 1999).

Another scale will consist of six five-point Likert-scaled items that were created by the author to bridge the difference between the Facebook Intensity Scale and the SDTLA Interpersonal Relationship Task Items. These questions will address participants’ usage of social media with respect to their interpersonal relationships (See page 82-84 of appendices). The data resultant from these questions will be used for future research on the subject matter by the author.

Participants will also complete Facebook Intensity Scale, which will “measure the frequency and duration, incorporating emotional connectedness to the site and its integration into individuals’ daily activities” (Ellison, et al, 2007). This portion of the survey will consist of six questions with responses on a five-point Likert scale ranging from strongly agree to strongly disagree. The seventh and eighth questions will be a closed-ended question on an ordinal scale to determine how many “friends” each participant has on Facebook and how much time each participant spends daily on Facebook, respectively. The overall Facebook intensity score is found by computing the mean of all items on the scale. Once this mean is computed it will be compared to the existing statistics found by Ellison, et al (2007).

The reliability information for the SDTLA is broken down to reveal two different sources of error: test-retest and internal consistency. In prior testing, the SDTLA was administered to

three classes of students at two different institutions once, then, four weeks later, without intervention, administered again. The correlations cluster around .8 and were statistically significant at $p < .01$, leading the authors to believe that the SDTLA has adequate temporal stability. The second reliability test was internal consistency, which reported Alpha coefficients ranging from .62 to .88 with a sample of 1822 students enrolled at 32 colleges in the US and Canada during the fall and spring of 1994-1995 and the spring of 1996 (Winston, Miller, & Cooper, 1999). The validity data specifically for the Mature Interpersonal Relationships Task and Subtasks was correlated with the total score for the Multi-group Ethnic Identity Measure (MGEIM) (Phinny, 1992) and one of its subscales Other Group. The correlations are listed in the SDTLA Technical Manual (Winston, et al., 1999).

Procedure

The data was collected through the administration of a survey consisting of 61 items. The surveys were administered under normal testing procedures to several groups of participants in order to be efficient. Participants were each given an instructional packet which included the statement of informed consent and question statements as well as a Scantron answer sheet on which to provide their responses to the questions statements. Students were allowed adequate time to complete the assessment.

Once enough responses (200) were collected, the resultant surveys and answer sheets were mailed to the Appalachian State University Office of Testing Services where the Managing Interpersonal Relationships Task will be scored and compiled into resultant Excel and SPSS data sheets for further interpretation. The additional items from the Facebook Intensity Scale and author were also scored by the office of testing but not assimilated into their banks of data.

Statistics to be measured

In order to answer the research question for this study, several analyses will be conducted. First, a Pearson r will analyze the correlation between Facebook use (determined by the Facebook Intensity Scale) and participants' development of interpersonal relationships (determined by the SDTLA MIR Task). To compare the differences in the sex of participants, second and third Pearson r will be drawn for males and females, respectively. Finally, a two way ANOVA will be run to determine the differences in the development of interpersonal relationships (dependent variable) based on sex and high and low Facebook use intensity (independent variables).

CHAPTER IV

RESULTS

Introduction

The following chapter will discuss the results of the designated methodologies outlined in the previous chapter. This chapter will begin with an overview of the exceptions made to the collected data. The research questions will be addressed through the calculation of the aforementioned descriptive statistics and the provision of necessary results. These results will be examined more thoroughly in the discussion chapter, where they will be compared and contrasted with each other and the information presented in the review of relevant literature.

Exceptions

Per specifications from the SDTLA Technical Manual (Winston, et al., 1999), stating that scores above 3 do not accurately describe the student, one respondent was removed from the pool due to a high Response Bias score (5). This indicated that the respondent was attempting to portray himself or herself in an unrealistically favorable way. All calculations in this section will not take into account the responses from this respondent and thus the sample was n=199.

Research question 1: Correlation of SDTLA MIR Task to FBI

The first question to be addressed is: Does Facebook usage impact college students' development of mature interpersonal relationships? This question was addressed through the correlation of the Student Development Task and Lifestyle Assessment Mature Interpersonal Relationships task to the Facebook Intensity Scale. The resultant calculation is shown below in Table 4.1.

Table 4.1 Correlations

		FBI_Mean	MIR_Raw
FBI_Mean	Pearson Correlation	1	-.150*
	Sig. (2-tailed)		.038
	N	192	191
MIR_Raw	Pearson Correlation	-.150*	1
	Sig. (2-tailed)	.038	
	N	191	198

*. Correlation is significant at the 0.05 level (2-tailed).

As is evidenced by the calculations performed in PASW Statistics, there is a small, but significant negative correlation between the mature interpersonal relationships and the Facebook use intensity of the sample on the order of -.150 which is significant at the .05 level with a p-value of .038. This indicates that as Facebook use intensity increases, the development of mature interpersonal relationships lessens. The r^2 value for this correlation is .0225 which indicates that 2.25 percent of the difference in interpersonal relationship development explained by Facebook use.

Another correlation was run in order to ensure that the conversion of continuous variables (Time on Facebook and friends on Facebook) into categorical variables did not interfere with results of the overall correlation. Table 4.2 (below) illustrates the correlation between the FBI scale and the MIR Task with Time on Facebook and friends on Facebook taken out of the

calculation. The results of the correlation are very similar, yielding a correlation coefficient of -.147 and which is still significant (.043) at the .05 level, but yields an even lower r^2 of .216 indicating that 2.16 percent of the difference in interpersonal relationship development is explained due to Facebook use.

Table 4.2 Correlations

		Mean FBI without Continuous variables	MIR Raw
Mean FBI without Continuous variables	Pearson Correlation	1	-.147*
	Sig. (2-tailed)		.043
	N	192	191
MIR Raw	Pearson Correlation	-.147*	1
	Sig. (2-tailed)	.043	
	N	191	198

*. Correlation is significant at the 0.05 level (2-tailed).

When measuring the correlation between the peer relationships task of the Mature Interpersonal Relationships Task with the Facebook Intensity scale, a stronger relationship is evident, where $r = -.244$, $p = .01$ (see Table 4.3). The peer relationships subtask measures relationships with peers that are open, honest, and trusting; such relationships reflect a balance between dependence and self-assured independence. Under this assumption the r^2 value is .0595, indicating that approximately 6 percent of variance in peer relationships is explained by Facebook use. This is a small percentage, but still significant, and we reject the null hypothesis because there is a significant correlation.

Table 4.3 Correlations

		FBI_Mean	PR Raw
FBI_Mean	Pearson Correlation	1	-.244**
	Sig. (2-tailed)		.001
	N	192	190
PR Raw	Pearson Correlation	-.244**	1
	Sig. (2-tailed)	.001	
	N	190	197

** . Correlation is significant at the 0.01 level (2-tailed).

Research question 1a: Correlation of MIR and FBI, Females vs Males

The second part of the first research question is: Is there a difference in the impact of Facebook use on the development of mature interpersonal relationships between females and males? Based on the results (Table 4.4), where the p-value was .217 and correlation was -.121, there was no significant correlation between Facebook use and Females' development of mature interpersonal relationships. When the correlation was computed including only the peer relationships component of the MIR task (Table 4.5), there was a significant; $p = .01$; yet small correlation; $r = -.244$; between Facebook use intensity and the development of peer relationships for females.

Table 4.4 Female Correlations

		MIR Raw	Mean of FBI
MIR Raw	Pearson Correlation	1	-.121
	Sig. (2-tailed)		.217
	N	109	105
Mean of FBI	Pearson Correlation	-.121	1
	Sig. (2-tailed)	.217	
	N	105	105

Table 4.5 Female Correlations

		Mean of FBI	Peer Relationships Raw Score
Mean of FBI	Pearson Correlation	1	-.234*
	Sig. (2-tailed)		.017
	N	105	104
Peer Relationships Raw Score	Pearson Correlation	-.234*	1
	Sig. (2-tailed)	.017	
	N	104	108

*. Correlation is significant at the 0.05 level (2-tailed).

The same held true with males (Table 4.6). With a p-value of .066, the correlation of -.199 was not significant at the .05 level. In both instances, we fail to reject the null hypothesis that there is no significant difference in the correlation between Facebook use and mature interpersonal relationships between females and males. Similar to females, when only the peer relationships subtask is considered (Table 4.7), the correlation becomes significant at the .05 level, but still remains small at $r = -.268$.

Table 4.6 Male Correlations

		MIR Raw	Mean of FBI
MIR Raw	Pearson Correlation	1	-.199
	Sig. (2-tailed)		.066
	N	89	86
Mean of FBI	Pearson Correlation	-.199	1
	Sig. (2-tailed)	.066	
	N	86	87

Table 4.7 Male Correlations

		Mean of FBI	Peer Relationships Raw Score
Mean of FBI	Pearson Correlation	1	-.268*
	Sig. (2-tailed)		.013
	N	87	86
Peer Relationships Raw Score	Pearson Correlation	-.268*	1
	Sig. (2-tailed)	.013	
	N	86	89

*. Correlation is significant at the 0.05 level (2-tailed).

Research question 2: ANOVA test between Sex and “Light” and “Heavy” users

The third research question is: Do sex or “heavy” or “light” Facebook use impact the development of interpersonal relationships? Based on the respondents’ provided information, a total of 191 of the total sample completed the FBI scale for analysis. Of this, the top 25 percent of users (N=51), having a mean of 3.7558 and the bottom 25 percent of users (N=48) produced a mean score of 3.5055 (Table 4.8). The middle 50 percent of users amounted to N=92 and were not included for any of these statistics. Based on the comparison of the effects of sex and “heavy” and “light” usage of Facebook on the development of mature interpersonal relationships (Table 4.9), a significant difference emerged for “heavy” and “light” Facebook usage where $F(1, 99) = 6.867, p < .01$ a marginally significant difference emerged for sex $F(1,99) = 3.805, p < .054$. There was no interaction between these two independent variables ($p > .05$).

Table 4.8 Descriptive Statistics

Dependent Variable: Mature Interpersonal Relationships Task Raw Score

Sex	High and Low, no middle	Mean	Std. Deviation	N
Male	Low	3.7021	.52884	23
	High	3.3000	.68279	18
	Total	3.5256	.62670	41
Female	Low	3.7999	.44473	28
	High	3.6288	.51265	30
	Total	3.7114	.48460	58
Total	Low	3.7558	.48195	51
	High	3.5055	.59721	48
	Total	3.6344	.55260	99

Table 4.9 Tests of Between-Subjects Effects

Dependent Variable: Mature Interpersonal Relationships Task Raw Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.886 ^a	3	.962	3.380	.021
Intercept	1238.977	1	1238.977	4352.943	.000
sex	1.083	1	1.083	3.805	.054
high_low	1.955	1	1.955	6.867	.010
sex * high_low	.317	1	.317	1.114	.294
Error	27.040	95	.285		
Total	1337.639	99			
Corrected Total	29.926	98			

a. R Squared = .096 (Adjusted R Squared = .068)

Calculating Cohen’s *d* from the descriptive statistics (Table 4.8) determines that the effect size for each of these different sources provides a medium effect of .46 for “heavy” and “light” Facebook usage and a medium to low effect of .332 for sex, affirming that both intensity of Facebook use and sex have an important role in the development of mature interpersonal relationships. In both cases, we are able to reject the null hypothesis, finding that “heavy” Facebook use yields lower scores in the MIR task and “lighter” scores yield higher MIR scores.

Other Results

Based on N=184 respondents, the mean amount of time spent on Facebook was found to be larger than other reports (Ellison, et al., 2007, Pempek, et al., 2009, & Kujath, 2011) had indicated. A mean of 2.36 where 1=0-30 minutes, 2=31 minutes to 1 hour, 3= 1-2 hours, 4=2-3 hours, and 5=3 or more hours, indicates the possibility that respondents may be spending over an hour on Facebook per day. The results are positively skewed with a value of .584. However, taking a continuous variable like time and placing it on a categorical scale might account for this.

Based on N=190 respondents, the number of friends each respondent reported was found to be “400 or more.” The mean of 4.22 indicates that on average, students have more than 200-400 friends with a majority (105) indicating they had 400 or more. These results are also skewed with a value of -1.488. The same considerations of continuous vs. categorical variables must be taken into consideration with these results.

While not relating to either of the scales being computed, N=194 respondents indicated they generally did not use Facebook to find new friends with a mean of 2.4 on a 5 point, “strongly disagree” to “strongly agree” scale.

CHAPTER V

DISCUSSION

Introduction

The purpose of this study was to determine whether or not there was an impact on college students' development of mature interpersonal relationships due to students' use of Facebook. This study analyzed several different components of this impact including the overall correlation between Facebook use and the development of mature interpersonal relationships, the differences in this correlation between males and females, and the differences between the development of mature interpersonal relationships of both "heavy" and "light" users of Facebook.

The following chapter contains the discussion of the results chapter as it relates to the review of relevant literature. Based on the connections made between the content of these two chapters, inferences will be drawn as to the implications that Facebook and social media use might have on the development of interpersonal relationships as well as the actions that could be taken on behalf of institutions and their Student Affairs divisions to address these trends.

Limitations

This study's results were primarily based upon a convenience sample constructed at a large public institution. While this convenience sample was intentionally constructed to provide a fairly comprehensive snapshot of the Oklahoma State University student body, it was,

nonetheless, a convenience sample. Results are not causal, but only causal-comparative, and should be interpreted with this in mind. While the SDTLA is a proven instrument, it originated in 1999 which was an era before the advent of social media. The Facebook Intensity Scale is also a relatively new instrument with its own set of limitations, including, but not limited to categorical variable in place of continuous variables and a quickly-evolving subject (Facebook) which it is evaluating. Future lines of research should seek to utilize a larger number of subjects from research subject pools at a wide variety of institutions and institutional types to provide a more comprehensive perspective on the subject matter.

Discussion of results of Research Question 1

Based on the resultant data from the correlation of Facebook intensity and the development of mature interpersonal relationships revealing that there is a small but significant negative correlation between Facebook use and interpersonal relationships, we can infer that those who more intensely use Facebook will not have the quality of interpersonal relationships of someone who does not use Facebook so intensely, particularly when it comes to peer relationships. This is likely due to the amount of investment that students have in their online networks rather than their face to face networks. However, the literature states that most relationships on Facebook are also represented in the “real world”, with Facebook serving as a supplementary tool to better understand the individual or network with them. If there had been a higher correlation coefficient, it would likely raise some cause for greater concern about whether Facebook has a highly negative influence on the quality of college students peer relationships, however, the correlation ranges between $-.147$ to $-.150$ when the entire Mature Interpersonal Relationships Task is taken into consideration up to $-.244$ when only the Peer Relationships Subtask is considered.

As is evidenced in literature and confirmed by the results, increased Facebook intensity yields a lesser developed set of mature interpersonal relationships. According to Baym, et al. (2004), the majority (64 percent) of interpersonal interactions took place in the face-to-face medium, with only a small percentage (16.1 percent) occurring on the internet. And of these interactions, email, chat and instant messaging were the primary forms of communication, with no indication of social networking sites. Based on literature provided by Hicks (2010), and Ellison, et al. (2007), and corroborated by the present results, it appears that Facebook might be filling in some of the space that used to be occupied by email, chat and instant messaging. It would be interesting to note the responses to a similar Baym, et al. study. It is quite possible that the sheer volume of interactions would have increased dramatically, as students' networks have expanded, the channels of communication have opened up to include smart phones, more portable computers like netbooks and tablets, social networking sites and more, and the ability to instantly connect with multiple friends or peers simultaneously has arrived. This higher number of interactions is also likely seeing a shift to more online services as well. Due to the rapidity with which online interactions can take place, the volume of these interactions will probably outweigh the face-to-face interactions indicated in prior research, whereas "face-to-face" interactions held the majority of interactions in the past.

Perhaps Chickering and Reisser's "interpersonal development" should be redefined to take into consideration the development of new communication channels. In 1993, the last revision to this model of student development, Facebook and its ilk were probably only the notions of grandeur by internet developers. The internet itself was still in its infancy. Web 2.0 had not even been born. While Mature interpersonal relationships show a negative trend when correlated with increased use intensity of Facebook, perhaps this is not a bad thing. Hicks's (2010) research indicates that students are integrating these new communication channels into their routines, and the results confirm this. Rather than viewing Facebook's impact on the

development of mature interpersonal relationships as a negative thing, it may be pertinent to look at Facebook's integration into students' lives as an evolutionary process in their development of interpersonal relationships.

Discussion of Results of Research Question 1a

Based on the provision of the SDTLA technical manual that the normative sample of women scored higher on all tasks of the SDTLA save for Salubrious Lifestyle (which was not taken into consideration for this study), it is important to make this consideration when interpreting the results of the comparison of correlations between males and females. Based on the results from the first research question, there was a small, but significant negative correlation between Facebook use and the development of mature interpersonal relationships. When this group of participants is broken down into groups of females and males, there was not a significant correlation in either group. There is a possibility that the lack of any correlation in either group was due to sample size (females $N=105$ and males $N=86$) being too small. However, because the overall correlation found in research question 1 was so small and only significant at the .05 level, there is good reason to believe that the lack of correlation in each group had a good deal to do with that. It is pertinent to note that when the correlation was broken down to the peer relationship subtask of the MIR task, correlations more similar to the overall peer relationships correlation arose for each of the separate female and male groups. These results lend themselves to the possibility that Facebook use intensity has more to do with peer relationships than it does with mature personal relationships, which makes sense. Seeing that "heavier" Facebook users have less-developed peer relationships than "lighter" users suggests that these "lighter" users may spend more time with their peers or be more invested in their peers than they are with their online relationships.

Future research should seek to establish a larger sample size overall to determine if the overall correlation remains so subtly significant as well as determining if the lack of correlation among small samples of females and males remains consistent. If this is the case, it may be safe to assume that the process of integrating Facebook into college students' interpersonal developmental processes is taking place. While this process is occurring and it may be cause for the small but significant negative correlation, the correlation is small, and Facebook use intensity only accounts for only about two to three percent of the development of mature interpersonal relationships and only about six percent of peer relationship development.

Discussion of Results of Research Question 2

When examining the effect size differences between the influences of sex vs. the influence of “heavy” and “light” Facebook usage one can see that “heavy” and “light” Facebook usage is associated with greater developmental difference than is sex. This implication is sensible, as mature interpersonal relationships of “heavy” users of Facebook, those with FBI scores of 4.25 to 5, significantly differ from the mature interpersonal relationships of “light” users, those with FBI scores of 1 to 2.75, falling in line with trends established in the discussion of research question 1. When a user has a higher intensity rating for their use of Facebook, they are likely pouring more time and energy into the development of their online identity and relationships rather than their “real world” relationships or “face-to-face” communication. The significant difference in the development of mature interpersonal relationships of these two groups of users can likely be traced back to the investment they have in their respective networks. Whereas “heavy” users of Facebook may more often address the development of their interpersonal relationships through the utilization of the Facebook channel rather than “real world” interaction, the “light” users appear to be less prone to do so.

The SDTLA technical manual (Winston, et al., 1999) points out that females typically outscore men on both subtasks composing the Mature Interpersonal Relationships Task, the differences between those developments appear to remain fairly consistent, meaning that rate of females' development of interpersonal relationships is not greater than males, they simply remain slightly above those of males throughout their college experience.

The results of this study indicate the weight of use will have a more significant indication on interpersonal relationship development than does sex. If a "light" user of Facebook spends less time engaging with their peers through Facebook, regardless of their sex, this likely indicates that they do not have as substantial relationships as would a "heavy" user, regardless of sex. With regard to sex, while males may not have the mature interpersonal relationships that females do, these differences remain fairly constant. Also, a student cannot change their sex, so this figure will remain somewhat constant. However, a student can change their level of Facebook intensity, which might indicate a desire to utilize Facebook as a channel of communication and subsequently increase their development of mature interpersonal relationships. Students will likely not make the conscious decision to "develop their mature interpersonal relationships;" however, their increased (or decreased) Facebook usage intensity is shown to yield a difference in the development of mature interpersonal relationships.

The outcomes of these statistics do point out that there is a difference between heavy and light users in terms of their development of mature interpersonal relationships. However, by utilizing the channel of Facebook, "heavy" users are still working to develop their interpersonal relationships; it is just a different type of interaction with their network. Rather than utilizing "face-to-face" means of interaction, "heavy" users are interacting by sending messages, chatting, posting pictures or status updates, and other types of communication through Facebook. This may not be developing interpersonal relationships along the same lines as indicated by Chickering and Reisser, but as stated earlier, in 1993 social media was irrelevant. What is made

relevant by both reviewed literature (Ellison, et al., 2008; Stutzman, 2006; Pempek, et al., 2009) and the results of this study is that almost *every student* is using Facebook. Whether they are using it heavily or simply using it to catch up with old friends on a weekly basis, it shows signs of being integrated into students' everyday routine.

Broken down more simply, a student who uses Facebook more intensely will likely have less well developed relationships because they are more invested in their online relationships rather than those in the "real world." Conversely, students using Facebook less intensely will have more well-developed mature interpersonal relationships because they will have additional time and personal resources to devote to their "real world" relationships. This delves into the idea of social capital introduced in the review of literature by Ellison, et al. (2007) and Coleman (1988).

Students who are part of networks or communities with high degrees of social capital will have much more well-developed and rewarding relationships and those communities will function at a much higher level than those with lower social capital. While "traditional" forms of social capital have been on the noted decline, possibly paralleling the correlation between mature interpersonal relationships or peer relationships and Facebook use, Helliwell & Putnam (2004) suggest that social networking sites have provided a future avenue for the development of social capital, further reinforcing the likelihood of students' integration of Facebook and other social media channels into their routines. One of the possible reasons for the decline of mature interpersonal relationship development is the MIR task of the SDTLA being unable to account for relationship development taking place online due to the lack of social networking sites in 1999. This decline may not actually be a decline, but instead, likely part of a transition being made to include social networking through social media, which is not yet accounted for by instruments such as the SDTLA. The connection between Facebook and student routines is perhaps one of the most significant implications drawn from this study. "Traditional" social capital may be in

decline, but “modern” social capital is likely to be evolving as students exercise relationship development through channels of social networking sites like Facebook as well as other social media outlets.

Discussion of Other Results

The removal of the continuous variables which had been categorized did not greatly effect the overall correlation, which is interesting because of the skewness of each of these factors. However, because the number of Facebook friends was positively skewed and the amount of time spent on Facebook was negatively skewed, they likely balanced each other out when included in the scale, accounting for the minimal difference upon their inclusion. In future research utilizing instruments of this nature, it would be pertinent to keep each of these variables continuous rather than categorizing them. This would provide a better perspective on the actual time of use of Facebook and the number of friends on a users profile.

In looking at the Facebook Intensity Scale, and its time of origin: 2007, it is quite possible that the rate of growth in technology and the Facebook user base could account for the “dated” nature of some of the numbers contained within this instrument. In 2007, Facebook had less than 100 million users (Phillips, 2007) and had just started to expand outside of the educational market. Today, Facebook is a global corporation with over 500 million users (Zuckerberg, 2010), with some saying that number might be closer to 600-650 million (Cohen, 2011). The network reaches far beyond that of its 2007 embodiment, reaching friends, family, companies, businesses and many more, whereas the networks of many users in 2007 only contained schoolmates. Perhaps a more pertinent question to ask to keep the values somewhat consistent would be “how many Facebook friends do you have that are in college?” This way, users’ external networks of family members and businesses would be excluded. Either way, this item is due for a drastic overhaul in future research.

Much of the same can likely be said for the amount of time spent on Facebook. With more users and more expansive networks, users are going to spend more time connecting with each other through the channel of Facebook. While the results indicate that users may spend well over an hour on Facebook, it is a stretch to see that this amount of time would grow twofold (a half-hour to over one hour) since 2009, when use had only increased by 50 percent (20 minutes (Ellison, et al.) to 30 minutes (Pempek, et al.)) between 2007 and 2009. Yet with the five-to-six-fold growth in network size as well as the incorporation of a wealth of new features, the results reported by respondents seem to make complete sense. For respondents who indicate that they spend an hour or more on Facebook it was interesting to note that this was only impacting their development of mature interpersonal relationships two to three percent and their peer relationships by about six percent.

General Discussion and Implications for Practice

This study sought to tie together one of the foundational student development theories with one of the rising technologies in the world. The results reinforce a good deal of the reviewed literature. Facebook has grown from an educational network for students at elite institutions to an all-encompassing network of 500-650 million users. Throughout this period of growth, Facebook has engulfed over 90 percent of college students (Ellison, et al., 2008; Stutzman, 2006; Pempek, et al., 2009) who seem to be integrating its many features into their daily routines (Hicks, 2010). This phenomenon presents quite an interesting situation for Practitioners of Student Affairs and student development theory. Some of the critical tenants of many practices and theories are based on developmental processes which, for decades, have taken place in the “real world.” The development of interpersonal relationships, of identity, and in some cases even purpose, vocational or otherwise, is moving from the analog world to the digital frontier.

With the evolution of the internet into a service that not only allows for the provision of information to users from various sources, but allows users to share their own information, opinions, and other forms of UGC, the development of social networks like Facebook enable users to connect with each other to share their life experiences and related content. Rather than sharing physical photo albums or scrapbooks from spring break trips or study abroad endeavors, students are now posting images to Facebook, where they can instantly receive feedback from their friends no matter where they may be. Students can now join hundreds of groups that represent their interests. While a number of them may have real-world representations, such as the institution's engineering team or Latin dance club, many are simply interest groups.

The model for the development of mature interpersonal relationships; when broken down into its tolerance and capacity of intimacy components; can be served by various services of Facebook. Tolerance can be seen in the form of privacy controls. Because users have control to display as much or as little about them as they choose, they can either allow others into their digital lives, keep them at arms length, or shut them out altogether. These settings make for varying degrees of freedom within a user's network, while some may tolerate any actions of their closest friends, they may distance themselves from acquaintances they may not know. This presents the secondary aspect of interpersonal relationship development: capacity for intimacy. Depending on what is or is not shared as well as the degree of investment in a digital network over a real world network can determine the level of intimacy that can be developed by students on Facebook. While intimacy means a number of things, it can likely only be developed to a point through Facebook without being supplemented by real world interaction. Relationships can be forged or broken on Facebook, they can be reinforced or broken down based on shared content, wall posts or relationship status.

This study determined that one channel of social media; Facebook; does appear to have some influence on students' development: along the lines of Chickering and Reisser's fourth

vector of mature interpersonal relationships. While the results displayed only a small, but significant, negative correlation between Facebook use intensity and the development of mature interpersonal relationships, it is interesting to note that increased Facebook use yields a significant difference in the development of mature interpersonal relationships, with a more significant effect on this determination than the sex of the student. It will be interesting to note the continued development of Facebook and other social media channels and their new features which are brought online to continue to engage users. Following the trend of college students' Facebook use intensity alone will also be interesting, seeing what types of these new channels and features become integrated into students' daily routines.

While this study did not immediately address students' development of identity, there is a good deal of theory and relevant literature available on the various identity development processes that go on during college students academic career. As stated by Bargh, et al. (2002) and Torres, et al. (2009), the development of identity is entering a new frontier where users are presented with the near-boundless opportunities for profile creation on the internet. While Facebook and other social networking sites only have so many blanks to fill in about identifying characteristics, this does not mean there are other sites or communication channels that allow users to fully flesh out their identity to their desired specifications. Users can mold and shape their identity and their network as much as they see fit, providing as much or as little information as they want. While Martinez-Aleman and Wartman (2009) find that identity congruence between online and real world identities yield better overall relationships, this does not restrict users to abiding by that guidance. The correlation between online identity development and real life identity development would be an interesting analysis to bring into future research along these lines.

Purpose was another vector of Chickering and Reisser's model of student development that was not addressed in this study, yet maintains relevance in the world of social media. While

Facebook does not necessarily directly lend itself to the development of vocational purpose, it may indirectly serve students' development of purpose by allowing them to both build and maintain a network of friends who may assist in the decision-making processes associated with pursuing a vocational choice. Other social networking services such as LinkedIn are designed for professionals to connect with each to facilitate professional development, rather than the social networking aspects that sites like Facebook provide. While it is not out of the realm of possibility for Facebook to start integrating features that might facilitate the construction of more professional networks, Facebook is likely more focused in other domains.

The mission of most Student Affairs practitioners and their respective divisions is to provide support for the development of their students in realms outside of academia. Traditionally, this has been in the residence halls, in student organizations, in the recreation center or elsewhere. Because Facebook has provided a new arena for students to explore and develop within, this is where student affairs should seek to go. Practitioners and divisions need to strive to keep up with the advances in technology now more than ever, for if they are left too far behind, they run the risk of losing touch with their students and those students' respective development. Student Affairs divisions need to develop strategic plans for engaging with the students they serve where the students are: Facebook and other social media platforms. It will not be enough for the various student services to establish a presence on various social media channels, nor will it be enough for this presence to simply post updates about events and services available to students. Departments will have to intentionally plan to extend their services to these social media portals in order to engage their students, for without this engagement, the effort is lost. Facebook presents what appears to be a viable platform for student engagement through the development of applications and other services. Hopefully, departments are able to take advantage of this platform to reach their students and maintain interpersonal, identity and purpose

development through the proper utilization of a channel that presented a possible detriment to these processes in the past.

Implications for Future Research

This study provides a number of indications for future research. First of all, while it appears that the majority of mature interpersonal relationship development takes place outside of Facebook; with r^2 's indicating less than 6 percent of development is due to use intensity; it is quite possibly time to start taking this effect into account when considering student development. Chickering & Reisser (1993) and many other foundational theorists had few indications that the internet and subsequently social media would have the impact that it is having on students' lives. As students continue to change and evolve, the theories that describe them should be molded to include considerations for these new facets of students' lives.

While the SDTLA provided a good basis for measurement of students' development of mature interpersonal relationships, it could use some amendments or other changes to be brought into the 21st century of the internet age and millennial students. There are a number of items within the survey that were often questioned by respondents as to their necessity or validity related to their lives, which indicated to the researcher that some of these changes might need to be made if the SDTLA or a different iteration of its contents are to be used in the future. As pointed out in the discussion of research question 2a, instruments such as the SDTLA should be updated to be able to account for the amount of relationship and social capital development that is taking place through "modern" channels like social media rather than just the "traditional" forms (Helliwell & Putnam, 2004).

Regarding the Facebook Intensity scale, it also provided a useful tool to analyze the Facebook use of college students. However, despite its 2007 inception, the rapid evolution of Facebook and connected technologies has aged it quickly. Perhaps the items that showed their

age the most were those singled out in the “other results” section. While 400 friends might have seemed like a substantial number in 2007, the rapid expansion of Facebook’s network over the past four years has provided students with nearly six times the number of people to connect with. If this instrument were to be used again, both of the continuous variables; Facebook friends and time on Facebook; should be made to remain continuous on the respondents’ surveys to be able to more effectively stratify people who might use Facebook for varying amounts of time or have substantial differences in the extensiveness of their friend networks. As there are significant differences in the development of mature interpersonal relationships between “heavy” and “light” users, it is going to be important that future research can effectively distinguish between the “heavy” and “light” users.

This study’s results indicate that sex seems to be almost a non-issue when analyzing differences in the use of Facebook. However, it is possible that sample size might also play into that conclusion. A larger, more diverse sample from institutions across the country of varying sizes and types might help with clarification on this issue. Resultant correlations also indicate that Facebook use has more substantial relationships with the development of peer relationships rather than mature interpersonal relationships, which include the aspect of tolerance. This should be taken into consideration in future research.

One final consideration for future research would be the inclusion of other social networks or forms of social media. Twitter has been shown to have influence on student engagement both in and beyond the academic setting (Junco, et al., 2010) and some institutions are using LinkedIn to maintain persistent connections with their alumni (Hall, 2010 and Roblyer, McDaniel, Webb, Herman & Witty, 2010). Studies on “social media” or “social networking sites” as a whole should be conducted to analyze how students might compartmentalize different functions to various social media platforms or the intensity of use of varying channels.

Implications for Student Affairs Practitioners

This research poses both opportunities and challenges for Student Affairs professionals and their respective departments or divisions. Because students are using channels like Facebook more intensely, they may not be engaging with the “real world” to the extent that they might have in the past. For Student Affairs, this could mean a change in tactics for engaging with their students, placing additional emphasis on outreach through social media channels to engage with their students. One thing was made abundantly clear during the author’s experience at NASPA 2011: institutions and Student Affairs departments that are still utilizing social media as a channel to disseminate information are doomed to be viewed as an outdated message board (Nester & Daniels, 2011; Stoller, 2011). Institutions and departments should seek to *engage* and *connect* through these channels rather than simply spouting information. If there is no two-way communication occurring, chances are, that information is falling on deaf ears of students. With institutions seeking to cut costs and be more efficient than ever while maintaining effectiveness, using social media as a tool for engagement, education and development might prove to be one of the solutions to this difficult task. Fortunately, social media appears to be *where the students are*, institutions simply need to plug in and take advantage of all of the possibilities availed to them through this ever-evolving channel of communication.

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APPENDICES

Participant Information Sheet for SONA

Project Title: The Effects of Facebook Use on College Student's Interpersonal Development
Investigators: Ryan Masin-B.S.-Primary Investigator, John Foubert, Ph.D-Advisor

Purpose:

This research will gauge your use of Facebook and your current development of interpersonal relationships. You are being asked to participate because you are a college student or graduate student at Oklahoma State University 18 years of age or older and are eligible to participate. The information that will be gathered is related to your Facebook use and your relationships with others.

Procedures:

You will be read a set of instructions on how to complete this survey, asked to complete this survey and then you will be finished.

Risks of Participation:

There are no known risks associated with this project which are greater than those ordinarily encountered in daily life.

Confidentiality:

After completing the survey your survey will be collected as part of a larger number of surveys, which will not be connected to your name in any way; everything will remain completely anonymous. The data will only be reported in aggregate form comparing different groups to one another, not individuals. Because you are not providing your name on the survey, there are no foreseen risks about maintaining your anonymity.

Completed surveys will be stored in a secured apartment unit until the point that 200 completed surveys are collected. At this point, the surveys will be mailed via insured mail to Appalachian State University where they will be scored. The resultant data will be emailed to the primary investigator and stored in a secured apartment on a password protected computer which is only accessible by the primary investigator. This data will be kept for up to a year after the completion of this study.

Compensation:

You will be awarded .5 research credits through the SONA system for the participation in this study.

Contacts:

If you have any questions about this research, please contact Ryan Masin at 405-744-1291 or ryan.masin@okstate.edu. Advisor John Foubert, Ph.D can be reached at 405-744-1480 or john.foubert@okstate.edu. If you have questions regarding your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater OK 74078, 405-744-3377 or irb@okstate.edu

Rights:

Participation in this study is voluntary. You may discontinue completing the survey at any time without reprisal or penalty.

By completing the survey, you are giving your consent to participate.

Participant Information Sheet for Non-SONA

Project Title: The Effects of Facebook Use on College Student's Interpersonal Development
Investigators: Ryan Masin-B.S.-Primary Investigator, John Foubert, Ph.D-Advisor

Purpose:

This research will gauge your use of Facebook and your current development of interpersonal relationships. You are being asked to participate because you are a college student or graduate student at Oklahoma State University 18 years of age or older and are eligible to participate. The information that will be gathered is related to your Facebook use and your relationships with others.

Procedures:

You will be read a set of instructions on how to complete this survey, asked to complete this survey and then you will be finished.

Risks of Participation:

There are no known risks associated with this project which are greater than those ordinarily encountered in daily life.

Confidentiality:

After completing the survey your survey will be collected as part of a larger number of surveys, which will not be connected to your name in any way; everything will remain completely anonymous. The data will only be reported in aggregate form comparing different groups to one another, not individuals. Because you are not providing your name on the survey, there are no foreseen risks about maintaining your anonymity.

Completed surveys will be stored in a secured apartment unit until the point that 200 completed surveys are collected. At this point, the surveys will be mailed via insured mail to Appalachian State University where they will be scored. The resultant data will be emailed to the primary investigator and stored in a secured apartment on a password protected computer which is only accessible by the primary investigator. This data will be kept for up to a year after the completion of this study.

Compensation:

You will receive an entry into a drawing for a \$15 iTunes Gift Card.

Contacts:

If you have any questions about this research, please contact Ryan Masin at 405-744-1291 or ryan.masin@okstate.edu. Advisor John Foubert, Ph.D can be reached at 405-744-1480 or john.foubert@okstate.edu. If you have questions regarding your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater OK 74078, 405-744-3377 or irb@okstate.edu

Rights:

Participation in this study is voluntary. You may discontinue completing the survey at any time without reprisal or penalty.

By completing the survey, you are giving your consent to participate.

The *Student Developmental Task and Lifestyle Assessment* is composed of statements shown to be typical of some students and is designed to collect information concerning college students' activities, feelings, attitudes, aspirations, and relationships. The Assessment is designed to help students learn more about themselves and for colleges to learn how to assist students more effectively. The SDTLA's usefulness depends entirely on the care, honesty, and candor with which students answer the questions.

It will require up to 30 minutes for you to complete this questionnaire.

DIRECTIONS

For each question choose the *one response* that most closely reflects your beliefs, feelings, attitudes, experiences, or interests. Record your responses as directed.

- Consider each statement carefully, but do not spend a great deal of time deliberating on a single statement. Work quickly, but carefully.
- In this questionnaire, "college" is used in a general sense to apply to both two and four year colleges, as well as universities; it refers to all kinds of post-secondary educational institutions.
- If you have no parent, substitute guardian or parent equivalent when responding to items about parent(s).

DEMOGRAPHIC QUESTIONS

Mark your responses where you have been instructed to provide this information. It is crucial that you provide this information.

Sex. Bubble in your sex in the space provided on the scan sheet.

Birth Date. Bubble in the month, day, and year of your birth in the space provided on the scan sheet.

Identification Number. Has been provided by the survey administrator in areas A-J.

For the following questions, please mark your responses in the special codes area K-O.

K. What is your racial or cultural background? (*Select one best response.*)

- 1 = Black or African American
- 2 = Hispanic, Latino/a, or Mexican American
- 3 = Asian American or Pacific Islander
- 4 = Native American/People
- 5 = White or Caucasian/European
- 6 = Bi-racial or multiracial
- 7 = Other

L. What is your academic class standing? (*Select one.*)

- 1 = Freshman (first year)
- 2 = Sophomore (second year)
- 3 = Junior (third year)
- 4 = Senior (fourth year)
- 5 = Other

M. Where do you presently live? (*Select one best response.*)

- 1 = In on-campus residence hall
- 2 = At home with parent(s)
- 3 = At home with spouse/spouse equivalent
- 4 = In on-campus apartment/trailer/house (not with parent or spouse)
- 5 = In off-campus apartment/trailer/house (not with parent or spouse)
- 6 = In fraternity/sorority house

N. Are you an international student? (*Select one.*)

- 1 = No
- 2 = Yes

O. How many semesters have you attended a college or university excluding the current semester? (If 10 or more, select 9.)

Continue to the next page.

PART 1: Statements 1 – 13
Respond to the following statements by selecting either A or B:

A = True
B = False

1. I never regret anything I have done.
2. I have personal habits that are potentially dangerous for my health.
3. I like everyone I know.
4. It's important to me that I be liked by everyone.
5. I would prefer not to room with someone who is from a culture or race different from mine.
6. I never get angry.
7. During the past twelve months, I have acquired a better understanding of what it feels like to be a member of another race.
8. I only attend parties where there are plenty of alcoholic beverages available.
9. I never say things I shouldn't.
10. I never lie.
11. I always take precautions (or abstain) to assure that I will not contract a sexually transmitted disease (STD).
12. Within the past twelve months, I have undertaken an activity intended to improve my understanding of culturally/racially different people.
13. I never get sad.
14. I avoid discussing religion with people who challenge my beliefs, because there is nothing that can change my mind about my beliefs.
15. I'm annoyed when I hear people speaking in a language I don't understand.
16. I pay careful attention to the nutritional value of the foods I eat.
17. I plan my activities to make sure that I have adequate time for sleep.
18. When I wish to be alone, I have difficulty communicating my desire to others in a way that doesn't hurt their feelings.
19. I avoid groups where I would be of the minority race.
20. I limit the quantity of fats in my diet.
21. Because of my friends' urgings, I get involved in things that are not in my best interest.
22. A person's sexual orientation is a crucial factor in determining whether I will attempt to develop a friendship with her/him.
23. I have plenty of energy.
24. It's more important to me that my friends approve of what I do than it is for me to do what I want.
25. I am satisfied with my physical appearance.
26. I feel uncomfortable when I'm around persons whose sexual orientation is different from mine.
27. My weight is maintained at a level appropriate for my height and frame.
28. I try to avoid people who act in unconventional ways.
29. I eat well-balanced, nutritious meals daily.

PART 2: Statements 14 – 35
Respond to the following statements by selecting the appropriate letter:
A = Never (almost never) true of me
B = Seldom true of me
C = Usually true of me
D = Always (almost always) true of me

Continue to the next page.

30. I find it difficult to accept some of the ways my close friends have changed over the past year.
31. I exercise for thirty minutes or more at least three times a week.
32. I don't socialize with people of whom my friends don't approve.
33. I plan my week to make sure that I have sufficient time for physical exercise.
34. I become inebriated from the use of alcohol on weekends.
35. I try to dress so that I will fit in with my friends.
36. Learning to live with students from cultural or racial backgrounds different from mine is an important part of a college education. (*Select best response.*)
- A. Strongly Agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree

PART 3: Statements 37 – 42

Respond to the statements below by selecting one of the following:

- A** = Never
- B** = Seldom
- C** = Sometimes
- D** = Often

37. I wonder what my friends say about me behind my back.
38. I dislike working in groups when there are a significant number of people who are from a race or culture that is different from mine.
39. Within the past three months, I engaged in activities that were dangerous or could be risky to my health.
40. I have used my time in college to experiment with different ways of living or looking at the world.
41. I express my disapproval when I hear others use racial or ethnic slurs or put-downs.

42. In the past six months, I have gone out of my way to meet students who are culturally or racially different from me because I thought there were things I could learn from them.

PART 4: Statements 43 – 47

From the alternatives provided, select the one response that best describes you.

43. After a friend and I have a heated argument, I will . . .
- A. never (almost never) speak to him/her again.
 - B. seldom speak to him/her.
 - C. usually speak to him/her.
 - D. always speak to him/her.
 - E. I never have disagreements with friends.
44. When I have experienced stress or tension this term,
- A. I have most often sought relief by listening to music, reading, or visiting friends.
 - B. I have most often had a few drinks or beers to relax.
 - C. I have most often exercised, worked out, or played a sport.
 - D. I have kept on going and ignored the stress.
 - E. I have had occasions when it became too much to handle and I had to take days off to relax or rest/sleep.
45. When I have heated disagreements with friends about matters such as religion, politics, or philosophy I . . .
- A. am likely to terminate the friendship.
 - B. am bothered by their failure to see my point of view but hide my feelings.
 - C. will express my disagreement, but will not discuss the issue.
 - D. will express my disagreement and am willing to discuss the issue.
 - E. don't talk about controversial matters.

Continue to the next page.

46. I use tobacco products (smoke, chew, or dip),
- Never
 - Once a week or less
 - Several times a week
 - Most days
 - Everyday
47. I have more than one drink (i.e., 1.5 ounces of liquor, 5 ounces of wine, or 12 ounces of beer).
- Never
 - Once a week or less
 - Two to three times a week
 - Most days
 - Everyday

Part 5: Statements 48–53

Respond to the statements by selecting one of the following:

- A** = Strongly Disagree
B = Disagree
C = Neutral
D = Agree
E = Strongly Agree

48. I use Facebook to find new friends
49. I use Facebook to better understand the interests and activities of my friends
50. Facebook accurately displays my relationships with others
51. I use privacy settings to select what parts of my profile I share with others
52. I use Facebook “Lists” to create different levels for friends like “Close Friends,” “Home Town Friends,” “College Friends,” etc.
53. Facebook helps me feel closer to my friends

Part 6: Facebook Intensity (FBI) Statements 54-59

The Facebook Intensity scale is used to measure Facebook usage beyond simple measures of frequency and duration, incorporating emotional connectedness to the site and its integration into individuals’ daily activities.

Respond to the statements by selecting one of the following:

- A** = Strongly Disagree
B = Disagree
C = Neutral
D = Agree
E = Strongly Agree

54. Facebook is part of my everyday activity
55. I am proud to tell people I'm on Facebook
56. Facebook has become part of my daily routine
57. I feel out of touch when I haven't logged onto Facebook for a while
58. I feel I am part of the Facebook community
59. I would be sorry if Facebook shut down
60. Approximately how many TOTAL Facebook friends do you have?
- A** = 25 or less
B = 26-100
C = 101-200
D = 200-400
E = 400 or more
61. In the past week, on average, approximately how much time PER DAY have you spent actively using Facebook?
- A** = 0-30 minutes
B = 31 minutes to 1 hour
C = 1-2 hours
D = 2-3 hours
E = 3 or more hours

END

Oklahoma State University Institutional Review Board

Date: Thursday, February 24, 2011

IRB Application No ED1150

Proposal Title: The Effects of Facebook on College Students' Interpersonal Development

Reviewed and Exempt
Processed as:

Status Recommended by Reviewer(s): Approved Protocol Expires: 2/23/2012

Principal
Investigator(s):

Ryan Masin	John Foubert
114 Smith hall	314 Willard
Stillwater, OK 74078	Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Shelia Kennison, Chair
Institutional Review Board

VITA

Ryan C. Masin

Candidate for the Degree of

Master of Science

Thesis: THE EFFECTS OF FACEBOOK USE ON COLLEGE STUDENTS'
INTERPERSONAL DEVELOPMENT

Major Field: Educational Leadership Studies-College Student Development

Biographical:

Personal Data: Born in Kettering, Ohio on July 14, 1985, the son of Connie and Dale Masin

Education: Graduated from Bethel Local High School, Tipp City, Ohio in May 2004

Completed the requirements for the Master of Science in Educational Leadership Specializing in College Student Development at Oklahoma State University, Stillwater, Oklahoma in May, 2011.

Completed the requirements for the Bachelor of Science in Management Information Systems at Wright State University, Dayton, Ohio in 2009.

Experience: Employed as a university tour guide and RA at Wright State University from 2005-2009, STEP Student Employee at Wright Patterson Air Force Base from 2005-2009, and Residence Director at Oklahoma State University's Department of Housing and Residential Life from 2009 to 2011

Professional Memberships: National Association of Student Personnel Administrators

Name: Ryan Masin

Date of Degree: May, 2011*

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: THE EFFECTS OF FACEBOOK USE ON COLLEGE STUDENTS'
INTERPERSONAL DEVELOPMENT

Pages in Study: 85

Candidate for the Degree of Master of Science

Major Field: Educational Leadership-College Student Development

Scope and Method of Study: This is a quantitative study that analyzes Facebook use intensity, sex, and the development of mature interpersonal relationships of students at Oklahoma State University.

Findings and Conclusions: Correlation analysis yielded small but significant negative relationships between the development of mature interpersonal relationships and Facebook use intensity, with slightly more negative correlations found when only peer relationships were considered. When broken down into females and males, no significant correlations were found unless only peer relationships were considered, in which case both females and males showed negative relationships similar to the entire sample. Two way ANOVA analysis established that both sex and Facebook use intensity have a significant effect on the development of mature interpersonal relationships. Analysis of other results found that respondents are likely spending over an hour on Facebook per day and that the majority of users have "over 400" Facebook friends. The conclusions drawn from these results were that students might be going through an evolutionary process of integrating Facebook and other social media into their routines which cannot be necessarily be accounted for by the somewhat dated (1999) MIR Task. Correlations were negative and small, but still significant, and Facebook use accounted for less than six percent of the development of mature interpersonal relationships. ANOVA analysis shows a significant difference between "heavy" and "light" users, which indicates that students who more intensely use Facebook have less developed mature interpersonal relationships than those who did not. This indicates that Facebook use might have a negative influence on mature interpersonal development. Future research should seek to take more channels of social media into consideration, integrate students' use of the internet and social media into student development theory and update current instruments for better analysis.

ADVISER'S APPROVAL: Dr. John Foubert
