EXAMINING GENDER DIFFERENCES AND RELATIONSHIPS AMONG FACEBOOK
USAGE, PERSONAL IDENTITY, SOCIAL IDENTITY, PERSONAL-EMOTIONAL
ADJUSTMENT AND SOCIAL ADJUSTMENT

by

Elizabeth M Hall
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Committee:

_____   Chair

_____

_____

_____   Program Coordinator

_____   Dean, College of Education
and Human Development

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Examining Gender Differences and Relationships Among Facebook Usage, Personal Identity, Social Identity, Personal-Emotional Adjustment, and Social Adjustment in College Freshmen

A Thesis submitted in partial fulfillment of the requirements for the degree of Master of Science at George Mason University

by

Elizabeth Hall
Bachelor of Science
The College of William & Mary, 2013

Director: Erin Peters-Burton, Professor
College of Education and Human Development

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George Mason University
Fairfax, VA

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ABSTRACT

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FRESHMEN

Elizabeth Hall

George Mason University, 2015

Thesis Director: Dr. Erin Peters-Burton

There is conflicting evidence as to whether or not Facebook relates to characteristics
associated with a positive well-being, particularly when considering gender. The purpose
of this thesis was to explore the relationships among Facebook usage, personal identity,
social identity, personal-emotional adjustment, and social adjustment. Additionally, this
study aimed to explore whether or not the relationships among these variables differed by
gender. A total of 174 freshmen students from 98 different universities participated in an
online survey including a scale for Facebook usage, personal identity, personal-emotional
adjustment and social adjustment. Some of the most notable significant findings include a
positive relationship between Facebook usage and personal identity social identity, and
social adjustment, in the overall sample. These significant relationships present in the

overall findings were also observed in the male sample, whereas social identity, was the

only variable that positively correlated with Facebook

usage in the female sample. Because this study does not establish that Facebook *causes* a

greater sense of personal identity, social identity and social adjustment, ideas for future

research involving moderating factors such as personality were explored. Additionally,

the relationship between social identity and social adjustment was discussed in the

context of Erikson's theory whereas the need for future research regarding other

relationships among the identity and adjustment variables were explored. Overall, this

study provides a basis for research supporting college students using Facebook while

paving a foundation for future studies in the field.

CHAPTER ONE: INTRODUCTION

Introduction

In the fall of 2014, approximately 5.7 million more students enrolled in college than in the year 2000, indicating that the number of students pursuing a post-secondary education is increasing (National Center for Education Statistics, 2014). Additionally as of last fall, Facebook remains by far the most popular social media site, despite the rate of growth in the number of the number of Facebook users leveling off (Pew Research Center, 2014). While the number of Facebook users may not be rapidly increasing, the level of user engagement with the social media platform has increased (Pew Research Center). These findings indicate that the number of students attending college is increasing as well as the level of Facebook activity of both current and new users. Because of these national trends, this study investigated how Facebook may play a role as all of these individuals adjust to college life.

The psychological implications of social media use in impressionable teenagers is still unclear, particularly when considering gender. Part of the reason there are ambiguous findings regarding the benefits and detriments of social media is because of the differing relationships Facebook usage has on variables related to well-being in men compared to women. Due to its popularity, this study used Facebook to further explore these uncertainties related to how various relationships regarding Facebook usage, identity and

adjustment all vary based on gender. Because Facebook was initially designed by college students for college students, it could be inferred that it was intended to help college students become connected to their peers and existing social circles regardless of gender, however, there is conflicting evidence as to whether or not this seems to be the case. The purpose of this study was to explore the relationship among Facebook usage, personal identity, social identity, personal-emotional adjustment, and social adjustment. Additionally, this study aimed to explain any differences among these variables within each gender as well as between each gender.

Overview of Framework

This study was investigated through the lens of Erik Erikson's theory of psychosocial development. Psychosocial development suggests that personality develops in stages (Erikson, 1959). This theory is assumes that social experiences have an effect on lifespan development. Erikson's psychosocial theory of development is known for the idea that each stage of development is affiliated with becoming competent in an area vital to a healthy life (Erikson, 1959; Erikson, 1963; Erikson, 1968). If the individual overcomes the conflict for that stage in life, he or she will exhibit mastery, and if the person fails to establish what is important to development at that stage in life, he or she will feel a sense of inadequacy (Erikson, 1959; Erikson, 1963; Erikson, 1968). This study focused on two stages of Eriksonian development: identity versus role confusion and intimacy versus isolation.

When beginning freshmen year of college, most American students are 17 or 18-years-old. According to Erikson's stages of psychosocial development, most individuals

at this age are encountering the conflict of identity versus role confusion in which they are addressing their need to develop a sense of self (Erikson, 1959; Erikson, 1963; Erikson, 1968). If they are successful in developing a personal identity, they will exhibit confidence, whereas individuals who do not accomplish a secure sense of self will experience role confusion. The stage of development that occurs after Erikson's identity versus role confusion stage is the conflict of intimacy versus isolation, lasting from approximately 19 to 40-years-old. It is summarized by the need to form intimate and loving relationships with other individuals. If the individual does not form such relationships, he or she is predicted to experience loneliness and isolation (Erikson 1959; Erikson, 1963). During freshmen year, many students turn 19-years-old. While Erikson's stages of development do not necessarily occur at these exact ages across the population, his theory suggests that college freshmen are trying to establish a sense of identity in addition to navigating the challenges of developing intimate and meaningful relationships.

Because identity is important to avoid experiencing role confusion, this study includes a measure of personal identity to see whether or not personal identity correlates with the personal-emotional adjustment. Similarly, because of the role interpersonal relationships play in Erikson's intimacy versus isolation stage of development, this study also includes a measure of social identity to see whether or not the variable of social identity correlates with social adjustment. A review of the literature explains how a significant relationship between personal identity and personal-emotional adjustment as

well as a significant relationship between social identity and social adjustment could support Erikson's framework.

Overview of the Literature

Entering college is a stressful experience for young adults due to adjusting to the unfamiliarity of the university environment (Gan, Hu & Zhang, 2010). College freshmen are confronted with the unique challenge of adapting to rigorous academic schedules while living away from home, often for the first time. In addition to these challenges, students are trying to establish new interpersonal relationships while also discovering their individuality. According to Erikson, these challenges are defined by the conflict of identity versus role confusion, and intimacy versus isolation, respectively (Erikson, 1959; Erikson, 1963; Erikson, 1968). These demands require a variety of coping responses, also referred to as adjustments, which vary in effectiveness from one individual to another (Baker & Siryk, 1984). As if adjusting to living on a college campus was not hard enough, students also find that they are immersed in a competitive environment, resulting in newfound failures (Hamm, Perry, Clifton, Chipperfield, & Boese, 2014). These experiences give students who are transitioning from high school into college feelings of perceived uncontrollability, which is particularly detrimental due to the vulnerability that surrounds developmental transitions (Hamm et al., Perry, 1991; Perry, 2003). Adjusting to college is often perceived as a stressor that makes students susceptible to low self-esteem, loneliness, depression, and anxiety substance abuse, and even suicide (Bagge, Lamis, Nadorff & Osman, 2013). These feelings of worthlessness correlate with disinterest in activities and procrastination from commitments, oftentimes resulting in

interpersonal, family, academic, and career problems (Anton & Reed, 1991; Kleinmuntz, 1960; Lasch, 2006). Though negative effects of failing to adjust to college life were recorded long before the Internet and social media, the current study examined whether or not Facebook usage exacerbates in the inability to adequately adjust to college.

Currently, Facebook is the second most visited website in the world after Google and is the world's largest social network. It has an estimated 955 million monthly active users and 552 million daily active users as of June 2012 (Gentile, Twenge, Freeman, & Campbell, 2012). Other reports have found that 94% of teenagers have used Facebook, confirming that it is by far the most popular social networking platform as of May 2013 (Facebook, 2013). Additional sources have found that over 85% of college students have an active Facebook account with an even higher percentage of students having a Facebook account at some point in their lives, or alternative forms of exposure to the Facebook platform (Hurt et al., 2012). Because of these statistics, Facebook, as opposed to another social network, was selected for this study.

With popularity comes great responsibility and because of the visibility Facebook has in the lives of young adults, it is important to understand the potential negative implications of Facebook usage. Because the transition to college provides a host of new challenges, demands, and stressors, it is unsurprising that undergraduate students are particularly vulnerable to psychological distress (Durlack et al., 2011). Like low levels of personal-emotional and social adjustment, increased Facebook usage is also related to feelings of loneliness, depression, and anxiety (Song et al, 2014). While increased Facebook usage and low levels of personal-emotional and social adjustment have similar

negative side effects, it is unclear how much Facebook usage and college adjustment relate to one another and whether or not this relationship is contingent on gender.

While students tend to have gender-based needs, services available to college freshmen are oftentimes uniform regardless of gender (Schweitzer, 1996). This finding segues into the problem of understanding gender differences in college freshman and how the accessibility and utilization of support services may not be properly used. When it comes to measures of personal-emotional adjustment, women are more likely than men to seek out counseling (Noldon & Sedlacek, 1998). While this finding is relevant to how men and women differ in adjusting to college, it does not necessarily indicate that women are less emotionally adjusted to college than men. In summary, it is clear that there are varying gender differences related to college adjustment, however, it is unclear whether or not the universities are providing adequate resources and appropriately promoting these support services to help students better adjust, based on their individual needs. When considering Erikson's framework, the susceptibility to negative emotions during the transition into college could be tied to what he identifies as identity versus role confusion (Erikson, 1959; Erikson, 1963; Erikson, 1968). Having a strong sense of identity is connected with greater overall wellness whereas the inability to develop a strong sense of identity has been frequently linked to psychological distress such as depression and anxiety (Hofer, Kartner, Chasiotis, Busch, & Keissling, 2007; Meeus, Iedema, Helsen, & Vollebergh, 1999; Phinney, 1989; Schwartz, et al., 2011). These findings imply that those who have established an identity may not be as negatively affected by the side of effects of the college transition.

In addition to considering the relationship between Erikson's framework and personal-emotional and social adjustment, it is also important to investigate the role of gender. While Erikson's theory did not emphasize the potential for gender differences, subsequent studies have found that gender likely plays a significant role in Erikson's theory, particularly when considering the two stages of Eriksonian development that are most relevant to college freshmen; identity versus role confusion and intimacy versus isolation (Gilligan, 1982; Eisenberg, Miller, Shell, McNalley, & Shea, 1991). For instance, research shows that men and women have differing socialization experience at this critical period in development, with men striving for more autonomy in their relationships and with females aiming for stronger connectedness (Lacombe, 1996). It is also likely that women overcome the intimacy versus isolation stage of development prior to identity versus role confusion whereas men develop in the sequential order that Erikson theorized (Lacombe). These findings suggest that men and women may be at different stages of development during the transition into college.

Because the current study aimed to parallel Erikson's stages of development to personal-emotional and social adjustment, it is important to investigate gender differences in college adjustment in addition to gender differences in Erikson's stages of development. One study suggests that women struggle with the aspects of personal-emotional adjustment more than men (Schweitzer, 1996). This study demonstrated that female students reported significantly more problems related to sexual harassment, emotional distress, and health problems, whereas men reported significantly more problems related to difficulties with professors (Schweitzer). Because personal-

emotional adjustment is the subjective well-being and positive somatic health of the individual, the emotional distress and health problems are characteristic of someone who has low levels of personal-emotional adjustment. Additionally, this study's findings indicating that men were more likely to have difficulties with professors is consistent with the interpersonal issues that are characteristic of someone with low levels of social adjustment. In summary, the findings of this study predict that women have lower levels of personal-emotional adjustment, whereas men have lower levels of social adjustment. However, it is important to consider that just because women are more likely to report feelings of emotional distress on a college campus, does not necessarily mean men are not having similar experiences.

Summary of the Problem

As demonstrated throughout the literature overview, there is evidence supporting that low levels of both personal-emotional and social adjustment have detrimental side effects that parallel to some of the negative side effects of increased Facebook usage, such as depression, loneliness, and anxiety (Anton & Reed, 1991; Bagge, Lamis, Nadorff, & Osman, 2013; Durlack et al., 2011; Kleinmuntz, 1960; Lasch, 2006). Additionally, because of the increasing number of students enrolling in higher education, universities now more than ever should ensure happiness and emotional stability to their students. While most universities already provide extensive support services, most students do not know the extent of what services are offered (Rings & Washburn, 2011). Additionally, it is likely that many universities need to update their services offered to educate students about the potentially negative effects of Internet use while also being mindful of gender-

specific needs and differences regarding Facebook usage and college adjustment. Though there is extensive literature on the importance of coping mechanisms and other strategies used to ensure a positive adjustment to college, that model is likely shifting due the rapidly changing technological landscape. With the trend of Facebook users becoming more active and the number of other social media platforms increasing in popularity, it is important to investigate how trends in college adjustment are also shifting. While some mechanisms used to cope with college stress are timeless, it is likely that additional strategies related to addressing the negative effects of social media need to be developed. Until there is sound evidence detailing which components of adjustment students struggle what role Facebook and social media play, designing new strategies intended to improve personal-emotional and social adjustment can be a daunting task. While the purpose of this study was not explore ways to improve adjustment, the findings of this study could be used to help improve personal-emotional and social adjustment for both men and women of future freshmen students.

Research Questions

There were four overarching research questions in this study with the first research question being concerned with the relationships among the variables in the overall sample.

- RQ#1: Is there a relationship among Facebook usage, personal identity, social identity, personal-emotional adjustment and social adjustment?

The next three research questions are concerned with gender. Research question two related to between gender differences, research question three is related to within

gender differences, and the final research question is related to gender-based

relationships among the variables.

- RQ#2: Are there gender differences among Facebook usage, personal identity, social identity, personal-emotional adjustment and social adjustment?

- RQ#3: Within each gender, are there gender differences among personal identity, social identity, personal-emotional adjustment and social adjustment?

- RQ#4: Do the relationships among Facebook usage, personal-emotional adjustment, personal identity, social adjustment and social identity differ by gender?

While the first research question explores the relationships among the variables in the

overall sample, the final three research questions all aim to examine gender differences.

Purpose

Each research question had a unique purpose to the study. The purpose of the first

research question, regarding between gender comparisons, was to examine whether or not

one gender is reporting significantly higher or lower levels of Facebook usage, personal

identity, social identity, personal-emotional adjustment or social adjustment than the

other gender. When considering the research question regarding within-gender

comparisons, the purpose was to see whether a single gender was reporting significantly

higher levels of one adjustment variable, or one identity variable over the other.

Relatedly, the within-gender question also examined whether a single gender was

reporting significantly higher levels of one personal variable (personal-emotional

adjustment and personal identity) over the other, as well one social variable (social

adjustment or social identity) over the other. The purpose of the correlational research questions was to see what the relationships were among all five variables in the study. In doing so, the similarities between Erikson's identity versus role confusion and personal-emotional adjustment, as well as the connection between the intimacy versus isolation stage and social adjustment could be discussed. Finally, the purpose of the last research question was to investigate what the relationships among each of these variables were for men as well as for women. If it is found that these correlations vary based on gender, potential reasons for these differences as well as implications for practice could be discussed

Definitions of Terms

There are six overarching variables in this study: social adjustment, personal-emotional adjustment, social identity, personal identity, Facebook usage and gender. The variables of personal identity and social identity are in the study to represent Erikson's conceptualization of identity and intimacy, respectively.

Social Adjustment. Social adjustment is defined as students who have made new friends, are involved in campus activities, and feel well-integrated with peers at their college or university (Kurtz, Puher, & Cross, 2012). The participants of this study were presented with a total of 20 items from the Student Adaptation to College Questionnaire (Baker & Siryk, 1986) related to social adjustment. All 20 items were on a 9-point scale with 1 being "this doesn't apply to me at all" to 9 being "this applies very closely to me." Most of the items were phrased so that a higher score indicated positive adjustment. For instance, a score of a 9 on the survey item, "I am satisfied with my social life" would be

characteristic of high social adjustment. Other items on the scale, however, were phrased so that a score of 9 would indicate low social adjustment. For instance selecting a 9 on the item stating, "I feel lonely a lot" is associated with low social adjustment. Items such as the latter were reverse scored during the analysis so that a higher score is associated with higher levels of social adjustment, regardless of how the item is phrased on the scale.

Personal-Emotional Adjustment. Personal-emotional adjustment is defined as subjective well-being, good coping with stresses of the college environment, and freedom from somatic problems (Kurtz, Puher, & Cross, 2012). The participants of this study were presented with a total of 15 items from the Student Adaptation to College Questionnaire (Baker & Siryk, 1986) related to personal-emotional adjustment. Like the social adjustment scale, all items were on a 9-point scale with 1 being "this doesn't apply to me at all" to 9 being "this applies very closely to me," however, unlike the social adjustment scale, most of the items were phrased so that 9 indicated low levels of adjustment. For instance, a score of 9 on the "I regularly feel tense or nervous" item would be characteristic of low levels of personal-emotional adjustment. To be consistent with the social adjustment scale however, the applicable items on this scale were reverse scored so that a higher score indicates higher levels of adjustment.

Facebook. Before capturing what Facebook usage means in the context of this study, it is important to first define Facebook as a social media platform. Facebook was selected as the social media site for this study because reports have found that 94% of teenagers have used Facebook, confirming that it is by far the most popular social

networking platform (Facebook, 2013). Facebook is an online platform where users create profiles, generate and share contents and information, and interact with other known and unknown contacts (Boyd & Ellison, 2007). On Facebook, users are presented with multiple communication channels, including private messages/instant messaging, public "timeline" postings, groups, and applications. An additional source defines Facebook as an online social networking site (SNS) that allows users to create a profile where they can post information about themselves ranging from their occupation, to their religious and political views, to their favorite movies and musicians (Hughes, Rowe, Batey, & Lee, 2012). On a Facebook profile, both the user and his/her "friends" can post web links, pictures and videos of interest (Hughes et al.). Users have the opportunity to add "friends", or individuals in which the user can communicate with through sharing these aforementioned posts. Additionally, Facebook also allows the user to send private and public messages to other members and even engage in real time instant messaging (Hughes et al.). All of these features coupled with the creation of applications, groups and fan pages make Facebook broadly popular for online socializing (Hughes et al.).

Facebook Usage. Facebook usage is described as Facebook behavior, including the extent to which an individual is actively engaged in Facebook activities (Ellison, Steinfield & Lampe, 2007). The Facebook usage scale contains five items scored on a 5-point Likert scale of strongly disagree to strongly agree (Ellison et al.). The items are related to connecting with prior acquaintances as well as using Facebook to meet new people. Higher scores on this scale are representative of higher levels of Facebook usage.

For instance, a score of a 5 on the item "I use Facebook to keep in touch with my old friends" is characteristic of higher levels of Facebook usage.

Gender. Gender is defined as an individual's sexual identity, as male or female, in relation to societal and cultural norms (Drass, 1986). In this study, gender was operationalized by whether the participant identifies himself/herself as male, or female.

Social Identity. Social identity is defined as the degree to which an individual is defined by his or her group memberships (Nario-Redman, Biernat, Eidelman & Palenske, 2004). Most individuals identify with many groups. In the context of the current study, an example of a group could be people who live in the same dorm, people who are on the same sports team, or people with the same cultural background and/or nationality as the participant. People with high levels of social identity pride themselves on their similarities with others whereas people with low levels of social identity do not feel other people play an important role in how they define themselves.

Personal Identity. Personal identity is defined as personal self-conceptions such as beliefs, abilities and emotions (Nario-Redman, Biernat, Eidelman & Palenske, 2004). People with high levels of personal identity pride themselves on their individuality, whereas people with low levels of personal identity do not feel that asserting their uniqueness is important to how they define themselves.

CHAPTER TWO: LITERATURE REVIEW

Identity and Intimacy and its Relation to Personal and Social Identity

Before understanding how the results of this current study may support or challenge Erikson's theory, it is important to understand some of the assumptions of this theory. Psychosocial development is a developmental theory suggesting that the personality develops in stages (Erikson, 1959). Erikson's theory posits that each stage of development is affiliated with becoming competent in an area related to a healthy life (Erikson, 1959; Erikson, 1963; Erikson, 1968). If the individual overcomes the competency for that stage in life, he or she will exhibit mastery, and if the person fails to establish the stage's challenge, he or she will experience inadequacy. Inadequacy at one stage of development leads to difficulty in overcoming the challenge affiliated with the next stage of development. There are a total of eight stages and they are listed chronologically as: trust vs. mistrust, autonomy vs. shame and doubt, initiative vs. guilt, industry vs. inferiority, identity vs. role confusion, intimacy vs. isolation, generativity vs. stagnation, and integrity vs. despair (Erikson, 1959; Erikson, 1963; Erikson, 1968). While all stages leading up to and occurring after the stages associated with the college years are potentially relevant to an individual's well-being, for the purpose of this study, only two of Erikson's stages will be focused on in detail: identity vs. role confusion, and intimacy vs. isolation. While some research has studied how all of Erikson's stages of

development play a role in the college years, the current study will only focus on identity versus role confusion and intimacy versus isolation. This is because Erikson suggested that these stages occur at approximately 18 and 19-years-of-age respectively, the same average age of freshmen who attend college immediately following high school graduation.

Prior to drawing any parallels between Erikson's framework and variables related to college adjustment, it is relevant to consider how the identity and intimacy contribute to a sense of well-being, since this is an important component of college adjustment. Our sense of identity refers to all beliefs, ideals, and values that facilitate the shaping and guiding of a person's behavior (Erikson, 1968). As we integrate new experiences into our memory as we go through life, our identity evolves (Erikson, 1959). When beginning freshmen year of college, most American students are 17- or 18-years-old. According to Erikson's stages of psychosocial development, most college freshmen are encountering the conflict of identity versus role confusion in which they are addressing their need to develop a strong sense of self (Erikson, 1959; Erikson, 1963; Erikson, 1968). If they develop a strong personal identity, they are more likely to be confident. Contrarily, individuals who have not accomplished a secure sense of self will experience role confusion. Students who have not accomplished a sense of self prior to college are more likely to have confidence issues, anxiety, and sleep disturbances after beginning college (Wagner, Lorion, & Shipley, 1983). Additionally, moving away from home to attend college is associated with individuals reformulating their identities (Azmitia, Syed, & Radmacher, 2008; Shaver, Furman, & Buhrmester, 1985). This could result in there being

a negative relationship between college adjustment and an individual's identity even if he or she had a strong sense of self prior to entering college (Azmitia, et al.). Because this stage of development begins around age 12, many individuals will have established a sense of self prior to beginning college, making for a smoother transition and adjustment period.

The stage of development that occurs after identity versus role confusion is intimacy versus isolation, operationalized by the need to share and commit to other people (Erikson, 1950). If the individual forms such relationships, he or she is predicted to have strong relationships whereas a lack of intimacy is said to lead to loneliness and isolation (Erikson 1959; Erikson, 1963). In Erikson's intimacy versus isolation stage, intimacy does not necessarily refer to romantic relationships, but instead indicates a need for meaningful relationships that exceed a superficial level of connectivity (Erikson, 1959; Erikson, 1963; Erikson, 1968). For instance, when considering social situations, students who have a strong identity will be more confident in social situations, serving as a gateway to forming successful peer relationships .One study investigated how college freshmen cope with the demands associated with the intimacy versus isolation psychosocial conflict (Paul, Poole, & Jakubowyc, 1998). Individuals who identified that they had no romantic or intimate developments during the course of their freshmen year were more subject to decreased psychological well-being. This finding implies that while many college freshmen are struggling with developing a personal identity, others may instead, or even simultaneously, be faced with the challenges of developing intimate relationships. In summary, Erikson's theory suggests that being confident in one's

identity is critical as an individual continues to develop meaningful interpersonal relationships. A person's inability to master a sense of identity will presumably result in role confusion. This role confusion will inhibit the individual from experiencing intimacy, resulting in isolation.

It has been shown that Erikson's stages of development may be more fluid than what was initially implied by the explanation of his theory (Whitbourne, Sneed & Sayer, 2009). Erikson indicates that identity versus role confusion is a conflict of adolescence whereas intimacy versus isolation is a conflict of young adulthood, however, in one longitudinal study focusing on psychosocial development, it was found that this may not always be the case (Erikson, 1968; Whitbourne et al.). This study investigated college students through middle age and found that while the stages leading up to identity versus role confusion typically followed the same pattern, development becomes more ambiguous during the identity versus role confusion and intimacy versus isolation stages. It was found that these ambiguities are due to factors such as gender, occupational prestige, and parenthood status (Whitbourne et al.). While role confusion may impede a college freshmen from developing intimate relationships, it is not to say that he or she will never develop a sense of identity. Based on scores on the scales intended to measure identity and intimacy, the results of the current study may provide evidence suggesting that individuals experience feelings associated with intimacy prior to establishing a strong sense of identity. Because of the age of college freshmen, based on Erikson's framework, it is also highly possible that scores in related to identity and intimacy may not be significantly different. In other words, if these scores do not differ, one

interpretation could be that college freshmen are overcoming the conflicts of both identity versus role confusion and intimacy versus isolation during their freshmen year. While the aim of the current is not to find evidence debunking Erikson's theory, it does aim to provide alternative explanations and insights to the identity versus role confusion and intimacy versus isolation stages.

College Adjustment

Prior to narrowing in on personal-emotional adjustment and social adjustment, the idea of measuring college adjustment as a whole was considered. The Student Adaptation to College Questionnaire (SACQ) measures not only personal-emotional adjustment and social adjustment, but also academic adjustment and institutional attachment (Baker & Siryk, 1986). Though this scale was published nearly 30 years ago, has yielded significant results in recent studies investigating various variables in college freshmen (Aspelmeier, Love, McGill, Elliott & Pierce, 2012; Jones, Rabinovitch, & Hubbard, 2015; Kurtz, Puher & Cross, 2012; LaBrie, Ehret, Hummer & Prevonost, 2012; Sevinc & Gizir, 2014). A meta-analytic study found that the SACQ is an exceptional predictor of college adjustment due to its multidimensional properties (Crede & Niehorster, 2012). Because of its validity and reliability, this scale has also been translated into Spanish and has also yielded significant findings for Spanish-speaking populations (Gonzalez, Lopez, Vacas, Counago & Fenandez, 2012). Some of the most recent studies using this scale have investigated the effects of ADHD, personality traits, race and culture, and alcohol use, and locus of control on college adjustment (Aspelmeier et al.; Jones et al.; Kurtz et al.; LaBrie et al.; Sevinc & Gizir). Prior to this study, this scale had not yet been used to

investigate the relationship between Facebook usage, or social media usage in general, and college adjustment.

There are a few reasons that only the personal-emotional adjustment and social adjustment subscales were used for the current study. Because part of successful personal-emotional and social adjustment include feelings of well-being and integration with the college community, it is unsurprising that high personal-emotional and social adjustment scores are associated with academic achievement (Crede & Niehorster, 2012; Wohn & LaRose, 2010). Additionally, when considering the role social networking sites play in college adjustment, most studies focus on the academic performance aspect of college adjustment (Jacobsen & Forste, 2011; Junco, 2015; Karpinski, Kirschner, Ozer, Ipek, & Ochwo, 2013). In other words, because feeling socially and emotionally well-adjusted to college is often a predictor of good grades and not transferring out of or dropping out the university, it is important to investigate the personal-emotional and social adjustment subscales and their relationship to Facebook and social media usage. These stages were also selected due to the suggested parallels between the personal-emotional and social adjustment variables to the Eriksonian stages that occur around the age of college freshmen. While there may be a relationship between academic adjustment and one or more of stages of psychosocial development, for instance, industry versus inferiority, the Eriksonian stages that are more critical during the freshman year in college are identity versus role confusion and intimacy versus isolation, occurring at approximately 18-and 19-years, respectively. Relatedly, due to its concern with connectedness, the college adjustment variable of institutional attachment could be

related to Erikson's intimacy versus isolation stage of development, however, Erikson's definition of intimacy concerns interpersonal connectedness as opposed to connectedness to a university. Next, existing research specifically related to personal-emotional adjustment and social adjustment will be explored.

Personal-Emotional Adjustment. Academic adjustment periods, especially the transition between high school and college, are particularly vulnerable times for students' well-being (Chow, 2007). Compared to high school, university life adds more stress and requires more independent decision-making (Chow). Students who report having a difficult time adjusting to college are more likely to experience feelings of loneliness, depression, and anxiety, further suggesting that the transition into college is a particularly impressionable time (Mounts, Valentiner, Anderson, & Boswell 2006). Alternatively, students who report higher levels of personal-emotional adjustment are more likely to earn better grades and finish their degree (Kurtz, Poher, & Cross, 2012). Relatedly, research shows that the majority of students who drop out of college do so during their first year, indicating that how students adjust to college is a big predictor of future collegiate success (Gray, Vitak, Easton, & Ellison, 2013). This suggests that appropriate resources for support related to personal-emotional adjustment are critical for college freshmen.

Personal-emotional adjustment is defined as, subjective well-being, good coping with stresses of the college environment, and freedom from somatic problems (Kurtz, Puher, & Cross, 2012). There are three major components of this definition, the first being *subjective* well-being. It is important to note that the current study did not use any

objective measure of personal-emotional adjustment. In other words, two students could be experiencing very similar situations, while one is reporting high levels of personal-emotional adjustment, while the other has significantly lower levels. These subjective differences are tied to reasons such as personality differences, differences in expectations of college, and other attributes that go beyond the scope of this study.

The second component of this definition is good coping with stresses of the college environment. While the key word subjective does not appear in this portion of the definition, it is important to understand that stresses of college environment are highly dependent on the perception of the participant as opposed to an objective reality of the situation. For instance, three students may have the same midterm exam the next day. One student may report no stress, the other may report stress and positive coping mechanisms, and the third may report high levels of stress with no strategies to cope. This scale is unable to decipher whether the student who reports no stress has coping mechanisms so superior that stress was never consciously experienced, or on the opposite end of the spectrum, he or she could be so apathetic about the course that stress was never experienced. In other words, this scale item is assuming that every participant is experiencing some level of stress related to his or her college environment.

Finally, personal-emotional adjustment measures levels of somatic problems, or physical pain or illness. While prolonged stress, depression, anxiety and other negative effects of poor personal-emotional adjustment often are manifested as physical pain, there are also causes of physical discomfort unrelated to poor personal-emotional adjustment. For instance, high scores on the "I have gained or lost a significant amount of weight

since I have been in college" item may have less to do with levels of personal-emotional adjustment and more to do with a preexisting health condition. Similarly, though the "overall, I feel that I am in good health" statement represents the freedom from somatic problems portion of the variable, it may not be the best measure of personal-emotional adjustment. For instance, an individual could be in great physical health, but still struggling emotionally with the pressures of college. Alternatively, someone could be suffering from poor health for reasons other than low levels of personal-emotional adjustment.

Social Adjustment. The inability to socially adjust to college results in negative effects similar to low levels of personal-emotional adjustment, including loneliness, depression and anxiety (Mounts, Valentiner, Anderson, & Boswell 2006). Feeling well-integrated with the social scene and one's peers makes an individual more likely to be successful academically, while also feeling more connected to the university he or she attends (Kurtz, Poher, & Cross, 2012). Social adjustment is defined as students who have made new friends, are involved in campus activities, and feel well-integrated with peers at their college or university (Kurtz et al.). There are three major components of this definition, and when delving further into this definition through the lens of Erik Erikson, it makes sense to explore what it means for students to feel well-integrated with peers at their college or university. As previously mentioned, Erikson proposed that individuals must have a secure sense of self before establishing meaningful interpersonal relationships. Of course people are capable of making new friends and getting involved with campus activities prior to mastering the identity versus role confusion stage of

development. Feeling *well-integrated* on the other hand, is consistent with individuals who have a strong sense of their own personal identities.

When exploring the making new friends component of the definition, it is important to recognize that individuals may have different expectations and definitions of friendship depending on where they are in their personal development. For instance, someone who has not yet mastered a sense of identity may be content with, and perhaps reliant on, more adolescent friendships. These types of individuals may feel a sense of purpose by identifying with people simply because they live in close proximity and are involved in the same campus activities. Individuals with a strong sense of self on the other hand, likely need more from someone to consider them a true friend. They don't desire superficial friendships as a crutch to hide their role confusion. As a result, they may need to feel that mature sense of integration with the people whom they surround themselves with, before labeling them as a friend.

In summary, because of the subjectivity of the social adjustment scale, even when simultaneously investigating social identity, it is difficult to determine a sound conclusion as to where an individual is in terms of Erikson's developmental stages. This may be because Erikson's stages of development aren't necessarily mutually exclusive. In other words, follow up studies further analyzing Erikson's framework have suggested that there may be overlap between Erikson's stages (Constantinople, 1969; Levine, 1988). For instance, an individual may be experiencing conflicts characteristic of the intimacy versus isolation stage of development while simultaneously struggling with developing a sense of identity. When considering the aforementioned scenario, at face value, it may appear

that someone who has not yet experienced high levels of social adjustment is not as far along in Erikson's stages of development as someone who reports high levels of social adjustment. On the contrary, it could be that someone who has lower levels of social adjustment on this scale has much higher standards of social adjustment and integration because of his or her mastery of Erikson's stage of identity versus role confusion.

Connection between Erikson's Theory and Adjustment

In order to measure any potential parallels between the identity versus role confusion stage and personal-emotional adjustment, this study contained a measure for identity. Erikson's theory includes 27 distinct aspects of identity (Erikson, 1968). Due to the complexity of Erikson's conceptualization of identity, researchers have had a difficult time developing an operational definition that captures all of Erikson's aspects of identity (Marcia, 1966; Waterman, 1988). Research demonstrates that when Erikson's concept of identity is measured, the part of the definition that is most often focused on is the goals, values and beliefs of an individual (Constantinople, 1969; Cote, 1996; Kerpelman & Lamke, 1997; van Hoof,1999). As previously mentioned, the personal identity measure in this study included personal self-conceptions such as beliefs, abilities and emotions (Nario-Redman, Biernat, Eidelman & Palenske, 2004). This scale captures the goals, values and beliefs component of Erikson's concept of identity, therefore representing how strong an individual's sense of identity is.

In addition to including a measure of personal identity to capture Erikson's concept of identity, this study also included a social identity scale, representing Erikson's definition of intimacy. Intimacy is defined as the ability to share and commit to other

people (Erikson, 1950). In this study, the social identity is defined as the degree to which an individual is defined by his or her group memberships (Nario-Redman, Biernat, Eidelman & Palenske, 2004). Because this social identity scale captures Erikson's idea of interpersonal relationships, the participant's social identity score will be used to represent Erikson's variable of intimacy.

After exploring how Erikson's concept of identity and intimacy parallel with measures of personal and social identity respectively, in addition to examining how personal-emotional and social adjustment are operationalized and measured in this study, there was enough evidence to make connections among these variables. Erikson's concept of identity, the personal identity scale, and personal-emotional adjustment all encompass feelings of well-being. Where personal identity is concerned with integrating one's beliefs, values and emotions into a strong self-concept, personal-emotional adjustment is the application of that strong sense of identity into a smooth college adjustment. Though these variables are not synonymous, because of their similarities, this study predicted a significant positive relationship between personal identity and personal-emotional adjustment. Relatedly, it was predicted that individuals who lack a strong sense of personal identity, or are experiencing role confusion, would have low levels of personal-emotional adjustment.

Due to the similarities between social identity, the measure that operationalizes Erikson's concept of intimacy, and social adjustment, there was also a predicted positive relationship between these two variables. Erikson's concept of intimacy, the social identity scale and social adjustment all encompass concepts of healthy interpersonal

relationships. While social identity is concerned with the degree to which an individual identifies with the groups he or she belongs to in general, social adjustment represents how well an individual is integrated into various groups in the college setting, specifically. Both social identity and social adjustment are similar to Erikson's concept of intimacy, or the ability to share with or commit to other people in interpersonal relationships, romantic or otherwise.

Interpersonal emotional support has also been found to be a critical factor in both personal-emotional and social college adjustment (Azmitia, Syed, & Radmacher, 2013). One study determined that emotional support from friends was particularly important for college adjustment (Azmitia et al.). Additionally, research demonstrated that those who maintained or had improved mental health throughout the course of their freshmen year of college had more emotional support from friends and family, thus resulting in a higher identity synthesis (Azmitia et al.). This implies that because of the stresses associated with college adjustment, extensive support from peers is necessary not only to improve mental health, but also just to maintain an acceptable level of subjective well-being. Erikson suggested that individuals need a solid sense of self prior to establishing more mature and meaningful interpersonal relationships, however, existing research demonstrates that social relationships may play a key role in establishing this sense of identity. Perhaps this conundrum is why the transition into college and the late teenaged years in general are one of the most vulnerable and trying times in an individual's life. An individual may have to wrestle through difficult interpersonal relationships, both social and romantic, in order to get to the root of his or her identity. The more these

individuals incorporate the life lessons learned from imperfect interpersonal relationships, the more they will solidify their senses of self, resulting in a strong foundation for more meaningful relationships moving forward in their lives.

In summary, this study aimed to demonstrate that freshmen who are facing personal-emotional and social challenges while adjusting to college are experiencing challenges similar to what Erikson theorized for the identity versus role confusion stage of development as well as the intimacy versus isolation stage of development, respectively. In order to measure Erikson's concept of identity, the personal identity scale was selected because of the similar definitions between Erikson's operationalization of identity as well as the meaning of personal identity on the SIPI scale (Nario-Redmond, Biernat & Palenske, 2004). Additionally, Erikson's concept of intimacy was measured by using the social identity subscale of the SIPI, since they are both concerned with the strength and importance of interpersonal relationships (Nario-Redmond et al.). Prior to the current study, the SIPI has yielded significant findings on numerous studies related to sexual identity, self-esteem, self-concept, gender identity, self-views, group identity and self-focus (Eldelman & Silvia, 2010; Nario-Remond, Noel & Fern, 2013; Sim, Goyle, McKedy, Eldelman, & Scott, 2014; Ute, Nanine, & Hannover, 2014; Weber, Johnson & Arceneaux, 2011; Wood & Eagly, 2009). Using this scale on the current study could potentially add value to the SIPI by providing significant results with investigating personal-emotional adjustment and social adjustment.

Gender in Erikson's Theory and College Adjustment

Though Erikson did not emphasize the role of gender in his theory of psychosocial development, future studies explored the role gender plays at various stages of Eriksonian development (Constantinople, 1969; Schiedel & Marcia, 1985). The current study expanded upon that research by further investigating gender differences, while attempting to connect those differences to personal-emotional and social college adjustment. One longitudinal study examined all of Erikson's stages in college students throughout their college tenure (Constantinople). Though the current study was not longitudinal and only concerned with two of Erikson's studies in college freshmen, this study yielded important results. It was found that during freshmen year, women had significantly higher levels of role confusion than men, however, this study didn't demonstrate any significant differences between levels of identity in freshmen men and women (Constantinople). This finding suggests that identity and role confusion are not necessarily mutually exclusive variables and the gender differences imply that the fluidity of Erikson's stages may be dependent on gender. In other words, an individual could have a sense of identity while also experiencing role confusion, but based on the findings of the study, it may be that this is just the case for women. The findings of the current study will only measure level of identity as opposed to both identity and role confusion. In another study, both identity and intimacy development were examined in male and female college students and it was found that men had higher levels of identity than women whereas women had higher levels of intimacy (Schiedel and Marcia, 1985). Whereas the previous study only demonstrated differences in levels of role confusion, this study demonstrated differences in identity. Additionally, this study found significant

differences in levels of intimacy whereas no significant differences for this facet of Erikson's theory of development were found in the previous study. In a more recent study, women tended to experience personal distress in their 20s and indicated that women tend to continue to solidify their sense of identity throughout their 20s (Zucker, Ostrove, & Stewart, 2002). If the current study had yielded similar results on the personal identity scale, and the personal identity scale and the personal-emotional adjustment scale had demonstrated a positive relationship, it could have been possible that women who are freshmen in college typically have not fully overcome the identity versus role confusion conflict. Additionally, the current study aimed to investigate whether or not men are experiencing similar challenges that could also be linked back to Erikson's stage of identity versus role confusion. Though these studies were not conducted in recent years, they are relevant because they demonstrate that while Erikson did not explicitly explore gender differences in his theory, researchers quickly found the value in examining gender differences in Erikson's theory shortly after his psychosocial development theory was established. By adding the variable of Facebook usage, the current study aimed to see if these studies challenging Erikson's framework theory could be further challenged based on modern day technology.

Because the current study attempted to draw the connection between the stages of Erikson's development that occur during the college years to the variables of personal-emotional and social adjustment, some past research concerning gender differences in the personal-emotional and social adjustment were considered. Because there are no peer-reviewed published studies that examine gender differences in Facebook and personal-

emotional adjustment, variables other than Facebook usage were examined to give context to various gender differences in personal-emotional adjustment. In one study, college freshmen with divorced parents were studied and it was found that women had significantly lower levels of personal-emotional adjustment (Wintre et al., 2011). While the current study is not concerned with the home life of the participants prior to college, this past research is applicable to the current study because it demonstrates that in vulnerable situations, women struggled with personal-emotional adjustment more than men. It could be inferred that in other vulnerable situations, for instance, receiving negative feedback on a Facebook page, women would have a harder time recovering than men. Another study found that women were more likely to experience distress than men (Oliver, Reed, & Smith, 1998). These support the prediction of the current study that women will have significantly lower levels of personal-emotional adjustment than men.

Other studies investigated variables related to both personal-emotional adjustment and social adjustment in the same study. In one study, female students were more likely to express concerns related to sexual harassment and health problems whereas men were more likely to express issues with their professors (Schweitzer, 1996). The findings of this study indicate that women need more support services to help with their personal-emotional adjustment, whereas men likely need more support services to assist their social adjustment based on difficulties with their interpersonal interactions. This finding is reminiscent of the study indicating that men have higher levels of identity whereas women have higher levels of intimacy (Schiedel & Marcia, 1985). These similar findings

suggest that there could be a connection between Erikson's identity and intimacy and personal-emotional and social adjustment, respectively.

To summarize, the current study investigated gender differences in Erikson's identity versus role confusion stage and intimacy versus isolation stage of development. These stages were operationalized by using the personal identity scale to represent levels of identity, and the social identity scale for intimacy. Because this study concerned freshmen as they adjust to college, the personal-emotional and social adjustment scales of the SACQ were used (Baker & Siryk, 1986). The relationship between Erikson's stages and college adjustment were explored because the age at which Erikson theorized the identity versus role confusion and intimacy versus isolation stages occur parallel with the average age of college freshmen.

Facebook Usage

Because Erikson's theory was developed decades before the advent of social media and Facebook in particular, his theory does not pose any explanations as to how online social networking contributes to his theorized stages of psychosocial development. Before using the results of the current study to draw conclusions about how differing levels of Facebook usage relate to Erikson's stages of development, it is first important to examine existing literature on this topic.

Traditional methods of social support include emotional support (e.g. cheering up a sad friend), financial support (e.g. providing a loan), and instrumental support (e.g. helping a friend move). Finding people to fulfill these roles and develop a social network while also managing newfound social freedoms is crucial to feeling assimilated into the

college community (Gerdes & Mallinckrodt, 1994; Hays & Oxley, 1986). While the aforementioned traditional ways of obtaining social support still exist, in more recent times, students have also been able to find ways to fulfill these needs through the Internet and social media. It is still largely debatable, however, as to whether or not the communication forums the Internet facilitates are beneficial for college students or not. While 79% of students believed that online communication tools related to their academic success by facilitating contact with faculty members and peers, contrarily, studies have shown that prolonged Internet usage can contribute to negative psychological dispositions including depression, loneliness, and other emotional problems (Ceyhan & Ceyhan, 2008). With how widely accessible the Internet now is to students, additional studies have investigated the relationship between Internet usage and factors related to self-concept. Because students often have unlimited access to the Internet, today's college students tend to spend large amounts of time online and therefore have a higher chance of engaging in problematic Internet use, such as spending more time on the Internet than initially intended (Chen, 2012). Results of such behaviors can produce negative outcomes such as decreased attention span and motivation to complete necessary tasks (Paul, Baker, & Cochran, 2012). It is important to further investigate the effects of using social media, both positive and negative, to see if it outweighs the role of traditional social support overall.

Even prior to the era of Facebook and online social networking, problematic behaviors based in computer-mediated communication (CMC) have been identified. This is relevant to the current study because Facebook is a form of CMC due to its

functionality of allowing people to communicate with others via the Internet. In one study, Internet addiction was defined as a problem in which people spent too much time online to the detriment of developing and maintaining other relationships and responsibilities (Grohol, 1999). Before Facebook, a popular medium for online social communication was AOL instant messaging (AIM). Shyness and alienation from family, friends, and peers is positively correlated with AIM addiction as well as a significant decrease in academic achievement (Huang & Leung, 2009). Another study investigated how CMC is correlated with detrimental outcomes such as overlooking social cues, resulting in frequent miscommunications and not conveying the intended interpersonal interaction. (Riva, 2002). The reason for this is it is often difficult to express emotions via an online communication medium.

Another study provides value to the current study by focusing on gender differences when using the Internet for social purposes while also using college adjustment as a dependent measure. This study investigated how gender serves as a moderating role for Internet use and college adjustment and found that social use of the Internet was positively associated with college adjustment, but only for males (Lanthier & Windham, 2004). Although this study predates Facebook, it is important to note that using the Internet for social use as the study defined it likely serves as a parallel to what college students use Facebook for today. This study is particularly important because unlike other studies in the field, this research paradigm incorporates components of the Internet, college adjustment, and gender, just as the current study aimed to do.

While there is adequate evidence supporting the idea that Internet usage, particularly social media, can be detrimental to college adjustment, there are also studies supporting that engaging in social media can be beneficial for college students. CMC often allows college freshmen to better maintain long-distance friendships that may have otherwise dissolved (Ellison, Steinfield, & Lampe, 2007; Ellison, Steinfield, & Lampe, 2011). Additionally, when studied in college populations, CMC has been positively related to psychological adjustment, self-esteem, closeness with friends, and enhanced well-being (Cummings, Lee, & Kraut, 2006; Shaw & Grant, 2002; Steinfield, Ellison, & Lampe, 2008). More specifically, CMC helped decrease loneliness and depression while simultaneously enhancing feelings of social support and self-esteem (Shaw & Grant). Additionally, people who are shy feel much less inhibited online than they do offline, implying because of the Internet, they are now able to form a number of relationships they otherwise wouldn't have developed (Huang & Leung, 2009). While these studies regarding computer-mediated communication have positive results, none of these studies include the role of Facebook.

In addition to looking at general Internet usage and online social networking, it is important to further investigate the usage patterns for Facebook specifically. Because Facebook is relatively new, the relationship between having a Facebook account and presence of negative psychological characteristics have not been widely investigated, however, a handful of notable studies have been done. One study used a Dutch friend-networking site, similar to Facebook, to evaluate the consequences of having an online profile for this website relating to self-esteem. This student demonstrated that adolescents

aged 10-19 years-old who received positive feedback on their profiles had enhanced social self-esteem and well-being, whereas negative feedback significantly decreased their self-esteem and well-being, indicating that social media does in fact have an effect on self-esteem for adolescents (Valkenburg, 2006). Although the social media platform under investigation in this study was not Facebook, the findings are still relevant because the ages of the participants include the 18 and 19-year-old population that was explored in the current study.

Since personal-emotional and social adjustment are related to psychological well-being, it is relevant to consider the relationship between Facebook and a psychological well-being. One study suggests that spending a lot of time on Facebook is associated with low self-esteem (Kalpidou, Costin, & Morris, 2011). College students who struggle with low self-esteem and interpersonal communication may rely on Facebook to seek reassurance (Clerkin, Smith, & Hames, 2013). Reassurance in this context is defined by the importance individuals place on their status updates and their emphasis on peer feedback. While this particular study was not causational in nature, there was a relationship between those who have low self-esteem and those who use Facebook for reassurance by peers. Additionally, a decrease in self-esteem was associated with a lack of belongingness and perceived burdensomeness (Clerkin et al.). To emphasize, it is unclear whether or not low self-esteem causes individuals to use Facebook for reassurance, or if the interpretation of the feedback received from this attempted reassurance is what is causing low self-esteem.

Not only has Facebook alone been associated with lower self-esteem and life satisfaction, but also, similar trends have been found in digital media in general. One study classified its participants as either light users, moderate users, or heavy users of digital media. The more the student engages in digital media, the less happy he or she is at school (Rideout, Foehr, & Roberts, 2010). The same study also found a negative correlation between engaging in digital media and having a quality relationship with the participants' parents. Finally, this study indicated that those who heavily use digital media platforms are more likely to feel bored, get in trouble, or feel sad or unhappy.

On the contrary, another study acknowledged that perhaps Facebook could be an appropriate medium for those who lack confidence to make social connections necessary to improved self-esteem (Forest & Wood, 2012). While in theory Facebook posts could help build friendships, in actuality, these individuals with low self-esteem typically had posts that were negative in nature, resulting in undesirable responses from their peers (Forest & Wood). As in the study described in the previous paragraph, this study is correlational rather than causational meaning that it is unclear whether low self-esteem causes negativity and undesirable feedback, or if negative peer commentary is responsible for low self-esteem and continued negative status updates.

Although it is difficult to establish causation in this field, it is important to investigate any studies that could potentially suggest a causal relationship. One study found that there was a significant positive correlation between Facebook and loneliness (Burke, Marlow, & Lento, 2010). While this may suggest a causal relationship between Facebook usage and loneliness, it could be that the loneliness causes students to engage

in Facebook more often. This segues into another study that explored whether or not individuals with low self-esteem used Facebook as a compensatory strategy to help alleviate low self-esteem (Lee, Moore, Park, & Park, 2012). This would indicate a causal relationship more than the other studies because it is grounded in the assumption that the low self-esteem occurs prior to the Facebook usage. An additional variable this study investigated was public self-consciousness. This variable was operationalized as the extent to which personal events are made known to others, as compared to knowledge that remains private (Lee et al.). There was a stronger negative correlation between Facebook usage and self-esteem for college students who had low self-esteem but who are high in public self-consciousness compared to the individuals with low self-esteem who were low in public self-consciousness. This indicates that like in the study described in the previous paragraph, that perhaps the students who had low self-esteem who chose to disclose more personal information on Facebook posted content that was negative in nature.

Because the current study also investigated Facebook usage behaviors, it is relevant to consider past research that has been done on gender differences related to Facebook activity. Interestingly, one study found that men use the Internet significantly more often than women, however, women use Facebook significantly more often than men (Thompson & Lougheed, 2012). Additional results to this study found that women are more likely than men to have a negative self-body image due to the images they see on Facebook (Thompson & Lougheed). Additionally, women are more likely than men to admit that they feel addicted to Facebook and experience anxiety and disappointment if

they can't access their Facebook accounts. The results of this study indicate that it can be inferred that Facebook could be a culprit to negative emotions that warrants further investigation.

There are a couple studies in the literature that are perhaps the most related to the current study due to investigation of the relationship between Facebook and loneliness on college adjustment and Internet usage and Erikson's stages of identity and intimacy (Huang, 2006; Wohn & LaRose, 2014). In the study regarding college adjustment, one of the dependent measures is social adjustment, like in the current study, however, instead of personal-emotional adjustment, this study focuses on academic motivation and perceived academic performance (Wohn & LaRose). This study found that increased Facebook usage was negatively correlated with academic performance. Additionally, the loneliness scale used in this study found that there is a much stronger relationship between loneliness and each of the three measures of college adjustment, than the relationship between Facebook and the same dependent measures (Wohn & LaRose). These findings provide valuable context to the current study since it also examined the relationship between Facebook usage and social adjustment. The study regarding Internet usage and Erikson's stages of identity versus role confusion and intimacy versus isolation found that people who spend more than 10 hours per week partaking in online chatting, gaming and other interactive Internet activities score significantly lower on measures of identity and intimacy than those who spent less than 10 hours per week online (Huang). Additionally, this study found that these same participants who scored significantly lower on measures of identity and intimacy scored significantly higher on scores that reflect

unsuccessful resolution of the Eriksonian conflicts of those stages of development; role confusion and isolation (Huang). While this study does not investigate Facebook specifically, its exploration of the role of social uses of the Internet on Erikson's stages of development has implications for the current study.

Summary of the Literature

This literature review examined Erik Erikson's theory of psychosocial development, the college adjustment variables of personal-emotional and social adjustment, the outcomes of Facebook usage and how gender plays a role in all of these topics. By investigating how Erikson defines the adolescent and young adult stages of identity versus role confusion and intimacy versus isolation as well as future studies related to Erikson's framework, it became evident that various components of the current study could provide additional evidence both supporting and challenging Erikson's framework theory. In order to successfully achieve this goal, ways of operationalizing and measuring identity and intimacy were explored. This literature review provides definitions of personal identity and social identity and draws the connections between these variables and Erikson's stages of identity versus role confusion and intimacy versus isolation

After achieving a method of operationalization for the two Eriksonian stages of interest, this literature review also explored how identity versus role confusion and intimacy versus isolation could parallel with the challenges associated with personal-emotional and social adjustment. This literature review explored how these variables of college adjustment are defined and how they were measured in the current study. Once

the connections among Erikson's stages of development, measures of identity and college adjustment were made, existing gender differences were explored. Existing gender differences in the literature suggested that the current study should have yielded gender differences related to Erikson's stages, college adjustment, and Facebook usage.

Finally, this review of the literature explores studies related to Internet, social media, and Facebook usage and its relationship to psychological components concerning both personal-emotional and social adjustment. The literature related to Facebook usage yields inconclusive results, some supporting that Facebook is beneficial, with others emphasizing its detriments. The current research will add to these findings by investigating all of these variables in the same study.

CHAPTER THREE: METHOD

Participants

There were three ways in which students were recruited to be participants in this study. The researcher contacted both professors and students who knew freshmen at George Mason University to ask them to distribute a link to the freshmen students they had the email address to. Additionally, the researcher randomly selected 350 freshmen students from the Mason People Finder Directory and emailed them a link to participate in the survey. While almost one third of the sample was from George Mason University, the majority of the participants were recruited from Amazon Mechanical Turk. All participants were residents of the United States. All participants had the opportunity to enter into a drawing to win a raffle for a $50 Amazon gift card as well as the opportunity to indicate that they would like to see a brief (1-2 page summary) of the results once the study is complete. Out of the 174 total participants, 134 individuals provided their email address to be entered into this drawing and 65 individuals expressed interest in reading the results of the study.

A total of 174 self-identified college freshmen participated in this study between April 4, 2015 and May 7, 2015. However, because the only mandatory question was the first question confirming consent, not every participant answered every question. Out of

the 164 students who identified where they attend school, 30% of students are freshmen at George Mason University (N=50), whereas the remaining 70% of participants (N=114) attend a combined total of 97 other universities in the United States. Out of the 174 participants, 163 students identified their gender with 52% of the sample being female (N=85) and 48% of the sample being male (N=78). Though the study did not explicitly aim to explore the relationships among Facebook usage, personal identity, social identity, personal-emotional adjustment and social adjustment when considering variables other than gender, preliminary analyses were conducted for additional demographic questions that were in the online survey to help describe the participant sample. In all tables, mean scores for personal-emotional adjustment, personal identity, social adjustment and social identity were calculated on a 9-point scale, whereas mean scores for Facebook usage were on a 5-point scale.

Age. As previously mentioned when describing the sample that was obtained, out of the 164 students who identified their age, the mode was 19-years-old while the mean was approximately 22-years-old (M=21.82, SD=5.38). Table 1 displays the means and standard deviations for each of the 5 variables for participants who reported being 18-or 19-years-old, compared to the participants who were 20-years-old or older. Traditionally, students who attend college immediately following high school graduation are 18- or 19-years-old. Additionally, according to Erikson's theory, individuals at this age are at the cusp of the identity versus role confusion and intimacy versus isolation stages of development (Erikson 1968). This implies that students who are 20-years-old or older should have already established a sense of identity. It was found that the participants who

were 19-years-old or younger had significantly higher levels of social adjustment (M=
6.00, SD=1.03) than participants who were 20-years-old or older (M=5.56, SD=1.05),
$t(162)=2.68$, $p=.001$. Additionally, Cohen's effect size value ($d=.42$) suggested a small to
medium effect size.

Table 1

Means and Standard Deviations for Variables in the Study by Age

Variables	Age			
	19-Years-Old or Younger		20-Years-Old or Older	
	M	SD	M	SD
Facebook Usage	3.07	.68	2.96	.88
Personal-Emotional Adjustment	4.57	1.03	4.68	1.00
Personal Identity	5.64	.1.49	5.69	1.50
Social Adjustment	6.00**	1.03	5.56**	1.05
Social Identity	5.42	1.32	5.15	1.72

*$p\leq.05$
**$p\leq.01$

Race/Ethnicity. Out of the 164 participants who identified their race/ethnicity, 65% (N=106) identified as White/Caucasian, 20% identified as Asian/Pacific Islander, 9% identified as Black or African American (N=14), 4% identified as Hispanic/Latino (N=6), 2% identified as American Indian or Native American (N=3) and 2% identified as Mixed Race or More Than One Race (N=3). Table 2 displays the means and standard deviations for each of the 5 variables for participants who identified as White/Caucasian, and for participants who identified as a race/ethnicity other than White/Caucasian. This dichotomy was selected for a preliminary analysis because the majority of the participants were White/Caucasian, with there being nearly twice as many White/Caucasian participants than all other races combined. It was found that participants who were not White/Caucasian (M=5.61, SD=1.35) had significantly higher levels of social identity than those who identified as White/Caucasian (M=5.13, SD=1.56), $t(162)=1.97$, $p=.05$. Additionally, Cohen's effect size value ($d=.31$) suggested a small to medium effect size.

Table 2

Means and Standard Deviations for Variables in the Study by Race/Ethnicity

Variables	Race/Ethnicity			
	White/Caucasian		Non White/Non Caucasian	
	M	SD	M	SD
Facebook Usage	2.94	.73	3.17	.82
Personal-Emotional Adjustment	4.56	1.08	4.71	.90
Personal Identity	5.50	1.50	5.96	1.42
Social Adjustment	5.81	1.02	5.81	1.13
Social Identity	5.13*	1.56	5.61*	1.35

*$p \leq .05$
**$p \leq .01$

Time Spent on Facebook. In addition to the Facebook Usage scale, 160 participants estimated the amount of time they spend on Facebook each day with 10% spending less than 10 minutes (N=16), 29% spending 10-30 minutes (N=47), 29% spending 31-59 minutes (N=47), 18% spending 1-2 hours (N=29), and 13% spending more than 2 hours (N=21). Table 3 displays the means and standard deviations for each of the five variables for participants who indicated that they spend less than an hour on Facebook each day compared to participants who typically spend at least an hour on

Facebook each day. This dichotomy was selected for a preliminary analysis because previous studies indicated that spending an hour or more on Facebook each day was considered a high Facebook intensity (Ross, Orr, Sisic, Arseneault, Simmering, & Orr, 2009). Unsurprisingly, those who reported spending an hour or more on Facebook each day (M=3.36, SD=.72) had significantly higher levels of Facebook usage than those who indicated that they spend less than an hour on Facebook each day (M=2.88, SD=.75), $t(158)=3.80$, $p=.001$. Additionally, Cohen's effect size value ($d=.60$) suggested a medium to large effect size. Those who spend an hour or more on Facebook each day also reported higher levels of personal-emotional adjustment (M=4.88, SD=1.09) than those who spend less than an hour on Facebook (M=4.52, SD=.96), $t(158)=2.11$, $p=.04$. Additionally, Cohen's effect size value ($d=.34$) suggested a small to medium effect size. Participants who spend an hour or more on Facebook each day also reported higher levels of personal identity (M=6.08, SD=1.36) than those who spend less than an hour on Facebook each day (M=5.49, SD=1.47), $t(158)=2.41$, $p=.02$. Additionally, Cohen's effect size value ($d=.38$) suggested a small to medium effect size. Lastly, participants who spend an hour or more on Facebook each day reported higher levels of social identity (M=5.66, SD=1.50) than those who spend less than an hour on Facebook each day (M=5.14, SD=1.50), $t(158)=2.03$, $p=.04$. Additionally, Cohen's effect size value ($d=.33$) suggested a small to medium effect size.

Table 3

Means and Standard Deviations for Variables in the Study by Time Spent on Facebook

| Variables | Time Spent on Facebook Each Day | | | |
| | Less Than an Hour | | An Hour or More | |
	M	SD	M	SD
Facebook Usage	2.88**	.75	3.36**	.72
Personal-Emotional Adjustment	4.52*	.96	4.88*	1.09
Personal Identity	5.49*	1.47	6.08*	1.36
Social Adjustment	5.78	1.04	5.89	1.11
Social Identity	5.14*	1.50	5.66*	1.50

*$p \leq .05$
**$p \leq .01$

Mode of Participation. Finally, the majority of participants (63%) participated in the survey through Amazon Mechanical Turk, whereas the other 37% of the participants participated through connections to the researcher and through random selection via the Mason People Finder. Table 4 displays the means and standard deviations for each of the five variables for participants who participated via Amazon Mechanical Turk compared to the participants who accessed the online survey through other modes of participation.

It was found that participants who completed the study using Amazon Mechanical Turk had significantly higher levels of Facebook usage (M= 3.18, SD=.74) than students who took the survey through other modes of participation (M=2.52, SD=.63), $t(162)=5.03$, $p=.001$. Additionally, Cohen's effect size value ($d=.79$) suggested a medium to large effect size. Finally, participants who completed the study using Amazon Mechanical Turk had significantly higher levels of social identity (M=5.55, SD=.74) than those who took the survey through other modes of participation (M=4.50, SD=1.23), $t(162)=3.97$, $p=.001$.

Additionally, Cohen's effect size value ($d=.62$) suggested a medium to large effect size.

Table 4

Means and Standard Deviations for Variables in the Study by Mode of Participation

Variables	Amazon Mechanical Turk		Other Mode of Participation	
	M	SD	M	SD
Facebook Usage	3.18**	.74	2.52**	.63
Personal-Emotional Adjustment	4.59	1.05	4.70	.90
Personal Identity	5.74	1.49	5.42	1.47
Social Adjustment	5.83	1.10	5.74	.92
Social Identity	5.55**	1.50	4.50**	1.23

$**p \leq .01$
$*p \leq .05$

Measures

The complete survey instrument can be found in Appendix A.

Social Adjustment. The 20 social adjustment items were obtained from the

Social Adjustment Subsection of the Student Adaptation to College Questionnaire

(SACQ) (Baker & Siryk, 1986). All items from this scale were scored on a nine-point

rating scale with one being anchored as, "This doesn't apply to me at all", and nine being

anchored as, "This applies very closely to me". Five questions had a "N/A" option. For the majority of the items, numbers closer to nine indicate a higher sense of social adjustment whereas numbers closer to one indicate a lower sense of identity and adjustment. There were four items where the opposite is true and these items were reversed scored so that all correlations were calculated consistently. In this study, the coefficient alpha for this scale was .85.

Personal-Emotional Adjustment. Like the social adjustment items, the personal-emotional adjustment items were also obtained from a subsection of the SACQ (Baker & Siryk, 1986). There are 15 items on this scale. All items from this scale were scored on a nine-point rating scale with one being anchored as, "This doesn't apply to me at all", and nine being anchored as, "This applies very closely to me". None of these items had an "N/A" option. Unlike the social adjustment scale, for 11 of the items of this scale, numbers closer to nine indicate a *lower* sense of personal-emotional adjustment whereas numbers closer to one indicate a *higher* sense of personal-emotional adjustment. These 11 items were reverse-scored so that a higher score indicates higher adjustment. In this study, the coefficient alpha for this scale was .69. Chapter five will discuss possible reasons as to why this coefficient alpha was lower than the social adjustment scale, though they both originate from the SACQ.

Social Identity. In order to test the suggested parallel between social adjustment and Erikson's variable of intimacy, all eight items of the social identity subsection of the Social and Personal Identities Scale (SIPI) were used. All eight of these items were scored on a nine-point rating scale, with one being "Not at all important to who I am" and

nine being "extremely important to who I am." In this study, the coefficient alpha for this scale was .85.

Personal Identity. In order to test the suggested parallel between personal-emotional adjustment and Erikson's concept of identity, all eight items of the personal identity subsection of the Social and Personal Identities Scale (SIPI) were used. All eight of these items were scored on a nine-point rating scale, with one being "Not at all important to who I am" and nine being "extremely important to who I am." In this study, the coefficient alpha for this scale was .90.

Facebook Usage. The Facebook Usage Scale contained five items scored on a 5-point Likert scale (strongly disagree to strongly agree). The statements addressed the degree to which the participants use Facebook to meet new people and connect with existing acquaintances. In this study, the coefficient alpha for this scale was .85.

Demographics. The demographic information collected included the gender, age, race/ethnicity name of the college/university the participant attends and approximately how long the participant spends on Facebook each day. Gender was an important variable to conducting statistical analyses to answer the research questions, whereas the other demographic information was collected to describe the participation sample.

Procedure

The primary researcher met with faculty from the Orientation and Family Programs and Services (OFPS) office affiliated with University Life at George Mason University for assistance in recruiting participants for the study. The purpose of this specific department within University Life is to assist incoming first-year students in their

transition into George Mason University (George Mason University, 2013). Because its goal is to provide transitional support critical to both academic *and* personal success, the office of University Life was the most relevant to the personal-emotional and social adjustment components of the study. Unfortunately, because freshmen orientation courses are offered primarily in the fall semester and the current study was conducted in the spring semester, there were limited ways to recruit participants through University Life. Instead, participants were recruited through undergraduate courses unaffiliated with University Life, but with a high presence of freshmen students.

The measures were built in Engage, an online survey platform. The first item on the survey was the consent statement. This item was mandatory so that the survey platform did not allow the participant to advance to the next page until he/she agreed to the consent statement. Because of the Institutional Review Board's request of not making any additional questions in the survey mandatory, this was the only mandatory question in the survey. Because of the length of the survey, there was "Save and Edit Later" functionality enabled on the survey. Eight participants selected this option, but never continued later to submit a final response.

Research Design

This study was exploratory in nature. Prior to examining the statistical analyses that were used to answer each research question, it is helpful to reiterate the research questions. There were four overarching research questions in this study with the first research question being concerned with the relationships among the variables in the overall sample.

- RQ#1: Is there a relationship among Facebook usage, personal identity, social

    identity, personal-emotional adjustment and social adjustment?

    The next three research questions are concerned with gender. Research question

two related to between gender differences, research question three is related to within

gender differences, and the final research question is related to gender-based

relationships among the variables.

- RQ#2: Are there gender differences among Facebook usage, personal identity,

    social identity, personal-emotional adjustment and social adjustment?

- RQ#3: Within each gender, are there gender differences among personal identity,

    social identity, personal-emotional adjustment and social adjustment?

- RQ#4: Do the relationships among Facebook usage, personal-emotional

    adjustment, personal identity, social adjustment and social identity differ by

    gender?

While the first research question explores the relationships among the variables in the

overall sample, the final three research questions all aim to examine gender differences.

All data were collected through an online survey.

Analyses

  All analyses were quantitative in nature and used IBM SPSS 22.0 software. Prior

to exploring the analyses used in this study, it is important to note how the data were set

up. A SPSS data export from Engage, the online survey platform reported how each

participant responded to each question. Next, an average was calculated for each of the

five variables for each participant. In other words, each participant had an average score

between 1 and 9 for personal-emotional adjustment, personal identity, social adjustment and social identity, as well as an average score between 1 and 5 for Facebook usage. Each of the five variables had a total of 164 average scores, representative of the 164 participants who submitted a survey. One potential limitation is the fact that not every participant answered every question. All participants who answered at least one item on the scale received an average score for that variable. For instance, in the social adjustment scale, some average scores may contain the average of all 20 items, whereas other average scores have fewer items if the participant did not answer all 20 items. Also related to the social adjustment scale, some of the items had a not applicable answer option which was assigned a null score as opposed to a score ranging from 1 to 9. For instance, if the participant answered all 20 questions, but answered "not applicable" to the item related to getting along with his or her roommate, only the 19 items that had a score between 1 and 9 were calculated into the average social adjustment score for that participant. As previously mentioned, it is important to note that some of the items on the social adjustment and personal-emotional adjustment scales were reverse-scored, so that for all items, a scores closer to 9 indicate higher levels of adjustment whereas scores closer to 1 indicate lower levels of adjustment.

Because the first research question was concerned with the overall relationship among the variables, the analysis was the Pearson product-moment correlation coefficient (PPMCC), or an r-score. The SPSS file was set up so that a single participant's mean score on one variable was correlated with his or her mean score on another variable. For instance, to examine the relationship between social adjustment and social identity, a

single participant's average score for social adjustment was correlated with his or her average score for social identity. This was an important step to the data set up to ensure that the correlational statistics were an accurate depiction of the findings. In other words, if one participant's social adjustment score was correlated with a different participants social identity score, the correlational findings would have been erroneous. Since the next two research questions concerned mean differences, a series of t tests were conducted to investigate both between gender and within gender differences among the variables. In order to obtain a single mean for each of the five variables, each of the 164 means were averaged. For instance, each of the 164 participants had a mean for social adjustment that was calculated based on an average of the items scored 1 to 9 that they answered on the social adjustment scale. Those 164 means were then averaged to obtain the overall mean. This same procedure was used for obtaining the overall mean for the remaining four variables in the study. Like research questions two and three, the final research questions used gender as a variable. Since the fourth research question asked about the relationships among each variable, the Pearson product-moment correlation coefficient (PPMCC), or an r-score, was used for this analysis.

CHAPTER FOUR: RESULTS

The purpose of this study was to explore the relationship among Facebook usage, personal identity, social identity, personal-emotional adjustment, and social adjustment. Additionally, this study aimed to explain any differences among these variables within each gender as well as between each gender.

RQ#1. Is there a relationship among Facebook usage, personal identity, social identity, personal-emotional adjustment and social adjustment? Table 11 displays the correlations among all five variables in the overall sample to answer research question number three. In the overall sample, Facebook usage was significantly positively correlated with personal identity ($r=.34$, $p=.001$), social adjustment ($r=.34$, $p=.001$), and social identity ($r=.46$, $p=.001$). Personal-emotional adjustment was significantly positively correlated with social adjustment ($r=.23$, $p=.001$), as were personal identity and social adjustment ($r=.24$, $p=.001$), personal identity and social identity ($r=.22$, $p=.01$) and social adjustment and social identity ($r=.28$, $p=.001$).

Table 5

Pearson Correlation Matrix Among Variables—Overall Sample

	1	2	3	4	5
1. Facebook Usage	-				
2. Personal-Emotional Adjustment	.05	-			
3. Personal Identity	.34**	.11	-		
4. Social Adjustment	.34**	.23**	.24**	-	
5. Social Identity	.46**	.05	.22**	.28**	-

$**p \leq .01$

RQ#2. Are there gender differences among Facebook usage, personal identity, social identity, personal-emotional adjustment and social adjustment?

Table 6 displays the findings for the between gender comparisons for each variable, to answer research question number one. There were no significant differences found between genders.

Table 6

Results of t-test and Descriptive Statistics for Between Gender Comparisons

	Group							
	Male			Female			t	*p*
	M	SD	N	M	SD	N		
Facebook Usage	3.02	.85	78	3.04	.69	85	.17	.87
Personal-Emotional Adjustment	4.58	.92	78	4.66	1.11	85	.50	.62
Personal Identity	5.53	1.49	78	5.79	1.49	85	1.11	.27
Social Adjustment	5.73	1.12	78	5.89	1.00	85	.97	.34
Social Identity	5.25	1.52	78	5.32	1.49	85	.30	.78

RQ#3. Within each gender, are there gender differences between personal-emotional adjustment and personal identity? There are four components to this research question. Table 7 displays the findings for the within gender comparisons between personal-emotional adjustment and personal identity to answer one component of research question three. It was found that men have significantly higher levels of personal identity (M=5.53, SD=1.49) than personal-emotional adjustment (M=4.58, SD=.92), $t(77)=4.79$, $p=.001$. Additionally, Cohen's effect size value ($d=1.04$) suggested

a large effect size. Women also had significantly higher levels of personal identity

(M=5.79, SD=1.49) than personal-emotional adjustment (M=4.66, SD=1.11), $t(84)=5.61$,

$p=.001$. Additionally, Cohen's effect size value ($d=1.22$) suggested a large effect size.

Table 7

Personal-Emotional Adjustment and Personal Identity—Within Gender

	Personal-Emotional Adjustment		Personal Identity				
	M	SD	M	SD	N	t	*p*
Male	4.58	.92	5.53	1.49	78	4.79**	.001
Female	4.66	1.11	5.79	1.49	85	5.61**	.001

*p≤.05
**p≤ .01

Table 8 displays the findings for the within gender comparisons between social

adjustment and social identity to answer another component of research question three. It

was found that men have significantly higher levels of social adjustment (M=5.73,

SD=1.12) than social identity (M=5.25, SD=1.52), $t(77)=2.23$, $p=.03$. Additionally,

Cohen's effect size value ($d=.51$) suggested a medium effect size. Women also had

significantly higher levels of social adjustment (M=5.89, SD=1.00) than social identity

(M=5.32, SD=1.49), $t(84)=2.93$, $p=.001$. Additionally, Cohen's effect size value ($d=.64$)

suggested a medium to large effect size.

Table 8

Social Adjustment and Social Identity—Within Gender

	Social Adjustment		Social Identity				
	M	SD	M	SD	N	t	*p*
Male	5.73	1.12	5.25	1.52	78	2.25*	.03
Female	5.89	1.00	5.32	1.49	85	2.93**	.001

*$p\leq.05$
**$p\leq.01$

Table 9 displays the findings for the within gender comparisons between

personal-emotional adjustment and social adjustment to answer another component of

research question three. It was found that men have significantly higher levels of social

adjustment (M=5.73, SD=1.12) than personal-emotional adjustment (M=4.58, SD=.92),

$t(77)=7.01$, $p=.001$. Additionally, Cohen's effect size value ($d=1.60$) suggested a large

effect size. Women also displayed significantly higher levels of social adjustment

(M=5.89, SD=1.00) than personal-emotional adjustment (M=4.66, SD=1.11), $t(84)=7.59$,

$p=.001$. Additionally, Cohen's effect size value ($d=1.66$) suggested a large effect size.

Table 9

Personal-Emotional Adjustment and Social Adjustment—Within Gender

	Personal-Emotional Adjustment		Social Adjustment				
	M	SD	M	SD	N	t	*p*
Male	4.58	.92	5.73	1.12	78	7.01**	.001
Female	4.66	1.11	5.89	1.00	85	7.59**	.001

*$p\leq.05$
**$p\leq.01$

Finally, Table 10 displays the findings for the within gender comparisons between

personal identity and identity to answer the final component of research question three. It

was found that women have significantly higher levels of personal identity (M=5.79,

SD=1.49) than social identity (M=5.32, SD=1.49), $t(84)=2.06$, $p=.04$. Additionally,

Cohen's effect size value ($d=.45$) suggested a small to medium effect size. Investigating

the within gender comparisons between personal identity and social adjustment as well as

social identity and personal-emotional adjustment goes beyond the scope of the study.

Table 10

Personal Identity and Social Identity—Within Gender

	Personal Identity		Social Identity				
	M	SD	M	SD	N	t	*p*
Male	5.53	1.49	5.25	1.52	78	1.16	.25
Female	5.79	1.49	5.32	1.49	85	2.06*	.04

*p≤.05

RQ#4. Do the relationships among Facebook usage, personal-emotional adjustment, personal identity, social adjustment and social identity differ by gender? Table 11 displays the correlations among all five variables in the male sample to help answer research question four. In the male sample, Facebook usage was significantly positively correlated with personal identity (*r*=.46, *p*=.001), social adjustment (*r*=.48, *p*=.001), and social identity (*r*=.36, *p*=.001). Personal-emotional adjustment and personal identity were significantly positively correlated (*r*=.24, *p*=.04), as well as personal identity and social adjustment (*r*=.36, *p*=.001), personal identity and social identity (*r*=.40, *p*=.001), and lastly, social adjustment and social identity (*r*=.36, *p*=.001).

Table 11

Pearson Correlation Matrix Among Variables—Male Sample

	1	2	3	4	5
1. Facebook Usage	-				
2. Personal-Emotional Adjustment	-0.01	-			
3. Personal Identity	.46**	.24*	-		
4. Social Adjustment	.48**	.14	.36**	-	
5. Social Identity	.36**	.04	.40**	.36**	-

*p≤.05
**p≤ .01

RQ#4. Do the relationships among Facebook usage, personal-emotional adjustment, personal identity, social adjustment and social identity differ by gender? Table 12 displays the correlations among all five variables in the female sample to help answer research question four. In the female sample, Facebook usage was significantly positively correlated with social identity ($r=.29$, $p=.01$). Also in the female sample, personal-emotional adjustment and social adjustment were significantly positively correlated ($r=.36$, $p=.001$), as well as social adjustment and social identity ($r=.23$, $p=.04$).

Table 12

Pearson Correlation Matrix Among Variables—Female Sample

**$p \le .01$

	1	2	3	4	5
1. Facebook Usage	-				
2. Personal-Emotional Adjustment	.11	-			
3. Personal Identity	.21	.01	-		
4. Social Adjustment	.14	.36**	.10	-	
5. Social Identity	.29**	.06	.05	.23**	-

CHAPTER FIVE: DISCUSSION

Discussion of the Results and Implications

Prior to interpreting the specific significant findings of the study, some high-level trends in the data will be summarized. In research question one, it was found that all significant findings were positive correlations, leaving no significant negative correlations. In other words, there were no data in this study suggesting that Facebook usage is detrimental to various components of college adjustment and identity. When considering gender, there were no significant findings in the between gender comparisons, however, there were several significant findings in the within gender comparisons. Since there were no significant findings when examining the between gender comparisons, it is unsurprising that most significant findings in the within gender analysis held the same pattern when investigating the same two variables in the other gender. For instance, both men and women had significantly higher levels of social adjustment compared to social identity. When considering the gender-based correlational analyses, there were more significant findings in the overall sample and in the male sample than in the female sample.

RQ#1: Is there a relationship among Facebook usage, personal identity, social identity, personal-emotional adjustment and social adjustment? In order to

investigate the answer to this research question, correlations in the entire sample of participants were explored. It was found that Facebook usage was significantly positively correlated with personal identity, social adjustment, and social identity. The significant positive correlations related to Facebook usage are reminiscent of the preliminary analyses demonstrating that the participants who spend an hour or more on Facebook each day have higher levels of personal-emotional adjustment, personal identity and social identity. Though the literature suggests that social media is detrimental to well-being, there are also studies supporting that engaging in social media can be beneficial for college students. Computer mediated communication (CMC) often allows college freshmen to better maintain long-distance friendships that may have otherwise dissolved (Ellison, Steinfield, & Lampe, 2007; Ellison, Steinfield, & Lampe, 2011). Additionally, when studied in college populations, CMC has been positively related to psychological adjustment, self-esteem, closeness with friends, and enhanced well-being (Cummings, Lee, & Kraut, 2006; Shaw & Grant, 2002; Steinfield, Ellison, & Lampe, 2008). More specifically, CMC helped decrease loneliness and depression while simultaneously enhancing feelings of social support and self-esteem (Shaw & Grant). Additionally, people who are shy feel much less inhibited online than they do offline, implying because of the Internet, they are now able to form a number of relationships they otherwise wouldn't have developed (Huang & Leung, 2009). Additional research found that that Facebook can contribute to higher levels of both personal identity and social identity. For

instance, one study suggested that Facebook increases the sense of social identity in young adults, due to the 24/7 accessibility of friendships from various social groups (Niland, Lyons, Goodwin, & Hutton, 2015). Relatedly, it has been found that social use of the Internet has a positive relationship between self and identity, social interaction and relationships (McKenna & Bargh, 2000). Additional studies have shown that social media can be used to shape identity in a way that results in higher self-esteem and positive self-views (Gentile et al., 2012). The findings of the current study support these findings in the literature that Facebook can contribute to a stronger sense of well-being in this case, better social adjustment to college as well as higher levels of personal and social identity.

In addition to the significant correlations related to Facebook usage, additional significant findings related to this research question were observed. Personal-emotional adjustment was significantly positively correlated with social adjustment, as were personal identity and social adjustment, personal identity and social identity, and social adjustment and social identity. The relationship between social identity and social adjustment was anticipated due to the predicted relationship between Erikson's intimacy versus isolation stage of development and social adjustment. The other significant findings related to this research question all suggest that higher levels of adjustment are indicative of higher levels of identity, and vice versa. This idea further supports that Erikson's stages of development may be more fluid than what was initially implied by the explanation of his theory (Whitbourne, Sneed & Sayer, 2009). Erikson indicates that identity versus role confusion is a conflict of adolescence whereas intimacy versus

isolation is a conflict of young adulthood, however, in one longitudinal study focusing on psychosocial development, it was found that this may not always be the case (Erikson, 1968; Whitbourne et al.). This study investigated college students through middle age and found that while the stages leading up to identity versus role confusion typically followed the same pattern, development becomes more ambiguous during the identity versus role confusion and intimacy versus isolation stages. It was found that these ambiguities are due to factors such as gender, occupational prestige, and parenthood status (Whitbourne et al.). While role confusion may impede a college freshmen from developing intimate relationships, it is not to say that he or she will never develop a sense of identity. As previously discussed, the results of this current study provide evidence suggesting that individuals experience feelings associated with intimacy alongside establishing a strong sense of identity. In other words, one interpretation of the findings of the current study could be that college freshmen are overcoming the conflicts of both identity versus role confusion and intimacy versus isolation during their freshmen year.

RQ#2. Are there gender differences among Facebook usage, personal identity, social identity, personal-emotional adjustment and social adjustment? There were no significant differences between men and women in any of the five variables in the study. The fact that there were no significant differences was unanticipated, given the previous research suggesting otherwise (Constantinople, 1969; Schiedel & Marcia, 1985). It is important to recognize that just because there were no significant findings for this research question does not mean the results were unimportant. Many of the studies that found gender differences aimed to find evidence

refuting Erikson's theory, since Erikson's theory did not emphasize the role of gender. In other words, the findings of this study support Erikson's initial claims that various stages of development occur at approximately the same ages across the population, regardless of gender (Erikson, 1950; Erikson 1959; Erikson, 1963; Erikson, 1968). Later in this chapter, ideas for future studies that may yield gender differences will be explored.

RQ#3: Within each gender, are there gender differences among personal identity, social identity, personal-emotional adjustment and social adjustment? While research question one did not yield any significant findings, each set of analyses related to research question two contained significant findings. The first set of analyses related to research question two investigated within gender differences in personal-emotional adjustment and personal identity. Research found that personal identity was significantly higher than personal-emotional adjustment in both men and women. With social adjustment and social identity on the other hand, it was found that social adjustment levels were significantly higher than social identity levels for both men and women. When looking at the personal variables, identity was higher, but when looking at the social variables, adjustment was higher. Additional analyses for this research question examined within gender differences for the adjustment variables and found that levels of social adjustment were significantly higher than levels of personal-emotional adjustment for each gender. Lastly, when looking at the identity variables together, it was found that personal identity was significantly higher than social identity, but only for women. Because there were no significant gender differences in research question one, it is unsurprising that the with gender trends are the same for both men and women when

considering the relationship between personal-emotional adjustment and personal identity, social adjustment and social identity, and personal-emotional adjustment and social adjustment. The fact that women had significantly higher levels of personal identity over social identity, however, is a trend that should be further examined, considering the evidence suggesting otherwise (Constantinople, 1969; Schiedel & Marcia, 1985; Zucker, Ostrove, & Stewart, 2002). Currently, no published studies have found higher levels of personal identity compared to social identity in a female sample. Future studies could further examine this trend through the lens of social identity theory (Tajfel, 2010). Doing so would help determine whether or not this is trend that can be replicated in other samples, or if it was a finding unique to the participant sample for the current study.

As previously mentioned when summarizing the problem this study addressed, the purpose of this study was not explore ways to improve adjustment, however, the findings could be used to help improve personal-emotional and social adjustment for both men and women of future freshmen students at universities nationwide. The goal of the university should be to improve the levels of personal-emotional and social adjustment in its freshmen students, both male and female. Keeping this goal in mind, it should be reiterated that this study demonstrated higher levels of social adjustment than personal-emotional adjustment in both men and women. Also in both men and women, levels of social adjustment were significantly higher than levels of social identity and levels of personal identity were significantly higher than levels of personal-emotional adjustment in both genders. Just because one variable reported significantly higher means than

another variable, however, does not mean the variable with the higher mean should be neglected entirely. For instance, though social adjustment was significantly higher than personal-emotional adjustment for both men and women, on a scale of 1 to 9, the female mean for social adjustment was only 5.89 while the male mean was only 5.73, both out of 9. While the primary focus should arguably be on ensuring higher levels of personal-emotional adjustment, bringing the cumulative social adjustment scores closer to a 9 should be a priority as well. These findings exemplify the idea that having a higher adjustment level does not necessarily equate to having sufficient levels of adjustment.

While most of the trends in the within gender comparisons held true for both genders, there was one case where differing patterns based on gender were observed. In the female sample, personal identity was significantly higher than social identity, whereas the difference between these variables in the male sample was not significant. As previously mentioned when examining the adjustment variables, higher levels of identity do not necessarily indicate adequate levels of identity. Though the primary focus of the universities should arguably be bringing up the levels of social identity in the female population, it is not to say that the higher levels of personal identity in this sample are indicative of sufficient levels of identity. Like with the adjustment scale, the identity scales were scored from 1 to 9 with numbers closer to 9 indicating higher levels of identity. Keeping this in mind, though personal identity scored higher than social identity in women, the personal identity mean was only 5.79 out of 9. As previously mentioned, though the primary focus should arguably be on ensuring higher levels of social identity in women, bringing the cumulative personal identity score closer to a 9 should be a

priority as well. An additional element of this finding to consider is the fact that this trend was not observed in the male sample.

RQ#4: Do the relationships among Facebook usage, personal-emotional adjustment, personal identity, social adjustment and social identity differ by gender? In order to draw conclusions related to this research question, the data in Table 11 and Table 12 must be examined. As previously mentioned, all significant correlations were positive, and there were more significant correlations in the male sample than the female sample. In both the male and the female sample, there were significant positive correlations between Facebook usage and social identity as well as social adjustment and social identity. There were observed gender differences in these data as well, with there being a significant positive correlation between personal-emotional adjustment and social adjustment, in the female sample, but not the male sample. As previously mentioned, this trend was also reported in the overall sample. There were no significant trends in the female data that were not also reported in the overall sample.

When looking at the male sample, there were significant correlations between Facebook usage and personal identity, as well as Facebook usage and social adjustment that were not observed in the female sample, but were present in the overall sample. This finding was anticipated since previous research demonstrated that there was a significant positive relationship between social use of the Internet and college adjustment, but only in males (Lanthier &Windham, 2004). One possible explanation for this relationship in men is that the Internet allows men to be more open and expressive, which is counter to the male stereotype (Morahan-Martin, 1998). Other findings from the male sample that

were not observed in the female sample, but were present in the overall sample include the relationship between personal identity and social adjustment, as well as the relationship between personal identity and social identity. There was one significant finding that was in the male sample that was neither in the female sample nor the overall sample, and that was the relationship between personal-emotional adjustment and personal identity. As with the previously mentioned personal identity and social identity in women, currently, no published studies have found a relationship between personal-emotional adjustment and personal identity that is only present in the male sample. Follow up studies could examine whether or not this trend can be replicated in other samples, or if it is a finding unique to the sample of the population that participated in the survey.

Limitations

Though there were numerous significant findings in this study, there were limitations in its design. One limitation includes whether or not the personal identity scale and the social identity scale are representative of Erikson's concepts of identity and intimacy, respectively. Because Erikson's concepts of identity and intimacy are abstract variables, they are hard to quantify, particularly in a scale that is only eight items. For instance, when considering identity, Erikson's concept is broad and encompasses all beliefs, values and opinions of an individual. The personal identity scale on the other hand, has the participant rate how important eight characteristics are to his or her identity. Keeping this in mind, scoring low on the personal identity measure used in this study is not necessarily indicative of low levels of personal identity. For instance, items on this

scale include variables such as rebelliousness and creativity. Though a participant may not identify as rebellious or creative, he or she could have a solid sense of identity made up of different characteristics that were not captured in the scale. Relatedly, when considering Erikson's concept of intimacy, the *strength* of the interpersonal relationships is of relevance, whereas in the social identity scale, the *importance* of these interpersonal relationships was considered. Though strength and importance are related, they are not synonymous. For instance, one item on the social identity scale asks the participant to rate the importance of his or her gender group. The participant could indicate that having interpersonal relationships with other people of the same gender may be very important to his or her identity, however, the strength of those relationships in that individual's life may not be very strong. In this scenario, there would be a discrepancy between the social identity score and the actual levels of intimacy in the participant's life, as defined by Erikson. Though there were significant findings in the study related to personal and social identity, it is uncertain as to whether or not these measures were accurate depictions of Erikson's identity and intimacy variables, respectively.

Another finding from the literature review suggests that low levels of role confusion do not necessarily indicate high levels of identity (Constantinople, 1969). A future direction for related research would be to study the counterparts of identity and intimacy; role confusion and isolation, respectively, particularly when looking at various levels of Facebook usage. Even in the 1960s, long before the advent of Facebook and social media, it was discovered that men and women could have comparable levels of identity with differing levels of role confusion (Constantinople,1969). A future study

could investigate the relationship between Facebook usage and role confusion and isolation, in addition to the existing variables of identity and intimacy, and investigate what the gender differences may be. The relationships and gender differences among these variables could provide additional evidence to help determine whether or not the absence of role confusion indicates a sense of identity, and similarly, whether or not the absence of feelings of isolation implies that the individual has established intimate interpersonal relationships.

Another limitation of the current study is the method by which the participants were recruited. As previously mentioned, it was asked that participants all have an active Facebook account, however, there was no way of verifying that this was true. In a future study, a question could be asked of the participant to indicate whether or not he or she has an active Facebook account and if so, what the URL to the Facebook page is. Doing this would allow the researcher to eliminate all participants without an active Facebook account from the analyses. Also related to the method by which the participants were recruited, it is unclear whether or not all participants were actually freshmen in college. While some of the participants were sought out because of their freshmen status, the majority of the participants were not actively targeted, therefore it is unclear whether or not they are actually freshmen students. For instance, the mean age of participants was 22-years-old, whereas the anticipated mean age was 18 or 19-years-old. This finding indicates that perhaps not all of the participants were in fact freshmen in college, or college students at all. Even if all of the participants were freshmen in college, future studies, particularly those related to the Eriksonian framework, could be controlled so

that all participants who are not 18 or 19-years-old would not be included in the analyses. In additional future direction could be to include these non-traditional freshmen students who are older than 18 or 19-years-old to see if their results differ from the traditional freshmen students who enroll in college immediately after high school graduation.

While this study does include several valuable variables, it is focused, and therefore limited in scope when considering all of the potential factors that could contribute to personal-emotional and social adjustment in college freshmen. One factor that could contribute to the various components of college adjustment are personality differences (Baron and Kenny, 1986). In a future study, Facebook usage could be the dependent variable and the independent variable could be different personality types using the framework of a certain personality theory. Though investigating personality traits goes beyond the scope of the current study, it is important to recognize other contributing factors to personal-emotional and social adjustment for a comprehensive understanding as to how Erikson's theory could play a role in explaining these variables. One study investigated the role that personality characteristics, such as shyness and sociability play in the college transition (Mounts et al., 2006). High levels of shyness coupled with low levels of sociability and parental support resulted in feelings of loneliness therefore contributing to depression and anxiety during the college transition. This suggests that excessive shyness could serve as a barrier during this developmental period in which an individual must establish his or her identity in order to prevent difficulty in forming important relationships as he/she progresses through emerging adulthood. Another study related to shyness found that shy emerging adults were more

prone to anxiety, depression, and low self-esteem (Nelson, Padilla-Walker, Baddger, Barry, Carroll, & Madsen, 2008). In turn, this has been correlated with poorer relationship quality between parents, best friends, and romantic partners (Nelson et al., 2008). In the critical years of emerging adulthood, seeking support from others in emotional situations is beneficial, and in some cases necessary, for achieving mastery in establishing a personal identity. Erikson's theory suggests that being confident in one's identity is critical to an individual as he or she continues to develop interpersonal relationships throughout the college years, and maturation throughout adulthood in general.

Another variable that could result in differences in levels of college adjustment could be the participant's environment during high school. For instance, a participant who went to a boarding school for high school will likely be more adjusted to the pressures of living away from home than a participant who had lived with his or her parents up until the start of college. If the participant is a commuter student to college on the other hand, he or she will not experience living away from home its related stresses thus affecting that component of college adjustment. These factors may also relate to differences in Facebook usage as well, meaning that some personalities may be more characteristic of increased Facebook usage.

Another limitation of the study was the scale used to assess Facebook usage. One major limitation of the current study is that the survey item related to how much time the participant spends on Facebook was a discrete variable rather than a continuous variable. While this provided valuable descriptive information in describing the participation

sample, if the question was worded so that participants could indicate the exact average number of minutes they spend on Facebook each day rather than selecting from an interval of time, that measure could have been incorporated into the Facebook usage analyses. Instead, Facebook usage was simply measured based on the actions and behaviors the participant engages in when using Facebook. The variable of Facebook usage could be more comprehensive in future studies to not only include the actions the participant partakes in while on Facebook, but also, the amount of time the participant spends on Facebook each day.

In addition to the limitations related to the variable of Facebook usage itself, another limitation of this study is the quickly evolving world of technology, the Internet, and social media. While Facebook is still by far the most popular social media site overall, other social media platforms may be relevant to current college freshmen. For instance, Instagram reportedly is the most popular social service and has the most engaged users than any other social media app used by teenagers (Instagram, 2014). Future studies could apply the framework of this study to other social media platforms such as Instagram or Twitter. One future study could focus on social media usage as one of the dependent variables as opposed to an independent variable. For example, in the current study, the primary dependent variables are the variables of personal-emotional adjustment and social adjustment. In a future study, the primary dependent variable could be the type of social media platform with the independent variable being gender and high and low levels of college adjustment. Alternatively, if Facebook were to remain the primary social media platform of concern, it would be worth revisiting the Facebook

usage scale that was published in 2007 since Facebook is a quickly evolving social media tool. For instance, the current study excludes questions from the Facebook usage scale related to the Facebook wall, since it is now has a different functionality and is referred to as a timeline. Relatedly, the verbiage of "logging on" to Facebook is no longer relevant with the advent of smartphones and social media smartphone applications. Finally, the Facebook usage had a question related to feelings of pride for having an active Facebook profile. While a Facebook profile may have been perceived as a stamp of approval in 2007, it is more a way of life for college freshmen eight years later.

Though there are not easy alternatives to self-report scales, any subjective measurement has room for error. In this study, differences due to subjective perceptions are more likely in the adjustment scales as opposed to the Facebook scales. One example is in the social adjustment item, "I am making new friends" may be perceived differently by women than by men. For instance, the way women define friendship may be different than the way men define friendship, but delving into the variable of friendship goes beyond the scope of the current study. Additionally on the social adjustment scale, participants scoring high on the "I am satisfied with my social life" do not necessarily have an involved social life. An introverted individual could have an objectively sparse social life, but score highly on this item solely because he or she is satisfied with having minimal social interactions. In other words, an item measuring the level of sociability is different than an item measuring the satisfaction the participant has with her or her sociability, or lack thereof.

When considering the personal-emotional adjustment scale, similar concerns regarding subjectivity. The "I am able to control my emotions well" question on the personal-emotional adjustment scale is a highly subjective item. What constitutes being able to control one's emotions well is highly dependent on the individual's interpretation of successfully managing his or her emotions, making it difficult to objectively determine how each participant interprets the meaning of controlling his or her emotions well. In addition to some of the items posing a problem due to their subjectivity, particularly when considering the personal-emotional adjustment scale, other more objective items within this scale may be problematic due to the fact that they could be measuring variables other than what they are intending to measure. This idea may relate to the coefficient alpha of only .69 for this scale, compared to the coefficient alpha of the other scales in the study that ranged from .85 to .90. For instance, because the definition of personal-emotional adjustment includes the absence of somatic issues, there are several questions in the personal-emotional adjustment scale related to physical health. While items such as "I have felt changes in my appetite recently" and "I get a lot of headaches" could be directly related to personal-emotional adjustment, they could also be a result of health concerns that are unrelated to college adjustment. Having so many questions on the personal-emotional adjustment scale related to the participant's somatic health without giving the participant the opportunity to indicate any pre-existing health conditions can be problematic. A future study of personal-emotional adjustment could focus on items unique to college adjustment such as the existing item on the personal-emotional adjustment scale, "I have trouble coping with college stress." In summary, the

items on the personal-emotional adjustment scale capture the variable of personal-emotional adjustment as defined, however, these items suggest that portions of the operationalization of personal-emotional adjustment should be redefined or amended. For instance, rather than defining personal-emotional adjustment as the absence of somatic problems, the definition could specify that personal-emotional adjustment should be the absence of somatic problems resulting from a stressful college environment. Additionally, when looking at the three-part definition of personal-emotional adjustment, it does not appear that any one part carries more weight than the other, however, when you look at the items on the scale, this is not the case. Of the 15 items on the scale, eight items are directly related to somatic problems whereas the other seven items encompass the coping with college stress and subjective well-being combined. Because of the aforementioned challenges of emphasizing somatic health issues, an updated scale would include more items pertaining to the other parts of the definition of the variable.

Future Directions

Though many of the aforementioned limitations have implications for future research, there are additional future directions that should be examined. Several limitations regarding the personal identity and social identity scales of the SIPI were discussed and as a follow up, additional measures that could depict Erikson's concept of identity and intimacy could be explored. One study used the Identity Scale (IDS) to measure identity versus role confusion (Ochse & Plug, 1986) in addition to the Erikson Psychosocial Stage Inventory (EPSI) to measure intimacy versus isolation (Rosenthal, Gurney, & Moore, 1981). These scales were used in a study investigating the relationship

among an individual's sense of identity and how that relates to the development of intimacy (Dunkel and Sefcek, 2009). As predicted, one of the findings of this study included a significant relationship between identity and intimacy (Dunkel and Sefcek, 2009). This is reflective of the relationship between personal identity and social identity in the current study. Though the coefficient alpha on the EPSI was lower than the reliability measure on the social identity scale, because the EPSI was developed specifically to measure Erikson's concept of intimacy, this scale likely would have been a more accurate measure of intimacy. A future study could also include a meta-analysis of various scales that aim to capture Erikson's abstract variables of identity and intimacy, and even their counterparts of role confusion and isolation. The goal of this study could be to determine which scales are the most effective measures for quantifying these variables so that future research related to the current study can use the most accurate scales.

Other future directions do not necessarily refer to follow up studies entirely, but rather, further analyses of the existing data from the current study. For instance, current analyses were reported in aggregate, in other words, a single mean score representative of each variable was calculated. Further analyses could include an item analysis for each of the five scales. This could reveal that one item in particular tends to yield significantly lower scores, suggesting that it is weighing down the overall score for each variable. For instance, if an item analysis indicates that participants are struggling with sleeping well far more than any other item on the personal-emotional adjustment scale, resources could be focused on strategies of how to get improved sleep. Additionally, an item analysis on

the social adjustment scale could reveal that most participants are scoring low on the item related to informal interaction with professors compared to other items on the scale. If this were to be true, the university could focus its efforts on offering strategies on ways to improve communication with professors, and the resulting benefits of doing so. When considering Facebook usage, there may be certain patterns of behavior on Facebook that are contributing to higher levels of identity and adjustment. For instance, it may be that the item related to using Facebook to connect with people in class could be contributing to college adjustment. Though there were no significant gender differences in Facebook usage when the results were reported in aggregate, there may be significant gender differences if each of the five items on the scale were investigated in isolation. Isolating these items could help universities determine which components of Facebook are beneficial, and if any are particularly detrimental. Universities could use this information to educate their students, so they can make informed decisions as to whether or not having an active Facebook profile is the best decision for them during their freshmen year of college. Additional future analyses could be conducted on the within gender analyses. Current analyses neither include within gender comparison between personal-emotional adjustment and social identity nor the within gender comparison between social adjustment and personal identity. While these relationships are explored through correlational analyses in research questions three and four, examining mean differences among all five variables in the context of gender could provide additional valuable findings.

While the current study was quantitative in nature, future directions could take a qualitative approach. As previously mentioned, Erikson's concepts of identity and intimacy are difficult to operationalize using a quantitative scale. To work around this limitation, in addition to using the personal identity scale, an open-ended question along the lines of "in 500 words or less, describe what identifies you" could have been asked of the participant. If the participant scores low on the personal identity scale, a theme analysis of the open-ended question could reveal what the characteristics the individual considers important to his or her identity. It would be anticipated that the in this scenario, the themes identified in the open-ended question would be different from the eight characteristics that are quantified on the existing personal identity scale. These findings could be used in even further follow up studies to develop a more comprehensive personal identity scale. This same method could be applied to the social identity scale. For instance, in addition to the existing social identity scale, an item along the lines of "In 500 words or less, describe your strongest interpersonal relationships" could have been asked of the participant. If the participant scores low on the social identity scale, a theme analysis of the open-ended question could reveal which group memberships the participant considers important to his or her identity. As in the personal identity scale, it would be anticipated that the themes identified in this open-ended question would be different from the eight group memberships that are quantified on the existing social identity scale. These findings could be used in even further follow up studies to develop a more comprehensive social identity scale.

Summary and Implications

The purpose of this study was to explore the relationship among Facebook usage, personal identity, social identity, personal-emotional adjustment, and social adjustment. Additionally, this study aimed to explain any differences among these variables within each gender as well as between each gender. When examining the first research question, a positive relationship between social adjustment and social identity was found as well as a positive relationship between social adjustment and personal identity. These findings suggest that Erikson's identity versus role confusion and intimacy versus isolation stages of development could be related to social adjustment. When exploring research question two, it was found that there were no significant mean differences in any of the variables between genders. While there is preexisting literature suggesting that gender plays a role in Erikson's proposed stages of development, these findings support Erikson's theory that identity and intimacy develop at approximately the same age, regardless of gender. While some of these findings were predicted based on existing research reported in the literature review, other findings were more exploratory in nature and there were therefore the anticipated results were unclear. For instance, due to the reported parallels between Erikson's stages represented by the identity variables and college adjustment, the relationship between social identity and social adjustment was anticipated. Additional parallels were also anticipated between the personal variables (personal-emotional adjustment and personal identity), the social variables (social adjustment and social identity), the adjustment variables (personal-emotional adjustment and social adjustment) and the identity variables (personal identity and social identity). These predicted parallel relationships were evident based on the comparative analyses that were selected to

examine research question two. Additionally, when addressing correlational research questions three and four, various combinations of these parallels were depicted in the female sample and the male sample. Some of the more exploratory, or unanticipated, findings include the relationship between personal identity and social adjustment. As discussed, no studies regarding the gender-based relationship between social identity and personal-emotional adjustment as well as the gender-based relationship between personal identity and social adjustment have been examined in detail, so the importance of follow up research focusing on these unanticipated significant findings was discussed.

Though the literature holds mixed findings related to the role of gender when considering variables related to Erikson's stages of development, the most ambiguous findings are evident when examining the role of Facebook on variables related to well-being. For every study that claims Facebook and social media relates to sadness and loneliness, there is another study stating the opposite. The current study supports the latter school of thought by providing evidence of a positive relationship between Facebook usage and all measured variables of adjustment and identity, except personal-emotional adjustment. As a follow up, the low reliability of the personal-emotional adjustment scale was discussed in addition to ideas of how to improve this measure for future studies. While there were no mean differences based on gender, there were gender differences in the relationships among the variables, and those differences were discussed when investigating the results related to research question four. Because this study does not establish that Facebook *causes* a greater sense of personal identity, social identity and social adjustment, ideas for future research involving moderating factors such as

personality were explored. Overall, this study provides a basis for research supporting college students using Facebook while paving a foundation for future studies in the field.

Though the purpose of this study was not explore ways to improve adjustment, the findings could be used to help improve personal-emotional and social adjustment for both men and women of future freshmen students at universities nationwide. Additional studies could explore existing services and how effective those programs are at improving personal-emotional and social adjustment. While the student's sense of identity is arguably not the responsibility of the university, it is important for colleges nationwide to be mindful of the relationship between personal and social identity and social adjustment when evaluating existing programs and developing new ones. Because this current study researched college freshmen, some of the most relevant programs these results could inform are university orientation services. For instance, additional studies, both quantitative and qualitative, could gauge the student perceptions of how they believe various orientation programs and services are preparing them for a smooth adjustment to college, both social and emotionally. Results in this type of study could be used to further explain and discuss the significant findings of the current study. For instance, both men and women scored significantly lower on personal-emotional adjustment than social adjustment. If a follow up study indicated that a service that was designed to assist students with the emotional challenges they face when adjusting to college was perceived as ineffective by the students, the results of the current study would support that finding.

Additionally, though the findings of the current study were favorable for Facebook usage, each university should be cognizant of the potential detriments of the

social media platform as well. When educating its freshmen, it is important for the

university to present data that suggests the benefits of Facebook usage, such as the

current study, as well as study that has evidence supporting the opposite. Presenting the

data in an unbiased fashion could allow students to determine whether or not having an

active Facebook profile, or other social media accounts, is the best decision for them

during their freshmen year of college. In conclusion, the purpose of this study was

achieved, while also paving the way for future directions for both research and practical

applications.

APPENDIX A: MEASUREMENTS AND INSTRUMENTS

Research Procedures:

This research is being conducted to investigate the role gender and Facebook play in social and personal-emotional adjustment for college freshmen. If you agree to participate, you will be asked to answer questions about your social activities, Facebook behaviors and personal attitudes and experiences with college. It will take approximately 15-20 minutes to complete this survey.

Risks:

There are no foreseeable risks for participating in this research, however, some questions in the study ask about such as loneliness and being homesick. These survey items may serve as negative triggers if you are already experiencing anxiety or depression.

Benefits:
There are no direct benefits.

Confidentiality:

The data in this study will be confidential. Results will be reported in aggregate, meaning that your individual survey responses will not be singled out. Two optional questions in the survey ask for your email address, however, if you choose to provide your email address, the email address will not be linked back to any individual survey responses. The data will be password protected on a secure server. The student researcher and the faculty supervisor are the only two individuals who will have access to this data. No other individuals will have access to the raw, unreported data.

Participation:
Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party. You must be at least 18-years-old and a college freshmen with an active Facebook account to participate. You will have the opportunity to provide your email address to be entered into a raffle for a $50 Amazon gift card. After 125 individuals have completed the survey, the survey will close and the drawing will immediately take place. The survey will not close until 125 individuals have participated. You will also have the opportunity to provide your email address if you are interested in receiving a brief 1-2 page write up of the results upon completion of the study.

Contact:
This research is being conducted by Dr. Erin Peters-Burton, Academic Program Coordinator, Educational Psychology, and Elizabeth Hall, M.S. Educational Psychology candidate. Dr. Erin Peters-Burton can be reached at 703-993-9695 or at epeters1@gmu.edu and Elizabeth Hall can be reached at 703-424-6525 or ehall18@masonlive.gmu.edu. You may contact the George Mason University Office of Research Integrity & Assurance at 703-993-4121 if you have questions or comments regarding your rights as a participant in the research. This research has been reviewed according to George Mason University procedures governing your participation in this research.

1. Consent: By selecting "yes" below, you are indicating that all of your questions have been answered by the research staff and that you agree to participate in this study.

Yes	O

Social Adjustment

Please rate the following items on the 9-point scale below with 1 being "this doesn't apply to me at all" and 9 being "this applies very closely to me."

2. Social Adjustment	1	2	3	4	5	6	7	8	9
I fit in well with the college environment.	O	O	O	O	O	O	O	O	O
I am very involved with college social activities.	O	O	O	O	O	O	O	O	O
I am adjusting well to college.	O	O	O	O	O	O	O	O	O
I have several close social ties.	O	O	O	O	O	O	O	O	O
I have adequate social skills.	O	O	O	O	O	O	O	O	O
I am satisfied with my social life.	O	O	O	O	O	O	O	O	O
I am meeting new people.	O	O	O	O	O	O	O	O	O
I am making new friends.	O	O	O	O	O	O	O	O	O
I have informal contact with professors (such as meeting for coffee during office hours).	O	O	O	O	O	O	O	O	O
I feel at ease with others at college.	O	O	O	O	O	O	O	O	O
I mix well with the opposite sex.	O	O	O	O	O	O	O	O	O
I feel different from others in undesirable ways. In other words, I wish I could be more like others.	O	O	O	O	O	O	O	O	O
I have good friends to talk about problems with.	O	O	O	O	O	O	O	O	O
I feel lonely a lot.	O	O	O	O	O	O	O	O	O
I am pleased with my decision to attend this college.	O	O	O	O	O	O	O	O	O

3. I get along well with my roommate(s).

This doesn't apply to me at all 1	O
2	O
3	O
4	O
Neutral 5	O
6	O
7	O
8	O
This applies very closely to me 9	O
N/A: I do not have (a) roommate(s)	O

4. I miss home.

This doesn't apply to me at all 1	O
2	O
3	O
4	O
Neutral 5	O
6	O
7	O
8	O
This applies very closely to me 9	O
I still live at home	O

5. I would rather be at home.

This doesn't apply to me at all 1	O
2	O
3	O
4	O
Neutral 5	O
6	O
7	O
8	O
This applies very closely to me 9	O
I still live at home	O

6. I enjoy living in a dormitory.

This doesn't apply to me at all 1	O
2	O
3	O
4	O
Neutral 5	O
6	O
7	O
8	O
This applies very closely to me 9	O
I don't live in a dormitory	O

7. I am satisfied with my extracurricular activities.	
This doesn't apply to me at all 1	O
2	O
3	O
4	O
Neutral 5	O
6	O
7	O
8	O
This applies very closely to me 9	O
I don't participate in extracurricular activities	O

Personal Emotional Adjustment

Please rate the following items on the 9-point scale below with 1 being "this doesn't apply to .me at all" and 9 being "this applies very closely to me."

8. Personal-Emotional Adjustment	1	2	3	4	5	6	7	8	9
I regularly feel tense or nervous.	O	O	O	O	O	O	O	O	O
I regularly feel blue or moody.	O	O	O	O	O	O	O	O	O
I am able to control my emotions well.	O	O	O	O	O	O	O	O	O
I feel independent.	O	O	O	O	O	O	O	O	O
I have thought of seeking psychological help since I've been in college.	O	O	O	O	O	O	O	O	O
I have been getting angry too easily lately.	O	O	O	O	O	O	O	O	O
Sometimes my thinking gets muddled too easily. In other words, I feel "fuzzy" or have clouded thoughts.	O	O	O	O	O	O	O	O	O
I worry a lot about college expenses.	O	O	O	O	O	O	O	O	O
I have trouble coping with college stress.	O	O	O	O	O	O	O	O	O
I feel tired a lot.	O	O	O	O	O	O	O	O	O
I have felt changes in my appetite recently.	O	O	O	O	O	O	O	O	O
I have gained or lost a significant amount of weight since I have been in college.	O	O	O	O	O	O	O	O	O
I get a lot of headaches.	O	O	O	O	O	O	O	O	O
I have been sleeping well.	O	O	O	O	O	O	O	O	O
Overall, I feel that I am in good health.	O	O	O	O	O	O	O	O	O

Facebook

9. In the past week, on average, approximately how much time each day did you spent on Facebook?

Less than 10 minutes	O
10-30 minutes	O
31-59 minutes	O
1 hour- 1 hour & 59 minutes	O
2-3 hours	O

Please rate the following 5 items related to Facebook Usage below:

10. Facebook Usage	Never	Rarely	Sometimes	Often	Always
I use Facebook to check out someone I've met in a social setting.	O	O	O	O	O
I use Facebook to learn more about other people in my classes.	O	O	O	O	O
I use Facebook to learn more about other people living near me.	O	O	O	O	O
I use Facebook to keep in touch with my old friends.	O	O	O	O	O
I use Facebook to meet new people.	O	O	O	O	O

Social Identity

Social identity is defined as the degree to which an individual is defined by his or her group memberships. Most individuals identify with many groups. For example a group could be people who live in the same dorm as you, people who are on the same sports team as you, people with the same cultural background and/or nationality as you, and the list goes on.

People with high levels of social identity pride themselves on their similarities with others whereas people with low levels of social identity do not feel other people play an important role in how they define themselves.

On the scale below, please rate how important each of the following group membership statements is to your individual identity, with 1 being not at all important to who I am, and 9 being extremely important to who I am.

11. Social Identity	1	2	3	4	5	6	7	8	9
This similarities and common interests I share with others in my groups	O	O	O	O	O	O	O	O	O
My family nationality or nationalities	O	O	O	O	O	O	O	O	O
The memberships I have in various groups	O	O	O	O	O	O	O	O	O
The places where I have lived	O	O	O	O	O	O	O	O	O
My sense of belonging to my own racial group	O	O	O	O	O	O	O	O	O
My gender group	O	O	O	O	O	O	O	O	O
The color of my skin	O	O	O	O	O	O	O	O	O
My being a citizen of my country	O	O	O	O	O	O	O	O	O

Personal Identity

Personal identity is defined as the degree to which an individual distinguishes his or herself from others.

People with high levels of personal identity pride themselves on their individuality, whereas people with low levels of personal identity do not feel that asserting their uniqueness is important to how they define themselves.

On the scale below, please rate how important each of the following statements is to your personal identity, with 1 being not at all important to who I am, and 9 being extremely important to who I am.

12. Personal Identity	1	2	3	4	5	6	7	8	9
My rebelliousness	O	O	O	O	O	O	O	O	O
My need to be completely distinct and unique from everyone else	O	O	O	O	O	O	O	O	O
My creativity	O	O	O	O	O	O	O	O	O
My sense of being different from others	O	O	O	O	O	O	O	O	O
My complete individuality	O	O	O	O	O	O	O	O	O
My boldness	O	O	O	O	O	O	O	O	O
My nonconformity	O	O	O	O	O	O	O	O	O
My sense of independence from others	O	O	O	O	O	O	O	O	O

Demographics

13. What is your gender?

Male	O
Female	O

14. What is your age (in years)? Numeric responses only please.

15. What is your race/ethnicity?	
American Indian or Native American	O
Asian or Pacific Islander	O
Black or African American	O
Hispanic or Latino	O
White/Caucasian	O
Mixed Race or More than One Race/Ethnicity	O
Other (Please specify)	O

16. Where do you attend college?	
George Mason University	O
Other (Please specify)	O

17. Please type your email address if you would like to be entered into a raffle for a $50 Amazon gift card. Your email address will NOT be linked to your survey responses.

18. Please enter your email address if you would like to be emailed a brief summary (1-2 pages) of the results of this study in May.

APPENDIX B: INSTITUIONAL REVIEW BOARD

GEORGE MASON UNIVERSITY

Office of Research Integrity and Assurance

Research Hall, 4400 University Drive, MS 6D5, Fairfax, Virginia 22030
Phone: 703-993-5445; Fax: 703-993-9590

DATE: March 26, 2015

TO: Erin Peters-Burton
FROM: George Mason University IRB

Project Title: [652697-1] How Facebook Intensity and Gender Contribute to Social and Personal-Emotional Adjustment in College Freshmen

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: March 26, 2015

REVIEW CATEGORY: Exemption category # 2

Thank you for your submission of New Project materials for this project. The Office of Research Integrity & Assurance (ORIA) has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

Please remember that all research must be conducted as described in the submitted materials.

Please note that any revision to previously approved materials must be submitted to the ORIA prior to initiation. Please use the appropriate revision forms for this procedure.

If you have any questions, please contact Lorna Richards at (703) 993-4121 or lricha22@gmu.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within George Mason University IRB's records.

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BIOGRAPHY

Elizabeth M Hall graduated from Chantilly High School, Chantilly, Virginia in 2009. She received her Bachelor of Science from The College of William & Mary in 2013. She is currently employed as a Project Analyst at K12 *Insight* and received her Master of Science in Educational Psychology from George Mason University in 2015.