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PRACTICES AND PERCEPTIONS OF SOCIAL MEDIA AMONG LEADERS IN HIGHER
EDUCATION: A QUANTITATIVE STUDY

By

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Dissertation

presented in partial fulfillment of the requirements
for the degree of

Doctor of Education
in Educational Leadership

The University of Montana
Missoula, MT

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ABSTRACT

Holmes, Melissa, Ed.D., Summer, 2016

Educational Leadership

Practices and Perceptions of Social Media among Leaders in Higher Education: A Quantitative Study

Chairperson or Co-Chairperson: Dr. Frances L. O'Reilly

This quantitative dissertation study explored the social media practices and perceptions of 452 leaders of 142 public and private non-profit four-year degree granting institutions in the western United States. Descriptive statistics were calculated for gender, position title, age, social media use, and attitudes regarding themes revealed in a review of current literature. Then, a Spearman Rho analysis was used to measure the strength of correlation between hours using social media and rank scores of social media attitudes. The study revealed that about 85% of leaders use social media for an average of 4.54 hours per week ($SD=5.59$, $N=452$). Social media use was higher among younger leaders, and social media use among the participants was higher compared to the general population.

Frequency distributions reveal a generally positive attitude about using social media for marketing; and divided attitudes regarding using social media to enhance and support instruction. Most participants report feeling that social media does not pose a serious threat to institutions. Although participants were generally unlikely to use social media as a vehicle transparency, a moderate positive correlation ($rs=.42$, $p=2.99E-7$) exists between hours using social media and transparency attitude. The study found a small correlation between hours of use and attitudes regarding educational enhancement ($rs=.24$, $p=.005$), and a small correlation between hours of use and attitudes regarding social media as a threat to the institution ($rs=.19$, $p=.03$). The study revealed no relationship between hours using social media and attitudes regarding marketing and recruiting ($rs=.13$, $p=.13$).

DEDICATION

My work is dedicated to Jake, Halie, Nick, Lauren, Isabella and Aryanna. I love you all so much.
You are my world.

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The study could not have taken place without willing participants. Thank you to the 452 leaders who took the time to take the survey and offer your experience and insightful comments. I am very grateful you spent the time and effort to further my education.

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TABLE OF CONTENTS

Abstract.....	i
Dedication.....	ii
Acknowledgements.....	iii
Table of Contents.....	v
List of Tables.....	xi
List of Figures.....	xii
Chapter One: Introduction.....	1
Problem Statement.....	4
Purpose of the Study.....	6
Definition of Terms.....	7
Research Questions.....	10
Delimitations.....	11
Limitations.....	11
Significance of the Study.....	12
Summary.....	13
Chapter Two: Literature Review.....	14
Social Media History and Societal Influence.....	14
Social Media in Higher Education.....	16
Marketing and Recruiting.....	17
Enhancement of Education.....	21
Community and Engagement.....	22
Educational Innovation.....	24
Student and Faculty Perceptions.....	29
Threats to the Institution, Students and Employees.....	31
Digital Identity.....	32

Giving Away Data	32
Increased Awareness.....	33
Freedom of Speech, Academic Freedom and Civility	34
Summary	35
Social Media and Leadership.....	36
Summary	41
Chapter Three: Methodology.....	43
Non-Experimental Research Design.....	43
Research Questions and Hypotheses.....	44
Research Hypotheses	45
Null Hypotheses.....	47
Procedure	47
Participants.....	48
Population	48
Population Procedure	48
Sample	49
Sampling Procedure	50
Sample Size.....	51
Variables and Levels of Data.....	51
Instrumentation	53
Collection Instrument.....	53
Contacting Participants.	54
Response Rate.....	55
Reliability and Validity.....	55
Research Instrument Justification.	55
Pilot Test and Peer Review.	56

Reliability.....	56
Internal Consistency.....	57
Procedure	58
Data Integrity and Preparation for Analysis	58
Data Analysis Procedures	61
A Priori	61
Internal Consistency.....	61
Effect Size.....	61
Alpha Level.....	62
Sample Size.....	62
Statistical Power.....	62
Summary	62
Chapter Four: Analysis and Results.....	63
Demographic Data	63
Frequency Distributions.....	63
Gender.....	63
Position Title.....	64
Gender by Position Title.....	65
Age.....	65
Measures of Central Tendency	66
Social Media Use.....	66
Attitude Data.....	69
Frequency Distributions for Marketing questions (10-13).....	69
Frequency Distributions for Educational Enhancement questions (14-17)	70
Frequency Distributions for Threats to the Institution questions (18-21).....	71
Frequency Distributions for Transparency questions (22-25)	72

Summary of Frequency Distributions	73
Strength of Correlation	73
H ₁ : Social media use and attitudes regarding transparency	74
H ₂ : Social media use and attitudes regarding threats to the institution.....	74
H ₃ : Social media use and attitudes regarding educational enhancement	74
H ₄ : Social media use and attitudes regarding marketing	74
A priori.....	75
Effect Size.....	75
Alpha Level.....	75
Sample Size.....	75
Statistical Power.....	75
Summary	76
Chapter Five: Findings and Conclusions	78
Hypthesis 1	78
Hypothesis 2	80
Hypothesis 3	82
Hypothesis 4	84
Null Hypotheses.....	84
Summary of Findings.....	86
Limitations	89
Sampling Method and Procedure.....	89
Data Acquisition Errors.	91
Insufficient Statistical Power	91
Threats to External Validity	92
Discussion of Limitations	92
Analysis of sample.....	92

Summary	94
Implications for Practice	94
Recommendations for Future Research	97
Conclusion	98
References.....	100
APPENDIX A: POPULATION INSTITUTIONS	110
APPENDIX B: RESEARCH INSTRUMENT JUSTIFICATION	114
Questions About Social Media Use. Questions 4-7 address participants’ social media use. Question 4 uses the some of the same categories that are used in the Pew report, and is nominal data. These data will help us gain a deeper understanding of the types of social media are used by the participants. From this, we can also calculate how many social media venues are used by each participant.	116
APPENDIX C: PILOT SURVEY INSTRUMENT	124
Page 1: Consent Page and Peer Review Information.....	124
Page 2: Demographic Questions.....	124
Page 3: Social Media Questions	125
Page 4: Opinions about Social Media in Higher Education.....	125
Appendix D: Pilot Survey Email Invitation.....	128
appendix E: Survey Instrument Pilot Testing Notes.....	129
Appendix F: Final Survey Instrument.....	134
Page 1: Consent Page and Peer Review Information.....	134
Page 2: Demographic Questions	134
Page 3: Social Media Questions	135
Page 4: Opinions about Social Media in Higher Education.....	136
APPENDIX G: Final Survey Email Invitation	139
Request 1.....	139

Request 2.....	140
Request 3.....	140
APPENDIX H Institutional Review Board (IRB) Materials	141

LIST OF TABLES

Table 1. Variables and Levels of Data.....	52
Table 2. Results of Cronbach’s Alpha	57
Table 3. Cohen’s Effect Size Guidelines	61
Table 4. Position Title.....	64
Table 5. Gender by Position Title	65
Table 6. Age of Respondents	66
Table 7. Social Media Platforms Used	66
Table 8. Reasons for Using Social Media.....	67
Table 9. Hours Using Social Media Per Week	68
Table 10. Findings: Effect Size.....	75
Table 11. Statistical Power	76
Table 12. A Priori Values	86
Table 13: Percentage of U.S. Adults using Social Media.....	94

LIST OF FIGURES

Figure 1. Survey Responses Per Day	54
Figure 2. Gender	64
Figure 3. Position Title	64
Figure 4. Gender by Position Title.....	65
Figure 5. Age Histogram.....	65
Figure 6. Social Media Platforms Used	67
Figure 7. Reasons for Using Social Media	68
Figure 8. Total Hours Using Social Media Per Week	68
Figure 9. Question 10.....	69
Figure 10. Question 11.....	69
Figure 11. Question 12.....	69
Figure 12. Question 13.....	69
Figure 13. Question 14.....	70
Figure 14. Question 15.....	70
Figure 15. Question 16.....	70
Figure 16. Question 17.....	70
Figure 17. Question 18.....	71
Figure 18. Question 19.....	71
Figure 19. Question 20.....	71
Figure 20. Question 21.....	71
Figure 21. Question 22.....	72
Figure 22. Question 23.....	72

Figure 23. Question 24.....	72
Figure 24. Question 25.....	72
Figure 25. Ranges of Frequency Means for Attitude Questions.....	88
Figure 26. Proportion of Position Title in Sample and Population.....	93

CHAPTER ONE: INTRODUCTION

Society and technology have influenced one another since the dawn of mankind. Each technological advance, ranging from stone tools to a global network of traveling bits and bytes, has changed behaviors of individuals and ways of life in civilizations. One noteworthy change is in the methods and the speed in which people communicate. “In 1804, Meriwether Lewis and William Clark set out on a two-and-a-half-year voyage to explore what is now the western United States. Many more years passed before their journals were published” (Ambrose, 1996, p. 1). Ambrose goes on to explain that during the Lewis and Clark expedition, “information, people and goods moved no faster than a horse – and this limitation had not changed in thousands of years” (p. 4). Today, just over 200 years later, information travels at the speed of light. The speed and availability of information impacts every sector of our culture (Sunny Levin Institute, 2013). By examining the practices and perceptions of social media among higher education leaders, this dissertation study explored one way that technology impacts society and culture in modern times.

“The ubiquity of computers, the rapid pace of change, and their myriad applications and impacts on daily life characterize the last few decades of the 20th century and the beginning of the 21st” (Baase, 2013, p. 5). At the time of Lewis and Clark, social networking sites were places like churches and taverns. In 2016, much of our socializing occurs online. Baase (2013) declares “with the popularity of social networking, texting, and sharing video, photos, and information, the Net is a very social place” (p. 5).

Advances in technology have positive and negative, unintended consequences. According to Baase, widespread use of personal computers was accompanied by viruses

and copyright challenges. Increased, inexpensive storage enables corporations to store a myriad of details about our personal and financial lives. Email brought spam. Online commerce brings bargains to consumers, opportunities to entrepreneurs, and new ways to commit fraud, theft and exploitation (p. 5). Addressing social media technologies specifically, Baase summarizes “as with so many other digital phenomena, people found unanticipated uses of social networking, some good, some bad” (p. 10).

In little more than a decade, social media have become an integral part of our culture. “Modern technology has ushered in an age of instant information and gratification, and profound effects have been seen in business, health care, and educational environments” (Dubose, 2011, p. 112). Dubose (2011) describes the implications of mass, viral communication – social media are used for marketing, bullying, lobbying, protesting – and any other activity that requires the word to spread quickly and globally (p. 112). Some say social media have leveled the playing field of communication by “empowering individuals and groups to communicate horizontally at higher velocity and greater momentum than a hierarchical [communication model] can keep up with” (Friedman, 2013, p. 14). Further, social media are widely and freely available, and anyone with a web-enabled device can use them. Beyond the written word, images, slideshows, videos and audio recordings can be shared widely and rapidly. In less than a decade, social media “has become a powerful vehicle of influence in our society” (Dubose, 2011, p. 112).

Not surprisingly, social media have infiltrated the field of education. “We have been watching social media seep into every aspect of the academy: teaching, outreach, research, professional development, publishing, campus tours, and student life” (Parry,

2011, p. 1). Some educational leaders recognize the influence of social media on college students, parents, alumni and other supporters (Schmalz, 2014). A review of literature suggests educational institutions use social media heavily for marketing and recruiting (Barnes & Mattson, 2009; Barnes & Mattson, 2010; Nyangau & Bado, 2012) . Some professors use social media tools to communicate with students and enhance instruction (Blankenship, 2011; Mazman & Usuel, 2010; Rambe, 2012; Tay & Allen, 2011). On the darker side, “cyber-bullying” workshops are being conducted at institutions (Grigg, 2010); and education and political scandals are spread widely and virally via social media sites (Friedman, 2013; Charles, 2012).

Some industry leaders, such as Richard Branson, CEO of Virgin Group, use social media to build relationships among constituents and to promote transparency and authenticity (Charles, 2012). Santa J. Ono, President of the University of Cincinnati is regarded as a social media leader in higher education. In 2015 the Chronicle of Higher Education reported that university leaders “increasingly use social media to communicate in real time or to establish street cred with students, but Mr. Ono’s tens of thousands of Twitter followers qualify him as a pioneer in the emerging realm of digital higher-education administration” (Stripling, 2015, p. 1). In a 2014 interview, Ono enthusiastically described his success using Twitter to communicate with students, enhance transparency and to raise funding for the university (Chronicle of Higher Education, 2014). Ono regularly updates over 50,000 followers with “photographs, musings, and gentle provocations — ‘Shake Shack or In-N-Out?’ — and answers students’ questions directly, no matter how mundane” (Stripling, 2015, p. 1). However, after a University of Cincinnati police officer shot and killed an unarmed man during a

traffic stop, Ono struggled with being available to his followers exercising caution. After the tragedy, he explained in an interview “I try to think twice before I tweet; I think even longer than that in this kind of situation. I am very careful” (Stripling, 2015, p. 2).

President Ono has garnered significant media attention for his highly successful efforts and demonstrates caution in difficult situations. Still, social media use and perceptions among leaders in higher education have not been explored extensively. This quantitative study revealed some new information about the perceptions and practices regarding social media among leaders of four-year institutions of higher education in the western United States.

Problem Statement

Social media offer the potential to be a positive force in educational enhancement and marketing, and they can also be harmful to institutions and their employees. The recent case of Larycia A. Hawkins at Wheaton College of Illinois (2016) illustrates how a single social media post brought forth issues of theology, academic freedom and diversity at a small, private Christian institution. “Ms. Hawkins, who is the first and only black female tenured professor at the evangelical Christian college, says she is stunned by how a Facebook post intended to express support for Muslims led to a move by the provost, Stanton L. Jones, to force her out” (McMurtrie, 2016, p. 1). In December, 2015, Hawkins was placed on administrative leave for posting a photo of herself wearing a hijab on Facebook, along with the statement "*I stand in religious solidarity with Muslims because they, like me, are people of the book. And as Pope Francis stated last week, we worship the same God*" (McMurtrie, 2016, p. 1).

This one social media post had a massive ripple effect that began with the scrutiny of another Wheaton faculty member, Psychology professor Mangis. Professor Mangis had commented on Hawkins' original Facebook post, supporting her statement. Mangis was contacted by Wheaton Provost Jones and presented with an opportunity to

withdraw and apologize for his Facebook post. 'I cannot tell you what a disaster this brief comment from you on Facebook is shaping up to be,' wrote Jones.

'Larycia Hawkins also meant something similarly innocuous, but her theological comments are being taken up as an endorsement of Islam [...]' (Dias, 2016, p. 1).

Indeed, numerous news articles were published in periodicals including Time, Newsweek, The Chronicle of Higher Education, Christianity Today, and Religion News Service. On campus, the situation evolved into other issues: a question of Hawkins' commitment to the Statement of Faith required by Wheaton faculty and students; issues of academic freedom; and, since Hawkins was the only black female faculty member at Wheaton, racism (Dias, 2016). Wheaton initiated "employment action proceedings" in January, and after dozens of articles were published regarding the incident, Hawkins and Wheaton came to a confidential agreement in early February. Hawkins was hired immediately by the University of Virginia.

The case of Professor Hawkins at Wheaton was just one case involving social media. Social media are involved in many difficult higher education issues. They complicate issues of academic freedom and freedom of speech, and the speed at which news travels via social media can leave institutions defenseless against rumors and scandals. A brief search of the Chronical of Higher Education reveals that of 1,472 articles published in 2015, 409 contain the phrase "social media."

Some leaders of industry have embraced social media as a means to communicate with stakeholders and promote authenticity and transparency in leadership (Charles, 2012; Friedman, 2013). A small number of higher education leaders have followed suit and have recently received attention for their efforts and success (Schmalz, 2014). However, social media can facilitate great good and great destruction. In order to avoid pitfalls, leaders of higher education must be aware of the implications of social media, use it skillfully and thoughtfully, and be prepared to mediate negative situations. While a few leaders in education are embracing social media for the good of the institution, others are being harmed by it.

Purpose of the Study

The purpose of this study was to examine the practices and perceptions of social media among educational leaders. While some studies have been conducted regarding social media use among various demographics (Perrin, 2015) and higher education faculty (Moran, Seaman, & Tinti-Kane, 2011), a quantitative study of social media use among higher education leaders was not found in a search of the literature.

Social media are used widely by students, faculty and staff in universities, and by the media and larger communities in which universities exist. Universities use it extensively for marketing and recruiting, and some professors use it for educational purposes. Issues and conflicts surrounding social media can be complex. Since higher education leaders are likely to encounter issues with social media, they should be knowledgeable about it and understand its complexity. Because little research exists about use and perceptions of social media among higher education leaders, their use, attitudes and knowledge is unclear. This study helped bridge that gap by using a

quantitative approach to examine higher education leaders' social media use and their attitudes regarding issues identified in the literature.

Definition of Terms

Blog. A blog (a truncation of the expression web log) is a “discussion or informational site published on the World Wide Web and consisting of discrete entries (‘posts’) typically displayed in reverse chronological order (the most recent post appears first)” (Blood, 2000).

Dual relationship. “Interactions involving two or more distinct relationships with the same persons” (Endacott, et al., 2006, p. 988). Dual relationships are considered inappropriate in fields such social work (Endacott, et al., 2006) and some dual relationships may present conflicts of interest in education environments.

Facebook. Facebook is a social utility that connects people with friends and others who work, study and live around them. People use Facebook to keep up with friends, upload an unlimited number of photos, post links and videos, and learn more about the people they meet (Facebook, 2014).

Flickr. Flickr is a website that allows you to store, sort, search, and share your photos online. Flickr is also a community site. All images uploaded to Flickr that have not been marked as private can be searched using the tags (labels) associated with them. You can also search for and join groups to view photos from other users that match your interests (Flickr, 2014).

LinkedIn. LinkedIn is a social networking website for people in professional occupations. It is mainly used for professional networking, as opposed to friendship or casual socializing (LinkedIn, 2014).

Social media (also referred to as new media). Social media is a broad term used to describe web sites where content is generated by users and amended or commented on by other users. According to Junco and Chickering (2010),

Social media are a collection of Web sites, services, and activities that engage users through collaboration, sharing and democratization of roles and responsibilities. They encompass a major shift in focus from the first iteration of the Web because they allow for increased participation, connection, and interactivity. (p. 12)

An important aspect of social media is that they facilitate “the creation and exchange of user-generated content” (Kaplan & Haenlein, 2010, p. 61). Finally, “social media services can be divided into six categories: content creation and publishing, content sharing, social network sites, collaborative productions, virtual worlds and add-ons” (Silius, Kailanto, & Tervakari, 2011, p. 21).

Social network (also referred to in the literature as online social network or social network site). Social network is often used interchangeably with the term social media. According to boyd and Ellison (2008) social networks are web-based services that allow individuals to 1) construct a public or semi-public profile within a bounded system; 2) articulate a list of other users with whom they share a connection; and 3) view and traverse their list of connections and those made by others within the system. (p. 211)

Transparency (in leadership). “The degree to which an organization shares information its stakeholders need to make informed decisions” (Holtz, 2009). Rawlins identified transparency as “having three important elements: being truthful, substantial or

useful; having participation of stakeholders; and being objective, balanced and accountable” (2009, p. 74). “This includes a range of behaviors such as trusting employees to communicate with the public and communicating company information that helps others understand what the company does and why” (DiStaso & Bortree, 2012, p. 511).

Twitter. Twitter is an online social networking and microblogging service that enables users to send and read "tweets", which are text messages limited to 140 characters. Registered users can read and post tweets, but unregistered users can only read them. Users access Twitter through the website interface, text messages sent directly to/from a cell phone, or mobile device app (Twitter, 2014).

User-Generated Content. Content that is written and published by users of a system, rather than simply the “owners” or publishers. According to Kaplan and Haenlein (2010), user-generated content must meet three criteria: (a) it must be published on a publicly accessible website or social networking site accessible to a selected group of people; (b) it must show a certain amount of creative effort; and(c) it must have been created outside of professional routines and practices.

Web 2.0. Second generation iteration of the World Wide Web, that consists of tools allowing users to increase the amount of information available. With Web 2.0, all users have the ability to generate content, making it an interactive process. Web 2.0 includes online applications such as blogs, wikis, social bookmarking, media-sharing services, social networking, collaborative editing tools, syndication, and modification technologies (Haughn & Rouse, 2015).

Wiki. A wiki is usually a web application which allows people to add, modify, or delete content in collaboration with others. While a wiki is a type of content management system, it differs from a blog or most other such systems in that the content is created without any defined owner or leader, and wikis have little implicit structure, allowing structure to emerge according to the needs of the users (Scott, 2008).

YouTube. YouTube is a video-sharing website that allows users to upload, view, share, rate and comment on digital videos. The site is primarily for private users, but the company has partnerships with some commercial entities and media corporations for video distribution (YouTube, 2014).

Research Questions

“Quantitative research questions inquire about the relationships among variables that the investigator seeks to know” (Creswell, 2003, p. 132). This study seeks to understand relationships between higher education leaders’ social media use and their perceptions and attitudes regarding the use of social media for marketing and recruiting, teaching and learning, and transparency in leadership, and the implications of risk or threat to the institution. Four research questions were explored:

Q1: What is the relationship, if any, between the use of social media and transparency, among leaders in higher education?

Q2: What is the relationship, if any, between the use of social media and attitudes regarding risk to the institution, among leaders in higher education?

Q3: What is the relationship, if any, between use of social media and attitudes regarding the use of social media for educational enhancement, among leaders in higher education?

Q4: What is the relationship, if any, between use of social media and attitudes toward higher education marketing and recruiting, among leaders in higher education?

Delimitations

Delimitations, according to Creswell, "...narrow the scope of a study. For example, the scope may focus on specific variables or a central phenomenon, delimited to specific participants or sites, or narrowed to one type of research design" (Creswell, 2003, p. 148). This study is delimited by participants who are leaders in public or private non-profit, four-year degree granting institutions of higher education with "traditional" educational leadership structure. Leaders are defined as those in positions of President, Chancellor, Vice President, Provost, Dean, and equivalent positions. Institutions are located in eleven western states: Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington and Wyoming.

Limitations

Creswell considers the purpose of limitations "...to identify potential weaknesses of the study" (2003, p. 148). The limitations in this study include weaknesses related to the sampling method, insufficient statistical power and threats to external validity. This study utilized a cluster sample. First, an appropriate population of public and not-for-profit schools was selected from the geographic area. Then, some schools were removed from the population because they are owned by corporations and do not have a traditional academic leadership structure. This procedure is outlined in detail in Chapter 3.

The second stage of sampling can be characterized as purposive sampling, where "subjective methods [were] used to decide which elements are included in the sample" (Battaglia, 2008, p. 524). Purposive sampling is a non-probability sampling method. In

this study, public and not-for-profit institutions with a “traditional” leadership structure (i.e. not owned by a company and led by a CEO) were selected randomly. Then, leaders of those institutions purposively selected based on their position title. Battaglia (2008) offers this scheme as an example, stating “first-stage units are selected using probability sampling, and then, within the selected first-stage, expert judgment is employed to select the elements from which data will be collected” (p. 524). Since this study employs Spearman Rho, it assumes a random sample. An attempt was made to overcome this limitation by using institutions, rather than individuals, in the Spearman Rho calculation. However, the sample required complex analysis and observable errors were made during the procedure.

Statistical power is affected by three factors: statistical significance, effect size and sample size. The p-value, set a priori at $<.05$, was used to evaluate statistical significance. The null was rejected based on the p-value for three of the four hypotheses. Effect size is the size of the correlation and Cohen, 1992 was used as a guide. An effect size of $.30$ was set a priori as the level of importance. The effect size only held for one hypothesis. Statistical power was set at $.80$ a priori. The statistical power requirement held for two of the hypotheses.

Significance of the Study

“This section creates a clear rationale for the importance of the study [...] to convey the importance of the problem for different groups that may profit from reading and using the study” (Creswell J. W., 2009, p. 107). This study examines a social issue that is current, rapidly evolving, and culturally significant in our society and higher education environment. Social media have become an integral part of our society and a

powerful vehicle of communication and influence. Social media are especially popular among teens and young adults – an age group that is important to colleges and universities. However, the perceptions, practices and knowledge of social media among higher education leaders are unclear and have not been widely studied quantitatively. This study helped to expand the body of research surrounding these issues.

Summary

Issues surrounding social media have influenced our culture in a variety of ways during recent years. This influence has seeped into the educational arena due to copious student use, along with the reported potential to market institutions, recruit students and enhance teaching and learning. Institutions may face threats related to issues including cyber-bullying, dual relationships, freedom of speech conflicts and scandal. Social media have changed the communication model from hierarchical to a more horizontal model where many can contribute and share quickly and widely.

Leaders of institutions of higher education must be knowledgeable about the issues surrounding social media. In order to really understand how millennials communicate using these media, leaders must have hands-on experience using them too. With sparse research in this area it was unclear whether they are. A gap existed in the research and literature surrounding education and social media. This study helped to bridge the gap by examining and reporting social media perceptions and practices among leaders of institutions of higher education in eleven states in the western United States.

CHAPTER TWO: LITERATURE REVIEW

Creswell (2003) suggests that the literature review should meet three criteria: to present results of similar studies, to relate the present study to the ongoing dialogue in the literature, and to provide a framework for comparing the results of a study with other studies.

Numerous studies have been conducted regarding social media use in higher education. Studies have been conducted to explore the effectiveness of social media for marketing and recruiting, perceptions of social media use for educational purposes, privacy concerns, dual relationships and digital identity. Interesting topics surrounding social media in leadership have been explored, including communication strategies (Berman, 2008; Sweetser & Kelleher, 2011; Zuk, 2009), “humanizing” the leader (Charles, 2012), enhancing transparency and authenticity (Charles, 2012; Rawlins, 2009), and promoting transformational change (Freidman, 2013; Notter, 2012). This review of literature will explore the history and social impacts of social media, its various uses in higher education, and ways it has been used to enhance leadership efforts and relationships with stakeholders. Finally, a discussion of how to measure the effectiveness of social media will be presented.

Social Media History and Societal Influence

“The growing popularity and use of social media tools such as Facebook, YouTube, Twitter, blogging, and wikis have led to a social media revolution” (Dubose, 2011, p. 112). The “revolution” has occurred in a relatively short period of time. boyd and Ellison (2007) describe a history of the launch of major social network sites that occurred between 1997 and 2006, which is summarized below. boyd and Ellison identify

SixDegrees as the first commercial social networking site, launched in 1997. Then, they chronicle eleven additional sites that were launched between 1997 and 2002, including Friendster. The frequency and number of sites launched after 2003 increased dramatically, with 32 new social media sites launched between 2003 and 2006. Two of the more recognized sites, LinkedIn and MySpace, were both launched in 2003. Yahoo 360, YouTube and Bebo were launched in 2005, followed by Windows Live Spaces, Twitter, and a public launch of Facebook in 2006. Overall, 43 social media sites were launched between 1997 and 2006.

“That Facebooking has so quickly become a verb, and that other words associated with social networking (tagging, unfriend, retweet, and twitectomy) have entered both common usage and dictionaries show how pervasive the social phenomenon is” (Woodley & Catherine, 2012, p. 88). In 2013, the number of people using social media is staggering. Daniells (2013) provides a number of statistics regarding social media usage. According to Daniells, Facebook alone had 1.13+ billion total users, with 751 million users accessing the site from 7,000 different types of devices. Further, 23% of Facebook users reported checking their account more than 5 times per day, and 74% of marketers believed Facebook is important for their lead generation strategy (p. 1). While Facebook is the most widely-used social media site, other popular sites reflect huge numbers as well. Daniells reported that Twitter has over 288 million active users who tweeted every month and Google+ had over 500 million total users with 343 million active users. LinkedIn had over 238 million users; Instagram had over 130 million users; and Pinterest, served 70 million users in 2013. As suggested by the difference between the total users and active users on Google+, not all social media accounts are used. It appears that many

accounts are created then abandoned, and there are a fair number of “fake” accounts created for various reasons. Still, usage is incredible. Over a billion unique visitors watch videos on YouTube every month. And each and every day, over five million photos are uploaded to Instagram and 400 million tweets are sent (Daniells, 2013).

Usage among older adults has climbed steadily. One source reported that 72% of U.S. adults used at least one social network in 2013, up 67% from 2012 (Lunden, 2013). Another report (Bullas, 2014) illustrated social media usage climbing steadily among all age groups. Interestingly, there was a drop among the “traditional” college demographic in 2012 – usage was at 83%, down from 92% in 2009. The same reports stated usage among the “traditional” college demographic was at 89% in 2013. This figure alone makes social media interesting to institutions of higher education. The next section discusses how social media are used in higher education marketing and recruiting, teaching and learning, and various surrounding issues.

Social Media in Higher Education

“Love it or hate it, social media is now a part of the fabric of our lives. Whether or not you’ve embraced it, it’s a tool that colleges and universities can’t ignore” (Farrington, 2011, p. 1). Higher education faculty and administrators recognize that social media are an influence on their students and within their institutions. While some caution against its use in education (Mazman & Usuel, 2010; Zuk, 2009), others have embraced it for marketing and recruiting, and to some extent, for retention and to enhance teaching and learning. Numerous studies have been conducted, and there appear to be opposing views for each issue that is explored. Measuring the success of social media

strategies appears to be cumbersome at best, and frequently is seen as being difficult or impossible.

Marketing and Recruiting

Perhaps the most widespread use of social media in institutions of higher education occurs in marketing, recruiting, and to some degree, retention efforts. But students are not the only marketing audience: “for higher education institutions relationship marketing invokes building and maintaining a relationship of value exchanges between the institution and three main customer groups: alumni, current students and future students” (Constantinides & Zinck Stagno, 2011, p. 10).

When used well, social media enable universities to tell a deep, rich, authentic story of the institution via daily snapshots of events and news, using words and images. At The College of William and Mary in Williamsburg, VA, the goal is to “meet students where they are” in using social media as part of an overall communications strategy [...] with a goal of being authentic and consistent across all outreach materials, including social media (Davis, 2012). “Social media allows for interaction in a richer format,” according to one admissions counselor at Marquette University, “A lot of what we do is storytelling; we try to tell the Marquette story” (Davis, 2012, p. 1).

Nyangau and Bado (2012) reviewed literature to explore how institutions of higher education leverage social media for recruitment and admissions. “Relevant literature reveals that the majority of admissions officers prefer creating and maintaining accounts on various social media sites, because these allow them ‘direct contact’ with potential prospective students and it expands the recruitment base” (Nyangau & Bado, 2012, p. 39). Using social media, admissions officers can “friend” or “follow” potential

students, enabling posts to appear in news feeds of their social media accounts. Frequent posts keep information about the university in the reader's feed, and therefore in their awareness. And, admissions officers can answer questions and respond to feedback in a personalized manner.

Social media is becoming a more relevant part of admissions, recruiting, and overall admissions strategy. Nyangau and Bado (2012) cited and compared two reports, Barnes and Mattson (2009) and Barnes and Mattson (2010), to reveal:

- admissions officers are increasingly using social media to recruit and research potential students;
- social media use increased from 55% in 2007, to 63% in 2008, to 83% in 2009;
- 95% of admissions officers used at least one form of social media in 2009, up from 85% in 2008; and
- 91% reported that social media is "somewhat important" to future recruitment strategy in 2009, up from 89% in 2008. (Barnes & Mattson, 2009; Barnes & Mattson; Nyangau & Bado, 2012)

The findings presented by Barnes and Mattson "indicate that social media use by institutions of higher education is on the rise, yet it is unclear whether content on university social media pages influences prospects' choice-making processes" (Nyangau & Bado, 2012, p. 48).

Nyangau and Bado reviewed a study (Spraggon, 2011) that investigated the use of social media as marketing tools, collecting data from 20 business schools. Spraggon's findings suggested that a disconnect exists between theory and practice when it comes to marketing on social media platforms. "The problem," says Spraggon, "is due to the fact

that institutions do not take the time to develop a social network marketing strategy before adopting the tools” (Nyangau & Bado, 2012, p. 42). Another study indicated social media marketing does not have a significant impact on recruiting efforts: “while penetration of social media is extremely high among future students, the impact of these in the choice of study and institution is relatively low compared to more traditional forms of university marketing” (Constantinides & Zinck Stagno, 2011, p. 7). A case study, however, reveals conflicting information: Hayes, et al. (2009) describe the use of a social networking system as a marketing tool in their case study and found a significant relationship between those who logged onto the social network and the likelihood of them applying to the university (Hayes, Ruschman, & Walker, 2009).

Social media may also be used to help admitted students transition into university and to retain existing students who leave for the summer. Woodley and Catherine (2012) explored using Facebook as an "interactive point of engagement to support student transition to the university” (p. 86). Further, “social media helps cross-country students [who have left the university for summer break] stay connected, making them more likely to attend than to melt away in the summer” (Farrington, 2011, p. 18).

Difficulty in measuring the success of social media efforts is a common theme among conflicting reports of effectiveness. Some authors point to quality versus quantity (Freberg K., Graham, McGaughey & Freberg, L., 2010; DiStaso, McCorkindale & Wright, 2011), citing the inappropriate use of numbers to attempt to measure relationship-building. Other issues explored include the “disconnect” between potential and effectiveness (DiStaso & Bortree, 2010; Sweetser & Kelleher, 2011) and reliability of information (DiStaso & Bortree, 2010). Measurement of social media success,

according to Freberg, et al. (2010) sometimes relies on factors such as “number of daily hits on a blog, number of times a post is shared, or number of followers. Given the recognition that online influence is about quality, not quantity, these methods should be viewed as a starting place only” (p. 90). McCorkindale (2010) agrees, stating “The challenge for public relations practitioners is not just trying to find the best way to incorporate social media strategically, but also to determine the best way to measure it beyond merely counting followers or fans” (McCorkindale, 2010, p. 1).

DiStaso, McCorkindale and Wright (2010) conducted a qualitative study to explore usage, concerns, unknowns and measurement of social media in corporations. The findings indicated that most participants thought social media is important: 77% of participants indicated social networks are important; 65% indicated micro-blogging (i.e. Twitter) is important; and 57% indicated blogs are important. The DiStaso et al. (2010) study also revealed several themes about perceptions of measuring the effectiveness of social media. The concerns identified included how to measure behavioral outcomes, not just reach; how to connect media metrics to communications strategy; how to get concrete and meaningful measures of impact; how to influence behavior; and how to measure in a way that shows [social media] contributes to strengthening the brand. “One respondent even went so far as to question the ability to measure social media” (DiStaso, McCorkindale, & Wright, 2011, p. 327).

Taylor and Kent (2010) conducted a content analysis of articles published in *Public Relations Tactics* in order to compare “social media power” to evidence of social media effectiveness. Their results were consistent with DiStaso, et al. (2011), and the findings of their own literature review – “a disconnect exists between what authors view

as the potential of social media and the research findings about the effectiveness of social media” (Taylor & Kent, 2010, p. 210) “Typical” studies, according to Taylor and Kent, surveyed journalists who use social media, and cited evidence such as “social media are important because nearly half of Americans get their news and information from the Internet” (Berman, 2008, p. 21) and “Facebook claims to have about 150 million active accounts with 600,000 opened every day. Large numbers like this suggest practitioners [...] need to embrace social media” (Zuk, 2009, p. 7). Of the 59 articles reviewed by Taylor and Kent, “about two-thirds (39) made specific claims about the power of social media as a public relations tool, while only 31% (18 articles) cited any specific evidence about the effectiveness” (2010, p. 210).

Despite conflicting reports of effectiveness, the literature reveals significant and growing use of social media for marketing and recruiting. As social media is included in overall communications strategies, perhaps it will become more effective, or at least more measurable. While admissions officers and administrators use social media to recruit and retain students at the university, some faculty members are attempting to use it to support and enhance teaching and learning. The next section describes some of these efforts.

Enhancement of Education

According to Hrasinski and Dennon (2012), “The hype surrounding social media has caused a lot of speculation about how it might be used in a higher education environment” (p. 1). Hrasinski and Dennon report on perspectives ranging from the belief that higher education should capitalize on technologies and electronic devices that students already use, to struggling to “effectively integrate a technology whose naturalistic use has been so heavily informal and user-driven into a setting known for its

more formal and structured experiences” (p. 1). Numerous studies have been conducted regarding the use of social media to enhance teaching and learning. Mazman and Usuel (2010) say “social networks in educational and instructional contexts can be considered as a potentially powerful idea simply because students spend a lot of time on these online networking activities” (p. 444).

But “views about the role of Facebook and other social networking sites in education are extremely varied. Facebook poses a threat to academic success” (Kirschner & Karpinski, 2010, p. 1241) and yet, certain kinds of Facebook use supports study (Woodley & Catherine, 2012). Some proponents say social media “inspire new creativity in the way subjects are taught” (Blankenship, 2011, p. 40), contribute to critical thinking (Mazman & Usuel, 2010) and construction of knowledge (Rambe, 2012; Tay & Allen, 2011), and contribute to a sense of community that facilitates engagement so critical to college success (Caraher & Braselman, 2010; Hrastinski, 2012; Junco & Chickering, 2010; Ravai, 2002; Woodley & Catherine, 2012;). Others say social media “contribute to the intellectual depowering of a ‘Google generation’ of learners incapable of independent critical thought” (Hrastinski & Dennen, 2012, p. 452) and that using social media draw students’ attention from their studies. Several cases and a discussion are presented here.

Community and Engagement. “Students without a social network are more likely to abandon a university and the need for effective and successful learners to have a sense of belonging to a group and form relationships with peers is well recognized” (Woodley & Catherine, 2012, p. 88). According to Ravai (2002), a classroom community is a “specific type of psychological community based on the following characteristics: (a) the setting is the world of education; (b) the primary purpose is

learning; and (c) the community is based on a fixed organizational tenure, that is, a set length of the course or program in which members are enrolled” (p. 321). In a later publication, Ravai (2002) stated, “if online learners feel a sense of community, it is possible that this emotional connectedness may provide the support needed for them not only to complete successfully a class or a program but also to learn more” (p. 321).

Students use social media outside the classroom to socialize, network, and organize. In the classroom, professors have begun to adopt social media for varied purposes, some using the technology to support more traditional core aims (i.e. blogs as a form of portfolio or journal) and others seeking to use it in a more transformative sense (e.g. students building networks and engaging in collaborations related the course topic but outside of the university community). (Hrastinski & Dennen, 2012, p. 1)

Caraher and Braselman surveyed more than 1,000 college students in the US and found that 64% of those surveyed use social media to connect with classmates to study or work on assignments several times per month, and 27% use social media to connect with faculty to study or work on assignments several times per month (2010).

Junco and Chickering (2010) reported on research conducted by the Higher Education Research Institute that suggested a positive relationship between social networking web site use and college student engagement. The findings suggested that a higher percentage of frequent users of social media participated in campus organizations than less frequent users. “One controlled study found that using Twitter in educationally relevant ways in a first-year seminar course increased student engagement and improved grades” (Junco & Chickering, 2010, p. 13). Woodley and Catherine (2012) suggest

students can develop “social capital” via social media, therefore enhancing participation in academic life. Students who feel isolated or shy may be the very students who benefit the most: “Users experiencing low self-esteem and low life satisfaction” (Ellison, Steinfield, & Lampe, 2007, p. 1143) receive greater benefits (Woodley & Catherine, 2012, p. 93). Greenhow, Robelia, and Hughes (2009) brought together various sources to describe current students as “frequently creative, interactive, and media oriented; and use Web 2.0 technologies in their everyday lives” and propose that more use of such technologies in school would lead to increased preparation and engagement (p. 247).

Junco (2011) examined the relationship between Facebook use, participation in Facebook activities, and student performance and engagement. Results from the study show that students spend a great deal of psychological energy using Facebook, checking Facebook, and engaging in a variety of Facebook activities (Junco, 2011). The different types of activities were correlated either positively or negatively with performance and engagement. Junco found that time spent using Facebook, frequency checking on Facebook and frequency of playing games were negatively predictive of engagement score. Activities such as commenting on content and creating or RSVP'ing to events were positively predictive of engagement score (Junco, 2011). Junco’s findings also indicated a significantly negative relationship between frequency of engaging in Facebook chat and time spent preparing for class, but time spent using Facebook was positively related to time spent participating in co-curricular activities (2011).

Educational Innovation. The studies presented above explored social media in conjunction with engagement and a sense of community. The following studies are focused on educational innovation and enhancement of teaching and learning via social

media activities. Sweeney (2009) explored the use of Flickr in arts education, and concluded that his study may help art educators “see pedagogical implications in the visualities such technologies produce, and the identities formed in virtual environments and the epistemologies that develop from networked social media” (Sweeney, 2009, p. 201).

What makes [Flickr] substantially different from previous forms of critique common in art education, and perhaps more postmodern, is the ability for the conversations to spread beyond the walls of the classroom, museum or community centre, allowing individuals to engage with the artist and the public in ways that were previously unavailable. (Sweeney, 2009, p. 204)

Rambe (2012) reported on a case study involving one course at a South African university. Lecturer-student and peer based postings on Facebook were examined to understand the influence of Facebook adoption on student meaningful learning and pedagogical delivery. Rambe’s findings suggested Facebook constituted a collective "third space" for student enactment of counter scripts, augmented traditional academic networking, fostered "safe" havens for student democratic expression, and afforded learning communities for student co-construction of knowledge. Shortfalls identified included challenges of developing quality academic discussions and “fostering student engagement at epistemological and conceptual levels to ensure deep learning” (Rambe, 2012, p. 132).

Roblyer, McDaniel, Webb, Herman and Witty (2010) compared how likely faculty and students were to use Facebook and email for either personal or educational purposes. Findings indicated students are much more likely than faculty to use Facebook

and are significantly more open to the possibility of using Facebook and similar technologies to support classroom work, while “faculty members are more likely to use more 'traditional' technologies such as email” (p. 134). “Further, faculty and students do not use Facebook a great deal for instructional purposes” (p. 138) and social uses were far more common.

Wang, Sandhu, Wittich, Mandrekar and Backman, (2012) explored continuing medical education course participants' use of social media and their attitudes about the value of social media for enhancing continuing medical education and examined associations between participants' characteristics and attitudes toward social media. Their findings suggested the vast majority utilized social media, and “favorable attitudes toward social media utilization for continuing medical education were associated with younger age and frequency of social media use” (p. 1167). In the Wang et al. (2010) study, participants generally expressed that use of social media for continuing medical education is ethical, desirable for distributing content, and likely to increase over time; those older than age 50 were less likely to view social media as a professional medium of communication. Interestingly, participants with more advanced degrees (MD or PhD) viewed social media less favorably than those with less advanced degrees (Wang et al., 2010).

Lin, Hoffman, and Borengasser, (2013) examined Twitter use by undergraduate and graduate students in three classes. The study examined how students perceived Twitter as a classroom tool. Most participants agreed that Twitter provided another way to interact with peers and instructors, and allowed communication on a more personal level. Quantitative results indicated that of 44 participants, only about 13 actively

tweeted, resulting in over 1100 tweets in the course of the semester. This finding in the Lin et al. (2013) study seems to indicate that the few participants that were active were quite active. Several students suggested that the Twitter activity “should be integrated into the class as a required assignment. This way their peers would participate more, making it a more engaging and fun experience” (p. 43).

Allwardt (2011) examined a case study regarding social work students’ use of a wiki to collaboratively write a literature review in a research course and concluded that “using innovative approaches will not necessarily make student more eager to do courseware” (p. 602). “Students in the course expressed negative responses toward the assignment and were reluctant to use the wiki” (p. 597). Allwardt (2011) summarized “because of problems with or aversion to the wiki assignment, my students neither experienced the literature review as an unfolding process nor received meaningful peer critiques of their writing contributions. [...] the technology seemed to overshadow student learning” (p. 602).

Hung and Yuen (2010) reported on a study conducted in Taiwan that explored how social networking technology can be used to supplement face-to-face courses as a means of enhancing students' sense of community and to promote classroom communities of practice in the context of higher education. Findings indicated the majority of participants developed strong feelings of social connectedness and expressed favorable feelings regarding their learning experiences in the classes where social networking sites were used as a supplementary tool. “One participant mentioned, ‘our class social network makes it easy for us to communicate and interact with others

anytime, anywhere' -- a statement typical of many student's comments" (Hung & Yuen, 2010, p. 710).

Paul, Baker and Cochran (2012) conducted a survey of business school students to learn more about the impact of social networking on student academic performance. The results revealed a statistically significant negative relationship between academic performance and time spent by students on online social networks; and that the higher the attention span, the lower the time spent on online social networks (Paul, et al., 2012). Further, the Paul, et al. study indicated that participants did not think online social network is a good study tool, they are not likely to increase their use of social networks for study in the future, and they are not inclined to believe that it will improve their academic performance.

Mazman and Usluel (2010) suggest Facebook and other social networks facilitate informal learning because of their active role in students' daily lives. Further, the tools may support collaborative learning, engage individuals in critical thinking, enhance communication and writing skills by allowing students to work in personalized environments. Social networks, according to Mazman and Usluel, are pedagogical tools because people can use them for connectivity and social support, collaborative information discovery and sharing, content creation and knowledge and information aggregation and modification (2010). Tay and Allen (2011) agree, stating

The way in which educational writers discuss the value of social media focusing on collaboration, sharing, participation, and so on -- is clearly informed by a belief in the value of a social constructivist approach to learning. That is, the benefits of social media for learning emerge because these technologies promote a

way of learning in which students construct their knowledge as a consequence of engaging with, discussing, and re-expressing the material to be learned, rather than just acquiring and repeating that content, and more importantly do so in a combined, or collected manner -- one individual cannot learn as well as many working together. (p. 154)

Tay and Allen (2011) reported on a case study that suggests social media support constructivism in learning. They explored how social media might be used effectively in higher education, and concluded that students learn best “when they are required to engage actively with the curriculum material in ways that emphasize the individual construction of meaning and knowledge in a social setting involving interchanges between learners about the nature and intent of their studies” (Tay & Allen, 2011, p. 151). Since learners experience social media as collaborative, they are more likely to become engaged in a constructivist process. “Social media affords students collaborative potential because of the particular ways in which the technology works; yet also important are the actions of teachers who establish this ‘new’ form of learning and assessment in contrast to old approaches” (Tay & Allen, 2011, p. 153).

Student and Faculty Perceptions. Though some authors are clearly proponents of using social media for academic purposes (Tay & Allen, 2011; Mazman & Usluel, 2010), academic opinions are divided about the appropriateness of doing so. The results of a survey about faculty and student "acceptance of using Facebook for teaching may reflect a general sentiment: Students are willing; faculty members are not" (Roblyer, et al., 2010, p. 134). The next group of studies explores student and faculty perceptions regarding the use of social media for educational purposes.

Hrastinski and Dennen (2012) explored how students perceived using social media to support their studies and found that “although the vast majority of the respondents use social media frequently, a ‘digital dissonance’ can be noted, because few of them feel that they use such media to support their studies” (p. 451). Students prefer to use Facebook for social purposes, not educative ones (Parry & Young, 2010). However, a medical training curriculum that integrated Twitter, YouTube, blogging, and Skype in two courses offered to medical students (George & Dellasegra, 2011) received very positive reviews from students. Students in a Yarrow (2012) study rated their courses high and indicated that social media techniques assisted learning of content and collaboration among students (p. 36).

Blankenship (2011) reports on a commercially-funded study of about 1,000 faculty: “more than 80% [of faculty] use social media in some capacity, and more than half use the tools as part of their teaching. What's more, the survey reveals that older faculty (teaching 20 years or more) use social media at almost the same level as their younger peers” and suggests “social media benefits students with greater engagement, greater interest, students taking more control and responsibility for their education” (Blankenship, 2011, p. 40).

Results of student and faculty perceptions of using social media for educational purposes are quite mixed. Woodley and Catherine (2012) reports “some students and many academics have privacy, security and pedagogical concerns about using a commercial product, Facebook, for teaching and learning. Numerous students seem to be addicted to Facebook to the detriment of their study and Facebook is a social and not an academic space” (p. 90). Further, there are numerous legal and ethical issues about using

Facebook for teaching. Although many staff and students use Facebook socially, many of them are not comfortable conflating academic and social spaces, which teaching via Facebook entails (Woodley & Catherine, 2012).

As with marketing and recruiting, the problem of measuring effectiveness of social media for education enhancement exists. After reviewing literature regarding the role of social media in higher education classes, Tess (2013) reports

Social media are increasingly visible in higher education settings as instructors look to technology to mediate and enhance their instruction and promote active learning for students. Many scholars argue for the purposeful integration of social media as an educational tool. Empirical evidence, however, has lagged in supporting the claim. (p. A60)

Tess scrutinizes the available research, explaining that most of the existing research is limited to self-reported data and content analysis. There are mixed views and much conflicting information regarding the use of social media to enhance education. The next section examines some potential pitfalls of social media in educational environments.

Threats to the Institution, Students and Employees

Social media has been described as a “double-edged” sword by the literature and by those who participated in the study. Like technologies that preceded it, social media has the potential for disaster. In higher education, disaster comes in the form of cyberbullying, privacy issues and freedom of speech conflicts. These issues are sensationalized in the media and quickly become public relations nightmares for

institutions. At the same time, institutions have some responsibility in helping students thoughtfully and carefully create their own digital identities.

Digital Identity

Some literature exists regarding social media and the development of identity – “it can be a very positive way for students to create digital footprints, and teachers should help students along in the process” (Careless, 2012, p. 44). “Some students are not aware that potential employers check their social networking sites, in addition to conducting a Google search. Careerbuilder.com has found that 45 percent of employers check social media profiles during the hiring process” (Junco & Chickering, 2010, p. 14).

Smith and Kidder (2010) explored online identities created via Facebook and concluded students should be wary of what they present. “The absence of immediate social controls coupled with a culture of self-expression, creates community norms that may be inconsistent with most employers' profile of an employee” (p. 493). Smith and Kidder describe how Facebook's social norms (i.e. profiles that include drinking, bragging, and the like) “lead to projected identities that job applicants may not wish to be seen by potential employers – profiles may suggest the user lacks maturity and responsibility” (p. 493). Smith and Kidder advise students to “be attentive to what your online profile says about you; focus on presenting the identity of someone that would make an excellent employee” (p. 498).

Giving Away Data

Social media sites are free to users because they are often funded via online advertising and the sale of user data. Numerous data are collected by social media sites based on user interests, demographics, search phrases and websites that are visited. Much

of the information is shared willingly by users when creating an online profile, by visiting web pages, and “liking” and “sharing” information (Pierson, 2012). Disjoint data sets can be combined together to create a comprehensive profile of an individual. Social networking sites “aggregate information from various Internet locations, and comprise the virtual identity of the user in the process” (Sweeney, 2009, p. 209). However, some studies suggest that users are becoming more aware of privacy issues related to social media.

Increased Awareness

Boyd (2011) presents the results of a longitudinal study of social media users conducted over a two-year period. A series of online surveys examined changes of social media privacy attitudes and self-reported behaviors over time. Between 2009 and 2011, respondents' privacy concerns and distrust of social media sites increased significantly, while their disclosure of personal information and willingness to connect with new online friends decreased significantly (Boyd, 2011). Specifically, social media privacy concerns and distrust of social networking sites were positively correlated to time; risk perception for privacy disclosure increased significantly during the period of the study; and privacy disclosure to social networking sites, along with willingness to accept friend requests from unknown individuals decreased significantly during the period of the study (Boyd, 2011).

Participants in the Boyd (2011) study reported that changes in their attitudes regarding privacy and behavior were a result of “increased awareness of others’ maladaptive behaviors [and] increased knowledge and awareness of online privacy risks” (p. 7). Respondents reported increased awareness from media exposure, conversations

with others, and “perhaps most significantly for the majority of respondents -- by observing inappropriate online privacy behaviors by their social networking peer group” (p. 7). Boyd also reported a concern of information misuse by stalkers among all female respondents. Junco and Chickering (2010) summarize online privacy concerns, stating “Online privacy has both conceptual and technological difficulties. Information shared through social media can be detrimental to a job search and career; cyberbullying and online harassment occur” (p. 14).

So do freedom of speech conflicts. The case of Wheaton College and Latyia Hawkins described in Chapter 1 illustrates how a single Facebook post resulted in the loss of a talented faculty member, conflict among faculty and between faculty and administration, and a public relations nightmare for the institution. This is one of several recent cases. Others are described below.

Freedom of Speech, Academic Freedom and Civility

In a case referred to as the *unhiring* of Professor Salaita, a professor was offered a tenured faculty position in the American Indian Studies program at the University of Illinois at Urbana-Champaign (UIUC). “Following the usual procedures, the offer was made [...] on the basis of the program’s faculty’s academic evaluation of Salaita’s academic record, which included a history of excellent teaching” (Moshman & Edler, 2015, p. 1). Salaita resigned from his former position, made arrangements to move and prepared for his fall courses at UIUC. Then, on August 1, the UIUC Chancellor “abruptly overrode the department’s academic decision on the basis of her own expert administrative analysis of Professor Salaita’s tweets about Israel during its assault on Gaza. She determined he would be a bad teacher” (p. 1).

In an August 22 email to the campus, the Chancellor explained that her decision was based on an expectation of civility: “we will not tolerate [...] personal and disrespectful words or actions that demean and abuse either viewpoints themselves or those who express them” (p. 1). On August 24 the American Indian Studies faculty voted no confidence in the Chancellor, criticizing her for a “clear disregard of basic principles of shared governance” and “basic courtesy and respect for collegiality” (p. 2).

Moshman and Edler (2015) analyze the case in terms of the First Amendment, academic freedom and civility in education. The article suggests UIUC has violated the First Amendment, stating “Professor Salaita appears to have a strong case the UIUC violated his constitutional right to free speech” (p. 2); that the Chancellor has “failed to respect the academic freedom of the American Indian Studies program” (p. 2); and that the Chancellor’s vague standard of civility infringes on academic freedom throughout the university (p. 2). The dispute cost the University over \$2 million for settlements of two separate lawsuits and legal fees (Cohen J. S., 2015).

Summary

Social media mishaps can escalate quickly, harming institutions, their students and faculty. Unwary students can overshare, creating an undesirable digital identity and unknowingly share information. Issues of freedom of speech and academic freedom are divisive and complex. Leaders of higher education should be aware of the issues in order to support students and faculty and make thoughtful and careful decisions about issues that arise. The final section of this literature review focuses specifically on social media as it relates to transparency and authenticity in leadership.

Social Media and Leadership

An interesting and growing area in the literature explores social media and leadership topics, predominantly transparency and authenticity. In this age of transparency in government, these phenomena are particularly relevant and thought-provoking.

Leadership is defined as “a process of influence between a leader and his followers to attain group, organizational and societal goals” (Avery, 1990, p. 453). Leadership is classically defined as the function of a leader – one who guides, influences, or directs a group. “But in a social media world of empowered consumers and employees, does the leader direct the group, or does the group guide the leader?” (Friedman, 2013, p. 14).

“The key principle of leadership today is to empower the group rather than tell it what to do” (Friedman, 2013, p. 14). This statement is consistent with Burns’ theory of transformational leadership, which “occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality” (Burns, 1978, p. 20). Social media, according to Friedman (2013) changes the leadership equation. According to Friedman,

Social media breaks apart [the traditional hierarchy of leadership] by empowering individuals and groups to communicate horizontally at higher velocity and greater momentum than a hierarchical model can keep up with. We call this leveling the playing field of voice. Stimulate groups to lead your goals for you, rather than do it yourself. To influence, you must listen. To lead, you must learn to follow. (p. 14)

“The horizontal, democratized nature of social media means the truth will always come out. A leader then suggests, insists on, and practices transparency and authenticity. Success and mistakes are acknowledged. Groups are empowered and more effective when they embrace reality and can trust each other to work together” (Friedman, 2013, p. 14).

According to Holtz (2009), "Transparency is the degree to which an organization shares information its stakeholders need to make informed decisions" (p. 2). Rawlins (2008) identified transparency as having three important elements: “being truthful, substantial or useful; having participation of stakeholders; and being objective, balanced and accountable” (p. 71). This includes a range of behaviors such as trusting employees to communicate with the public and communicating company information that helps others understand what the company does and why (DiStaso & Bortree, 2012).

DiStaso and Bortree (2012) examined transparency in social media, and found that the public relations professionals [who participated in the study] feel strongly about the value of social media. The respondents reported that they were most likely to use social media to let people know what their companies do and why as well as provide information that is useful for others to make informed decisions. A content analysis of award-winning social media campaigns suggested that the dimension of transparency most commonly used in these campaigns was providing information that is useful for others to make informed decisions. Additionally, social media were used as a tool to help organizations be accountable for their actions and to communicate about how organizational decision affect others (DiStaso & Bortree, 2012).

Some industry leaders have embraced social media. Charles (2012) describes several cases. Richard Branson, CEO of Virgin Group, invites the outside world in by asking his 2.3 million Twitter followers to pose any question about the company. Branson says he uses social media to “relate to as many people as possible.” Tony Hsieh, CEO of Zappos and bestselling author, “publishes internal emails on Twitter, shining a light on the strategy behind corporate decisions” (Charles, 2012, p. 1). Marc Behioff, the charismatic CEO of Salesforce.com, tweets not only about business but also politics and other passions, providing a more well-rounded and relatable view of [himself]. “Executive Twitter accounts humanize a brand. There is a hunger to hear directly from CEOs without the corporate filters that dilute authenticity” (Charles, 2012, p. 1).

In April, 2014, Santa J. Ono, President of the University of Cincinnati, was interviewed in a video which was published on the Chronical for Higher Education website. In it, he describes his use of social media to enhance advancement and transparency efforts:

when I came to University of Cincinnati, it was actually the communications vice president who said, ‘Twitter is something which is really just going to grow, and if you really want to connect, especially with the younger generation, and prospective students, current students, and now increasingly people over 55 are actually on Twitter. You should really have some sort of presence on that.’ And that's really-- they created a monster I think because I'm [...] quite prolific on that. It has turned out to be, I think, something very positive for myself and for the University of

Cincinnati [...]. And just earlier this week, I got an Instagram, I'm also on Instagram, message from a student who said, 'I have chosen the University of Cincinnati because I started following you on Twitter, and then Instagram, and that feeling of connection with the president is something that differentiates the University of Cincinnati from other schools.' [...] and they're not shy about tweeting to me about a room that needs new tiles, or a vending machine that needs more Cheez-Its. And they actually tweet to me and we respond and they become more satisfied with their experience at the University. And they've told me so. So, it's a way for me to listen, to communicate with them, and also even to have a dialogue about important issues, such as diversity. (Chronicle for Higher Education, 2014)

Ono went on to describe how a connections made via social media landed him an invitation to a meeting and a subsequent research agreement with NASA. He also described how, on three separate occasions, such connections have resulted in \$50,000 or \$60,000 donations to the university.

Still, some CEOs perceive social media engagement to be uncontrollable, inviting too much reputational risk. Charles (2012) posits "an irreversible power shift is underway. Social networks made up of customers, investors and other stakeholders are becoming stronger than the organizations they orbit. If social media can help topple corrupt governments, they can unseat unscrupulous and unpopular CEOs" (Charles, 2012, pp. 1-2).

Friedman (2013) agrees, stating social media makes it difficult to control the spin. “Like a game of whack-a-mole, the more you try to control or delete your detractors, the more they pop up elsewhere. The social network world has endless venues for detractors to pop up, fueled in anger by your attempts to squelch them” (Friedman, 2013, p. 14).

The challenge for leaders, then, is to harness the power of social media and turn it to their advantage. Social media forces companies to become more transparent (Charles, 2012). “Group members value transparency and authenticity. It builds loyalty, support, trust and moves toward goals” (Friedman, 2013, p. 14).

In this era of budget cuts, social media can also be used to humanize someone whose decisions might not be popular. The person who makes decisions of budget cuts or layoffs “might be a campus pariah, but he/she is a person too. Using social media – a YouTube video about the struggle to make the decision, a Facebook page for the person – can be a way to personalize her or him” (Farrington, 2011, p. 18). The Charles (2012) study supports this sentiment, reporting “81% of respondents said CEOs who engage in social media are better equipped to lead than their peers, and 82% were more likely to trust a company whose CEO is engaged in social media” (p. 1).

According to Notter (2012), social media is shining a light on a new way of leading and managing – one that is more human and more powerful. Social media has been so successful because it lets us be human.

Social media has enabled us to create and share on a massive scale, without relying on organizations. Through our networks, we can produce our own news, create our own entertainment, collaborate and solve problems, and go places that are meaningful to us. That is the essence of being human. We were born to

collaborate and solve problems. That's why social media is so popular – it lets us be more human. (Notter, 2012, p. 1).

Notter goes on to say that human organizations are open, embracing decentralization and transparency, embracing truth and authenticity (Notter, 2012).

According to Aula (2011), social media challenges conventional reputation management strategy in three ways: “it is not just a one-way communication channel; it should concentrate on ethics rather than pursuing short-term interests; and it has the effect of presenting a collective truth” (pp. 45-46). Further, companies may appear to be authentic if they use a “human voice” on social media sites. Park and Lee (2011) suggest “a human voice may help create perceptions of transparency when interacting with a person instead of an organization, which can then help cultivate relationships” (Park & Lee, 2011). Also, a conversational human voice has been found to “positively impact dimensions of trust, satisfaction, commitment, and control mutuality” (Kelleher & Miller, 2009, p. 396).

Summary

According to the literature presented, social media has the potential to help a leader improve transformational leadership, transparency and authenticity, thereby building relationships and maintaining a positive image of a company or institution. While this is happening to some extent in industry, it is unclear whether leaders of higher education follow suit.

Peer reviewed literature addressing social media issues in higher education examines use and perceptions of faculty, staff and students. Many articles look at the perceptions of the people who sell the institution – advancement, marketing and

admissions. Marketing literature focuses on telling the story of the institution, creating and strengthening relationships, and protecting the brand. Numerous studies address the role of social media in education, looking at student engagement and faculty innovation. Findings are mixed and sometimes in conflict with one another. Articles regarding threats to the institution tend to be the most newsy and sensational articles. These are the stories of scandals, lawsuits and conflicts.

Whether or not leaders in education interact directly with social media, they need to be aware of its strengths and weakness, and perhaps most importantly, what can go wrong. The literature review brings together a literature supporting the four research questions in this study. Chapter 3 describes the methodology.

CHAPTER THREE: METHODOLOGY

This quantitative dissertation study, *Social Media Practices and Perceptions among Leaders in Higher Education*, sought to fill a gap in the research concerning higher education leadership and social media. Creswell (2009) would characterize the study as survey research, because it “provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population” (p. 12). Data were gathered using online survey instrument. Four research questions were explored: (a) What is the relationship, if any, between the use of social media and transparency, among leaders in higher education? (b) What is the relationship, if any, between the use of social media and attitudes regarding risk to the institution, among leaders in higher education? (c) What is the relationship, if any, between use of social media and attitudes regarding the use of social media for educational enhancement, among leaders in higher education? (d) What is the relationship, if any, between use of social media and attitudes toward higher education marketing and recruiting, among leaders in higher education?

These questions were explored quantitatively. Data were collected via an online survey instrument and analyzed using a Spearman Rho correlation, frequencies and measures of central tendency. Chapter Three describes the research design and procedures, population and sample, instrumentation and validation measures.

Non-Experimental Research Design

A correlational study was used to determine whether a relationship exists between respondents' hours spent using social media and their attitudes regarding themes revealed by the literature review. Themes surrounding social media in education include its roles

in transparency in leadership, threats to the institution, educational enhancement, and marketing and recruiting.

SurveyMonkey (SurveyMonkey, 2016) was used to gather data. Demographic data and data regarding social media use were collected and used for descriptive statistics. Spearman Rho was used to measure the strength of correlation between hours of social media use and attitudes among the respondents. Independent variables were self-reported hours spent using social media for personal and professional use. The dependent variables included attitudes regarding the use of social media in marketing and recruiting, educational enhancement, threats to the institution, and transparency. Attitude measurements were gathered using a Likert scale.

Creswell (1994) defined the quantitative approach as “an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true” (p. 2). In this study, the inquiry consists of the four research questions, and the theories being tested are the hypotheses. This study is a correlational study; the relationship between social media use and attitudes was explored by measuring the strength of the correlation between variables.

Research Questions and Hypotheses

This study explored the relationship between higher education leaders’ social media use and their perceptions and attitudes regarding themes uncovered in the literature: marketing and recruiting, teaching and learning, transparency in leadership, and the possibility of threat to the institution. Each research hypothesis is listed below with the research question it addresses.

Research Hypotheses.

H₁: A correlation exists between social media use and attitudes regarding transparency among leaders of higher education.

H₁ addresses Research Q1: *Among leaders in higher education, what is the relationship, if any, between the use of social media and attitudes regarding transparency in leadership?* Transparency has been described as “being open and honest in presenting one’s true self to others (Northouse, 2013, p. 264) , “having participation of stakeholders” (Rawlins, 2008, p. 71), and “trusting employees to communicate with the public and communicating company information” (Distaso & Bortree, 2012, p. 511).

H₂: A correlation exists between social media use and attitudes regarding social media as a threat to the institution, among leaders of higher education.

H₂ addresses Research Q2: *Among leaders in higher education, what is the relationship, if any, between the use of social media and attitudes regarding risk to the institution?* “Social media – for better or worse – has the potential to trouble institutions’ attempts to project a unified and controlled image of themselves to the world” (McNeill, 2012, p. 161). McNeill articulates a perceived threat of “reputational damage to institutions caused by unregulated and unsupervised social media use by both staff and students” (p. 153) and cautions that brand needs to be managed (p. 153). Some authors report that social media has a negative effect on academic performance (Paul, Baker & Cochran, 2012, p. 2117; Junco, 2011, p. 168) and describe issues such as cyberbullying (Zallaquete & Chatters, 2014, p. 1; Minor, Smith & Braschen, 2013, p. 15) and dual relationships between students and faculty.

H₃: A correlation exists between leaders' social media use and their attitudes regarding the use of social media to enhance education,

H₃ addresses Research Q3: *Among leaders in higher education, what is the relationship, if any, between the use of social media and attitudes regarding the use of social media for educational enhancement?* Some studies indicate using social media as part of a class enhances students' educational experiences. Hung and Yeun (2010) reported "the majority of participants developed strong feelings of social connectedness and expressed favorable feelings regarding their learning experiences" (p. 703). Junco and Chickering (2010) reported "increased student engagement and improved grades" (p. 13).

H₄: A correlation exists between higher education leaders' social media use and the use of social media for marketing and recruiting.

H₄ addresses Research Q4: *Among leaders in higher education, what is the relationship, if any, between use of social media and attitudes toward higher education marketing and recruiting?* Some studies describe the value of social media as a tool for "building and maintaining a relationship of value exchanges between the institution and three main customer groups: alumni, current students and future students (Constantinides & Zinck Stagno, 2011, p. 10). Further, "social media allows for interaction in a richer format (Davis, 2012, p. 1) and conveys its brand, which is "synonymous with the institution's personality – congruent with its mission, defined by its values (Black, 2008, p. 2).

Null Hypotheses

H_{0a}: There is no relationship between social media use and attitudes regarding transparency among leaders of higher education.

H_{0b}: There is no relationship between social media use and attitudes regarding threat to the institution among leaders of higher education.

H_{0c}: There is no relationship between social media use and attitudes regarding the use of social media in the classroom, among leaders of higher education.

H_{0d}: There is no relationship between social media use and attitudes regarding the use of social media for marketing and recruiting, among leaders of higher education.

Procedure

This quantitative study explored the social media practices and perceptions among leaders in education in the western United States. First, data was collected using an online research instrument. Following validation and integrity checks, the data were analyzed using frequencies for nominal data, means and cluster means for numeric data, and a Spearman Rho test of strength of correlation between hours of use and attitudes. A detailed description of the data collection, integrity checks and analysis is presented later in this chapter.

This study explored four research questions using four research hypotheses. The participants were those individuals who were identified as the leadership of each institution in the sample. The participants, population, sample and related procedures are described next.

Participants

Study participants were leaders of four-year degree-granting institutions in eleven western states who took the survey. Participants were individuals employed by the institutions that were sampled. Participants represented the leadership of each institution, and had position titles including President, Chancellor, Vice President and Dean. The population and sample are described below.

Population

“The population is composed of all individuals of interest to the researcher” (Cozby, 2009, p. 136). “The target population refers to the entire group of individuals to which researchers are interested in generalizing the conclusions” (explorable.com). The target population for this study were educational leaders in the western United States. The study population is a subset of the target population, and it is the population in research to which the researchers can apply their conclusions. The population for this study consisted of 324 public and private non-profit four-year degree granting institutions in the western states that have a traditional educational leadership structure. “Traditional” is defined as having a President and/or Chancellor; one or more Vice Presidents – often in the areas of Academic Affairs, Advancement, Human Resources/Financial, and Student Services; and a number of Deans reporting to the Academic Vice President.

Population Procedure

A list of institutions in the population was acquired using an online tool provided by the National Center for Educational Statistics (U.S. Department of Education, 2014). First, a list of 374 four-year public and private non-profit institutions in the states of

Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington and Wyoming, was compiled. Then websites of each school in the population were visited and the researcher determined whether the school listed has a “traditional” educational leadership structure of a President/Chancellor, Provost and Vice Presidents, and Deans. Some institutions were removed from the population because they did not fit this structure or some other criterion of the population. Institutions were removed for the following reasons:

- Two or more programs, divisions or campuses of an institution were listed as separate entries, but had the same leader(s). This would cause a single observation to appear in more than one cluster;
- The institution only offers graduate or law degrees though it was categorized as a four-year institution in CollegeNavigator;
- The institution, though designated non-profit, is owned by a corporation (some corporations own multiple institutions) and does not have a traditional educational leadership structure; or
- The researcher has a past or present strong affiliation with the institution (two institutions fit this criterion and were removed from the list to avoid “back-yard research”).

After removing institutions from the list, the study population consisted of 324 institutions from which a random cluster sample of 177 institutions was drawn.

Sample

A sample is a subset of the population acquired by one or more sampling methods. This study employed a two-stage random cluster sample (Thompson, 2012, pp.

157-159) of institutions in the study population. Since the sample consisted of institutions but individuals must answer surveys, a second stage of sampling was conducted to identify and select the leadership in the institution. The sample size and procedure are explained below.

Sampling Procedure

The sample for this study may be characterized as a two-stage random cluster sample. The clusters were the institutions in the study. During the first stage of sampling, the researcher assigned each of the 324 institutions a number between 1 and 324. Then, a Java program was used to generate a list of 177 unique random numbers between 1 and 324. The institutions that were assigned to the numbers generated by the Java program became the clusters in the sample. The lists of institutions in the population and the sample appear in the appendices.

The second stage of sampling can be best characterized as a criterion sampling. Criterion sampling is a form of purposeful (or purposive) sampling that involves selecting cases that meet some predetermined criterion of importance (Patton, 2001, p. 238). The criterion selected for this stage of sampling was position title, indicating a particular leadership role within the institution. Individuals selected for the study were those in positions of President, Vice President, or Dean or equivalent/similar positions. Those individuals were identified by searching institution websites. An email message was sent to each individual, inviting him or her to participate in the study by responding to an online survey.

Sample Size

The sample size for this study was determined using sample size calculator available on the RaoSoft website (Raosoft, Inc.). A sample of 177 institutions was desired to obtain a confidence level of 95%. The final sample size for the Spearman Rho analysis was 142 institutions, indicating a confidence level of 88.7% according to the Raosoft calculator.

The population for this study was leadership of four-year degree granting institutions in the western United States that have a “traditional” leadership structure. Institutions in the population were identified using an online tool. The population was sampled using a two-stage cluster sample resulting in a sample of institutions and a set of participants representing the leadership of each institution. The next section describes the data that were collected from the participants. Following variables and levels of data, the instrumentation and data collection procedures are described.

Variables and Levels of Data

“The variables need to be specified [...] so that it is clear to readers [...] what outcomes are being measured” (Creswell, 2003, p. 157). Creswell (2003) provides a number of recommendations, including the construction of a table that identifies the variables, the survey questions used to obtain the data, and related information (p. 151). Table 1 summarizes the variables and levels of data used in this study. Also included are the survey question number(s) used to obtain the data, and the analyses in which the data will be used. Variables are categorized as general demographic, social media usage and attitude.

Table 1. Variables and Levels of Data

Variable	Level of Data	Survey question	Analysis(es)
Demographics			
Gender	Nominal	1	Frequency
Age	Ratio	2	Frequency, measures of central tendency
Leadership position	Nominal	3	Frequency
University function	Nominal	4	Frequency
School	Nominal	5	Spearman Rho (used to meet individual observation requirement)
Social Media Usage			
What media used	Nominal	6	Frequency
What for	Nominal	7	Frequency
Hours/week used professional	Ratio	8	Used to calculate Total Hours, frequency, measures of central tendency, Spearman Rho
Hours/week used personal	Ratio	9	Used to calculate Total Hours, frequency, measures of central tendency, Spearman Rho
Attitudes			
Relationships with constituents	Ordinal (Likert)	10	Frequency, Spearman Rho (Marketing construct)
Relationships with prospective students	Ordinal	11	Frequency, Spearman Rho (Marketing construct)
Tells the story	Ordinal	12	Frequency, Spearman Rho (Marketing construct)
Conveys brand, mission, vision	Ordinal	13	Frequency, Spearman Rho (Marketing construct)
Engage students in scholarly activity	Ordinal	14	Frequency, Spearman Rho (Educational Enhancement construct)
Faculty interaction	Ordinal	15	Frequency, Spearman Rho (Educational Enhancement construct)
College engagement	Ordinal	16	Frequency, Spearman Rho (Educational Enhancement construct)
Constructive learning	Ordinal	17	Frequency, Spearman Rho (Educational Enhancement construct)

Variable	Level of Data	Survey question	Analysis(es)
Scandals and lawsuits	Ordinal	18	Frequency, Spearman Rho (Threats to Institution construct)
Detrimental to study	Ordinal	19	Frequency, Spearman Rho (Threats to Institution construct)
Cyberbullying and harassment	Ordinal	20	Frequency, Spearman Rho (Threats to Institution construct)
Inappropriate relationships	Ordinal	21	Frequency, Spearman Rho (Threats to Institution construct)
Express feelings openly	Ordinal	22	Frequency, Spearman Rho (Transparency construct)
Communicate organizational motive	Ordinal	23	Frequency, Spearman Rho (Transparency construct)
Address a mistake	Ordinal	24	Frequency, Spearman Rho (Transparency construct)
Employees using social media	Ordinal	25	Frequency, Spearman Rho (Transparency construct)

Instrumentation

A custom survey instrument was used to collect the data. The questions were written after an extensive literature review, and were based on themes and issues found in the literature. Some demographic and social media use criteria, such as age ranges and social media sites, were based on results reported in the Pew Report (Perrin, 2015). The design, development and validation of the instrument used in the study are described below. Deployment procedures are described later in the Procedures section of this chapter.

Collection Instrument

The collection instrument was an online SurveyMonkey survey distributed as a link in email messages to individuals identified in the sample institutions. The instrument was not an established instrument and a variety of techniques were applied to help ensure

validity, reliability and consistency. The original and revised collection instruments both appear in the appendices.

Contacting Participants. Email addresses of the potential participants were imported into Sendy (Sendy, 2015), which is a software tool for sending mass emails. While Sendy does not report who has taken the survey, it does report errors and bounces, as well as a list of email addresses of recipients have opened the message. This feature enabled the researcher to avoid sending follow-up messages to recipients who had previously opened the message.

Three sets of messages were sent to the list of sampled leaders. The first message was sent to the entire list of leaders in the sample. The second message was sent only to those who had not opened the message previously. The third follow-up message was sent to those who had not opened the message during the first two rounds. Figure 1 shows the number of survey responses per day, as reported by SurveyMonkey. The first message was sent on Day 1, the second on Day 8 and the third on Day 12. Day 5 was a Monday, a likely explanation for the small spike of responses.

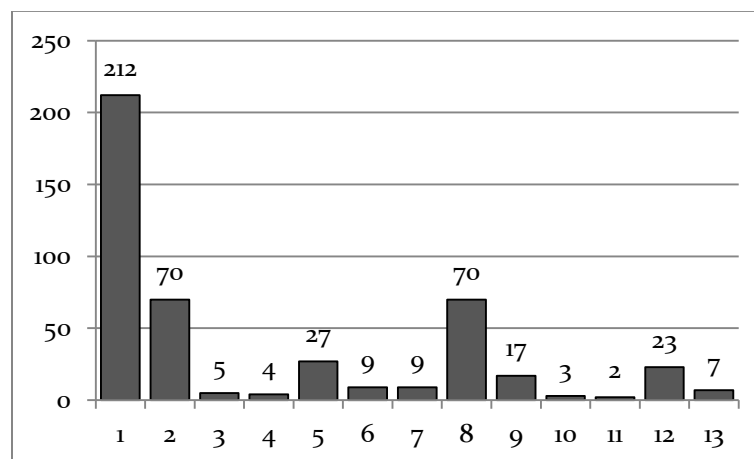


Figure 1. Number of Survey Responses per Day

Response Rate. The response rate for online surveys, particularly external surveys, can be quite low. According to one source, “Internal surveys will generally receive a 30-40% response rate or more on average, compared to an average 10-15% response rate for external surveys” (Survey Gizmo, 2010). Two response figures were noted: total responses and the number of institutions represented in the responses. The survey was sent to 1,474 individuals and 452 responded, resulting in a 32% response rate for individuals. The response rate for institutions was 39.6%, representing 147 of 371 institutions.

Reliability and Validity

“A sound research plan calls for thorough discussion about the instrument or instruments – their development, their items, their scales, and reports of reliability and validity of scores on past uses” (Creswell, 2009, p. 158). An original instrument was developed for this study and a variety of techniques were used to establish reliability and validity. Validity was established via peer review and a written research instrument justification. Reliability was established using a pilot test and Cronbach’s alpha, a measure of internal consistency.

Research Instrument Justification. A research instrument justification is a technique used to establish validity. A research justification supports each survey question with literature. The research questions for the study were developed based on themes revealed in the literature. Survey questions were developed to try to explore different aspects of each research question. The research justification appears in the appendices.

Pilot Test and Peer Review. Two methods of peer review were used: an extensive in-person review by Dr. Jo Swain, Professor of Educational Leadership, Rocky Mountain College; and an electronic review by pilot test participants. Pilot test participants were asked to provide feedback via email, and comment boxes were added to each page of the pilot instrument to solicit comments about the questions on that page. The results of the peer review appear in the appendices. Dr. Swain was a pilot participant, and she reviewed the instrument for content as well as the results of the pilot test. Dr. Swain discussed her opinions with the researcher at length.

Reliability. The instrument was pilot tested by seventeen higher education faculty and administrators who are the researcher's friends and colleagues. The pilot test provided valuable design feedback and data to use for a Spearman Rho analysis and Cronbach's alpha.

A pilot survey instrument was implemented using SurveyMonkey. In addition to the survey questions, comment boxes were added throughout the survey to request pilot participants to leave qualitative feedback. The instrument was available for one week. Pilot participants were contacted via email and Facebook messages. The pilot instrument, results and feedback are included in the appendices. The peer review process occurred during the same period as the pilot testing and data analysis, and so pilot testing and peer review are discussed together here.

Fifteen faculty members and administrators from Montana Tech, Rocky Mountain College, The University of Montana, and Boise State University participated in the pilot study. They included six teaching faculty, one college president, three vice presidents (two academic vice presidents and a vice president of advancement), three deans, a

marketing director , a director of alumni relations, and two librarians. Each of the participants currently works in higher education and holds an advanced degree. The data collected were used to pilot test the statistical procedures. Qualitative feedback guided the next iteration of instrument design.

Internal Consistency. Reliability was measured by using Cronbach’s Alpha, a test of internal consistency that looks at consistency of results across items. Cronbach’s Alpha was used to test for consistency among constructs and the whole instrument. Cronbach’s Alpha for this instrument must be ≥ 0.5 . The procedure is outlined here.

First, questions were organized into the construct they are meant to measure. The questions were grouped into the following constructs:

1. Transparency: 22, 23, 24, 25
2. Threats to the Institution: 18, 19, 20, 21
3. Marketing: 10, 11, 12, 13
4. Educational Enhancement: 14, 15, 16, 17

Cronbach’s Alpha was calculated using GNU PSPP, “a program for statistical analysis of sampled data” (GNU, 2016). Each construct consisted of four items (N=4). The constructs were Transparency, Threats to the Institution, Educational Enhancement, and Marketing & Recruiting. The values are in Table 2, below. The result of Cronbach’s was calculated for the entire set of Likert scale questions (N=16) was .81.

Table 2. Results of Cronbach’s alpha	
Construct	alpha
Transparency	.72
Threats to the Institution	.61
Educational Enhancement	.74
Marketing and Recruiting	.84

All Cronbach's measures exceeded the 0.5 level, indicating an acceptable measure of internal consistency for the study. The procedure is presented next.

Procedure

Data Integrity and Preparation for Analysis

1. The data were downloaded from SurveyMonkey in "individual responses" for Microsoft Excel format.
2. Unused and empty fields, inserted by SurveyMonkey, were deleted. Deleted fields were titled CollectorID, StartDate, EndDate, IP Address (not collected per IRB), Email Address, First Name and Last Name.
3. Write-in position titles were inspected and processed as follows:
 - a. Where appropriate, matched up with one of the pre-defined position titles in the drop-down list. Most of the write-in titles matched directly or were "in addition to" one of the pre-defined selections. Some cases had two titles, i.e. Provost and Dean, and the higher ranked titled was selected. Associate and Assistant Vice President positions were assigned to the Academic Vice President or Other Vice President, depending on the title indicated.
 - b. In a few cases, the survey had been forwarded to others, such as an administrative assistant, social media coordinator, or marketing director. These participants did not fit the criteria for the study and 5 records were deleted from the data set.
4. Write-in university function entries were matched up with pre-defined categories. Cases were as follows:

- a. Student Affairs and Student Services were categorized as “Administrative”
 - b. Communications/Marketing/Enrollment Management were categorized as “Advancement”
 - c. Mission / Identity / Spirituality were categorized as “Academic”
 - d. It was noted that there was a lot of overlap in this category. Many participants noted more than one category, and in some cases the category could not be determined. The data was not used.
5. Participant ID’s were captured and saved in a new table called ValidIDs. This dataset, consisting of the unique ID for each valid survey entry, was used for data integrity checks in later analysis.
 6. A table of demographic data was created and the data analyzed using Access for matching records /integrity, and Excel for calculations. Descriptive statistics were calculated: frequencies for nominal data; and mean, median, mode, standard deviation and variance for age and hours.
 7. A table consisting of Respondant ID’s and the Likert scale data was constructed. This data was used for Cronbach’s alpha, as described earlier in the chapter.

The next several steps prepared data for the Spearman Rho analysis.

8. Write-in names for schools were inspected and matched up with schools in the drop-down list on the survey. The following were noted:
 - a. the researcher erred when creating the survey, omitting two institution names.

- b. one user reported that the list did not display on his/her mobile device; this may be a reason for several write-in schools with clearly matching entries.
9. SQL queries and calculated data fields were used to prepare the data for Spearman Rho analysis. First, the SpearmanDataAll table was queried for the number of responses per institution. One hundred forty six (146) institutions were represented in the sample. Then, 14 records with missing institution and/or hours data were removed, leaving 142 institutions with data sufficient for analysis.
10. Calculated fields were created for sum of hours and a sum for each of the attitude constructs:
 - a. Personal and Professional hours of social media use were added together and displayed in the field [TotalHours].
 - b. The sum of responses for questions 10, 11, 12 and 13 was displayed in the field [MarketingSum].
 - c. The sum of responses for questions 14, 15, 16 and 17 was displayed in the field [EdSum].
 - d. The sum of responses for questions 18, 19, 20 and 21 was displayed in the field [ThreatSum].
 - e. The sum of responses for questions 22, 23, 24, 25 was displayed in the field [TransSum].

11. Averages of Total Hours, Marketing Sum, Educational Enhancement Sum, Threats Sum and Transparency Sum were calculated for each institution. Institution averages were used in the Spearman Rho calculation.

Data Analysis Procedures

12. The SpearmanDataAll data table was copied in to an Excel spreadsheet named SpearmanData and Spearman Rho correlation coefficients were calculated using the Real Statistics plug-in for Excel.
13. Findings were converted to APA format and reported.

A Priori

Internal Consistency

Experimental consistency is indicated by results of Cronbach's alpha, using the procedure detailed above. Cronbach's alpha was set *a priori* at 0.5 for this study. The result of Cronbach's alpha exceeded the requirement for each construct, suggesting acceptable internal consistency and reliability.

Effect Size

"In correlational data the coefficient of correlation is used as the effect size in conjunction with details of the direction of the association" (Cohen J. , 1992, p. 99). Cohen's effect sizes are listed in Table 3, below. The effect size is set at .30 *a priori*. An effect size of at least .30 must be attained to meet the level of importance for the study.

Table 3. Cohen's Effect Size	
.10	Small
.30	Moderate
.50	Large

Alpha Level

The alpha level represents “the odds that the observed result is due to chance” (Trochim, 2006) The p-value was used to determine statistical significance in this study. The p-value was set *a priori* at $p < .05$ for each hypothesis.

Sample Size

The sample size for this study was determined a priori using sample size calculator available on the RaoSoft website (Raosoft, Inc.). The desired sample size was 177 institutions. With 142 institutions represented, the requirement was not met.

Statistical Power

Statistical power represents “the odds you will observe a treatment effect when it occurs” (Trochim, 2006). Statistical power was calculated using the .05 for alpha level, a sample size of 142 and the coefficient of correlation for each construct. Power was set at .80 *a priori*.

Summary

This study employed a quantitative design to attempt to gain deeper understanding of social media practices and perceptions among leaders in higher education. A survey instrument was developed to collect quantitative data used to address the four research questions. The data were analyzed using a Spearman Rho correlation and descriptive statistics. The resulting effect size, alpha level and sample size were used to determine statistical power. Further, a number of descriptive statistics were calculated. Chapter 4 presents these results.

CHAPTER FOUR: ANALYSIS AND RESULTS

This study explored the social media practices and perceptions among higher education leaders in the western United States. An online survey was completed by 452 leaders of 142 higher education institutions in the western United States. The data were analyzed using frequency distributions, measures of central tendency and strength of correlation. Frequencies are reported for gender, age, positions, social media platforms used, reasons for using social media, and attitude questions. Measures of central tendency are reported for age and hours using social media. Then, Spearman Rho was used to measure the strength of correlation between hours using social media and attitudes regarding the use of social media for each of four constructs: Transparency, Threats to the Institution, Educational Enhancement and Marketing.

Demographic Data

Frequency Distributions

“When analyzing results, it is useful to start by constructing a frequency distribution of the data. A frequency distribution indicates the number of individuals that receive each possible score on a variable” (Cozby, 2009, p. 226). Frequency distributions are presented here for gender, position title, type of social media used reasons for using social media and age.

Gender. Figure 2 depicts a frequency distribution for gender of respondents. The gender proportion of the participants was about 2/3 male and 1/3 female.

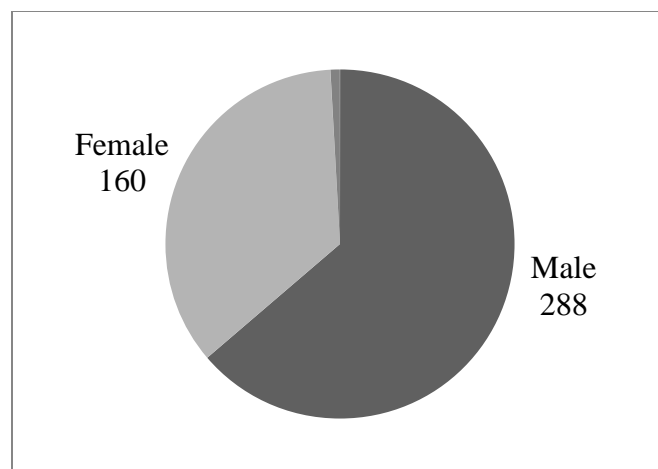


Figure 2. Gender of Respondents

Position Title. Table 4 and Figure 3 describe the proportion of respondents in each position title. Percentages of respondents are listed along with the percentages of the same position titles in the sample.

Table 4. Count of Respondents by Position Title			
	Count of Respondents	% of Respondents	% of Sample
President or equivalent	42	9.29%	10.99%
Academic Vice President	75	16.59%	12.38%
Administrative or Other Vice President	152	33.63%	38.94%
Dean or equivalent	179	39.60%	36.62%
Did not respond	4	0.88%	N/A

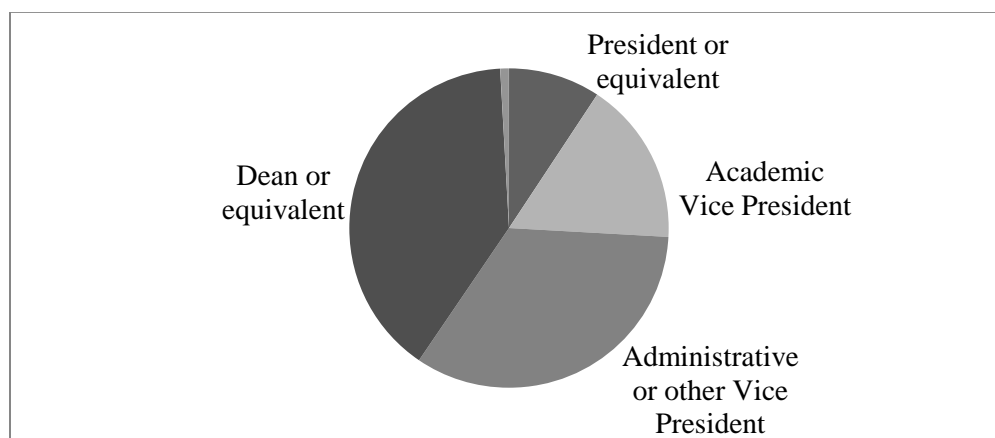


Figure 3. Respondent Position Title

Gender by Position Title. Table 5 and Figure 4 illustrate the proportions of gender by position title.

	Male	Female	% Female
President or equivalent	34	8	19.0%
Academic Vice President	43	32	42.7%
Admin/Other Vice President	101	49	32.7%
Dean or equivalent	109	69	38.8%

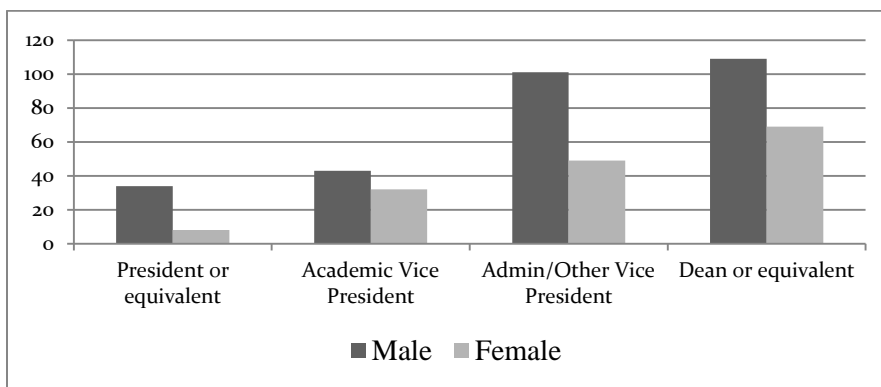


Figure 4. Gender by Position Title

Age. The age frequency distribution is depicted in Figure 5, followed by measures of central tendency in the next section. Age is normally distributed via the Empirical Rule.

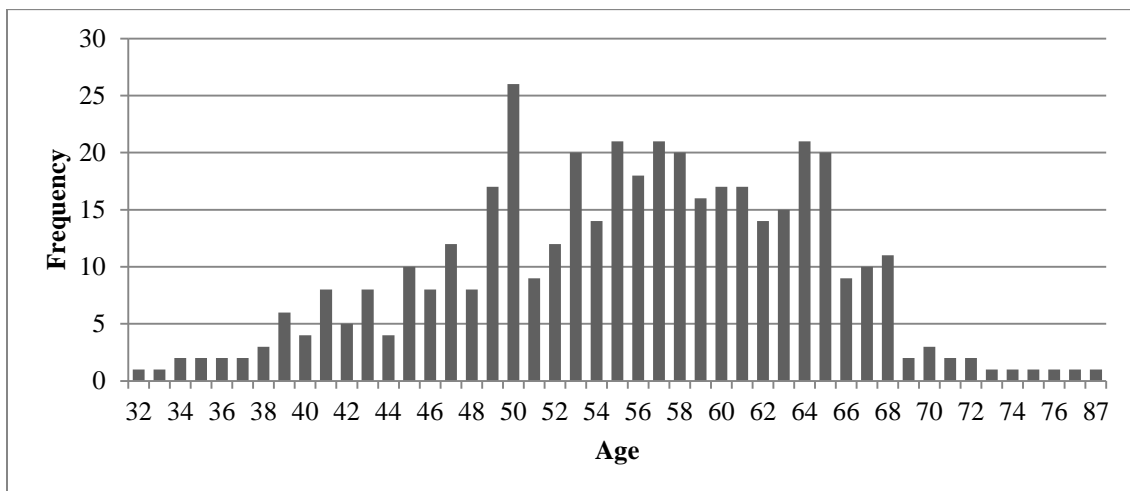


Figure 5. Histogram for Age. Age is normally distributed.

Measures of Central Tendency

“Descriptive Statistics do exactly what they say: they describe and present data“ (Cohen, 2007, p. 503). Cohen (2007) list types of descriptive statistics, including the mode, mean, median, minimum and maximum scores, range, variance, standard deviation and standard error (p. 504). Measures of central tendency are presented below for age and hours using social media. Table 8 reports the measures of central tendency for age.

Minimum	32
Maximum	87
Range	55
Mean	55.48
Median	56
Mode	50
Standard Deviation	8.69

Social Media Use

The following tables and figures address social media platforms used among participants as their reasons for using social media it. These questions allowed multiple answers, so the percentages do not add up to 100 percent. Table 7 and Figure 6 address platforms used.

Social Media platform	Count of Respondents	% of Respondents
Facebook	334	73.9%
Twitter	206	45.6%
Instagram	121	26.8%
LinkedIn*	91	20.1%
Pinterest	59	13.1%
Tumble	21	4.6%
G+ *	5	1.1%
None	67	14.8%

*write-in responses

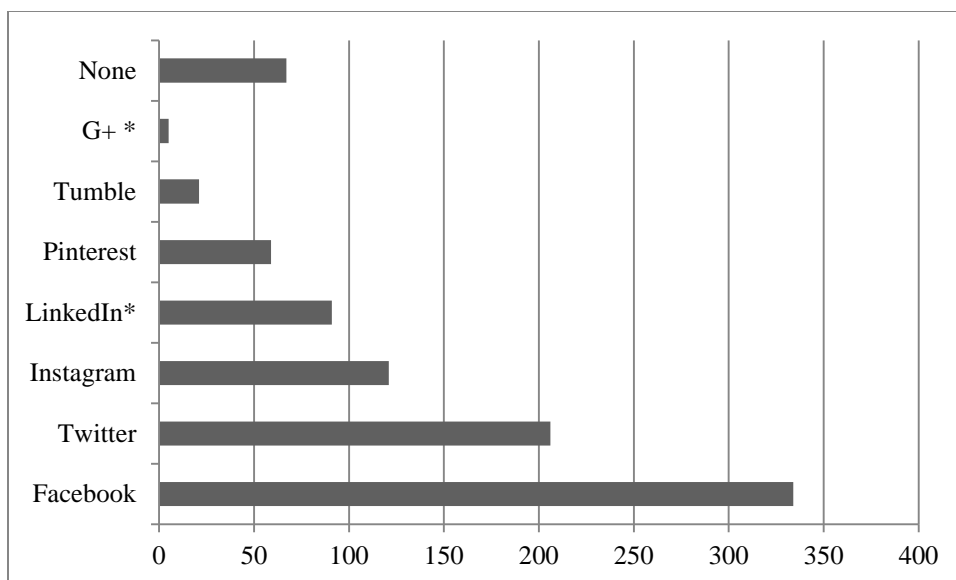


Figure 6. Social Media Platforms Used

Over 85% of respondents report using at least one social media platform.

Facebook is the most widely-used, with 74% of respondents reporting its use. Following Facebook, the most popular sites are Twitter (46%), Instagram (27%) and LinkedIn (20%). Almost 15% of respondents report they do not use social media. Table 8 and Figure 7 address the reasons for using social media. Again, responses may not add up to 100 percent.

Table 8. Reasons for Using Social Media

	Number of Respondents	% of Respondents
Business or professional use	258	57.1%
Stay in touch with family and friends	293	64.8%
News	211	46.7%
Follow businesses and organizations	152	33.6%
Entertainment	123	27.2%
Do Not Use	60	13.3%

The most prevalent reason to use social media is to keep in touch with family and friends (almost 65%), followed by business and professional use (57%) and news (47%).

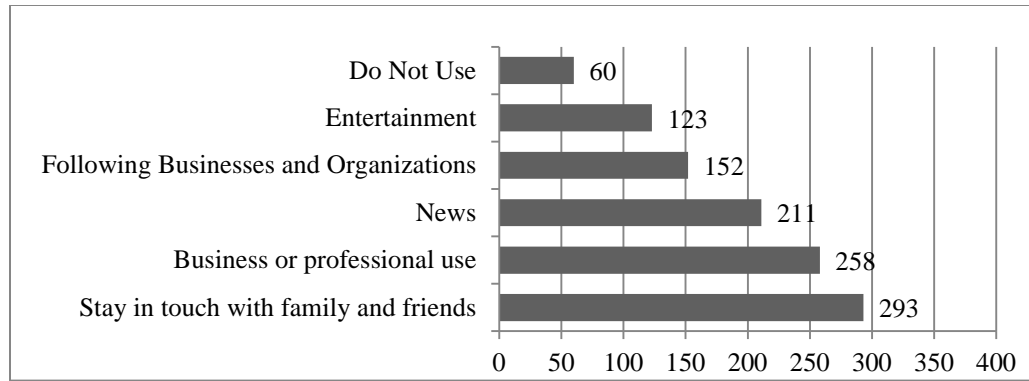


Figure 7. Reasons to use social media

Finally, the hours participants spend using social media per week are presented in Table 9 and Figure 8. The survey asked the participants to report hours using social media for personal reasons and professional reasons. The sum of the two (Total Hours) was used for the Spearman Rho analysis. The mean, almost 5 total hours per week, is skewed by a few high values. Most respondents use social media less than one hour per week, as represented by the mode and the frequency chart, below.

Table 9. Hours Using Social Media per week.

	Professional	Personal	Total
Minimum	0	0	0
Maximum	55	20	60
Range	55	20	60
Mean	2.02	2.71	4.74
Median	1.0	2.0	3.0
Mode	1.0	0.0	0.0
Standard Deviation	3.53	3.12	5.59

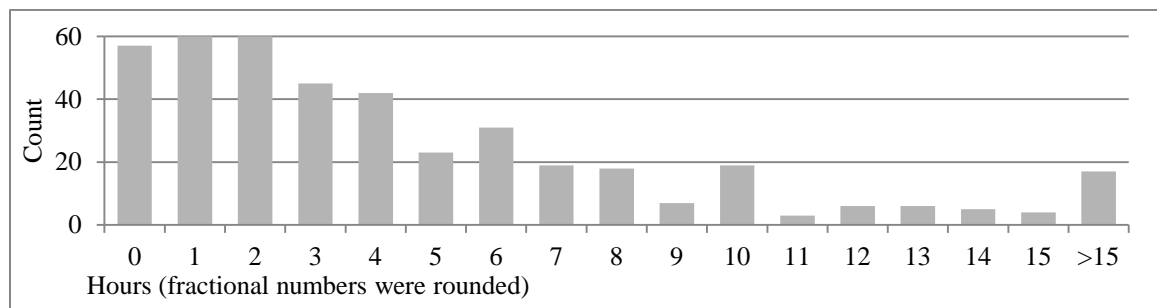


Figure 8. Total Hours per Week Using Social Media

Attitude Data

Frequency Distributions for Marketing questions (10-13)

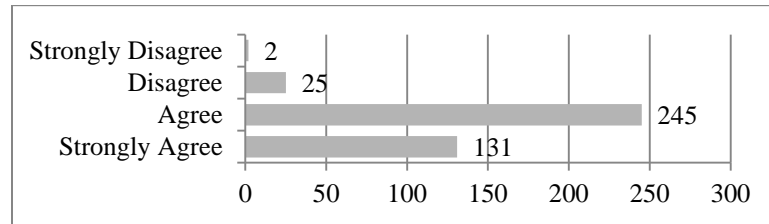


Figure 9. Responses to Question 10: *Social media provides an effective means to build and maintain relationships with students, parents, alumni and supporters of the university.*

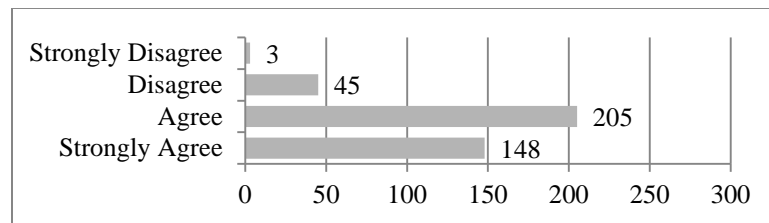


Figure 10. Responses to Question 11: *Social media provides an effective means to build relationships with prospective students.*

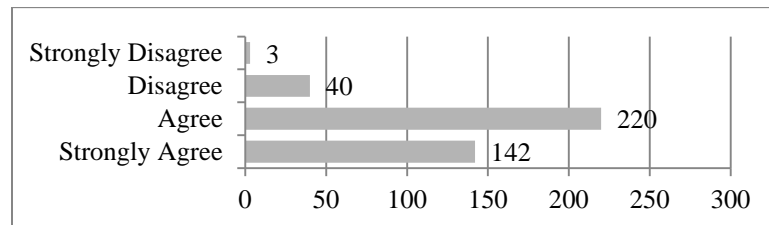


Figure 11. Responses to Question 12: *Social media provides an effective means to tell the story of my institution.*

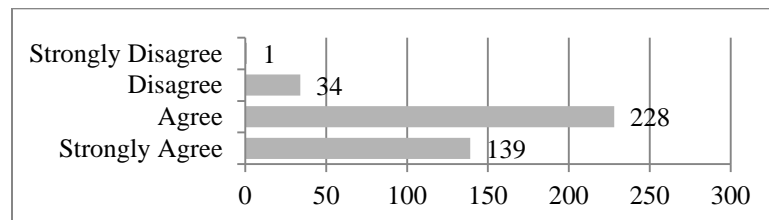


Figure 12. Responses to Question 13: *Social media provides an effective means to convey my institution's brand, mission and vision.*

Frequency Distributions for Educational Enhancement questions (14-17)

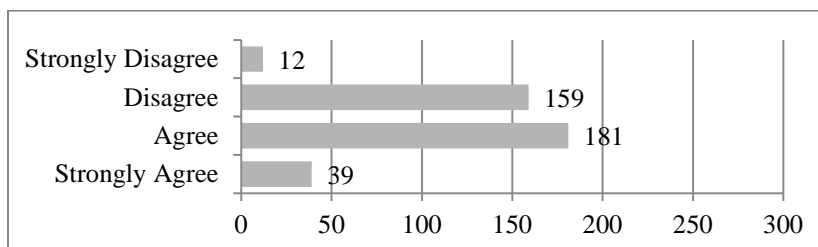


Figure 13. Responses to Question 14: *Social media provides an effective means to engage current students in scholarly activities.*

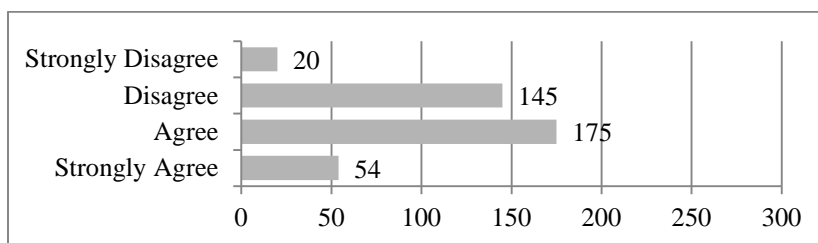


Figure 14. Responses to Question 15: *Social media is an effective way for faculty to interact with students outside of the classroom.*

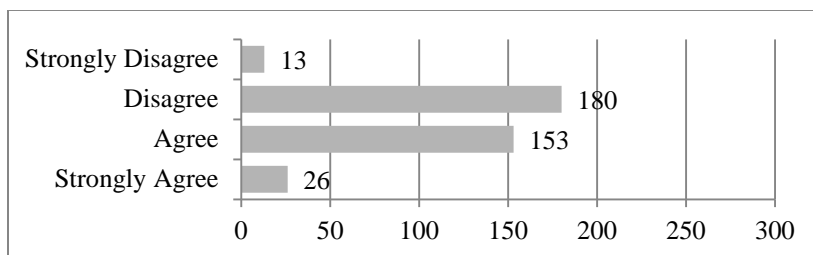


Figure 15. Responses to Question 16: *Students who use social media are more engaged in the college experience than those who do not use social media.*

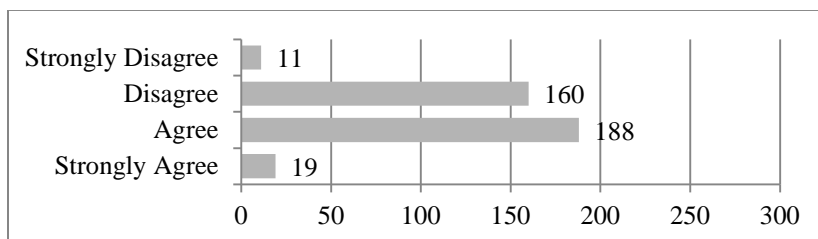


Figure 16. Responses to Question 17: *When used for educational purposes, social media provides a means for students to construct deeper meaning and knowledge of course topics.*

Frequency Distributions for Threats to the Institution questions (18-21)

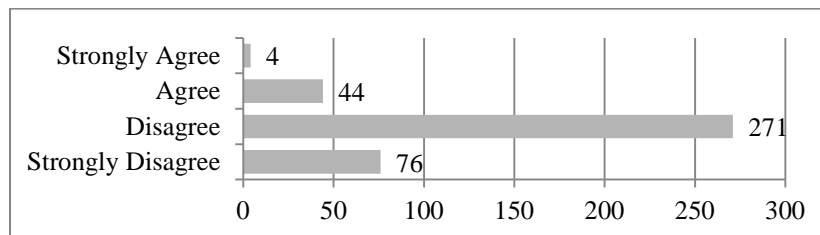


Figure 17: Responses to Question 18: *Social networks are a potential for scandal or lawsuits for institutions, their employees, and/or students.*

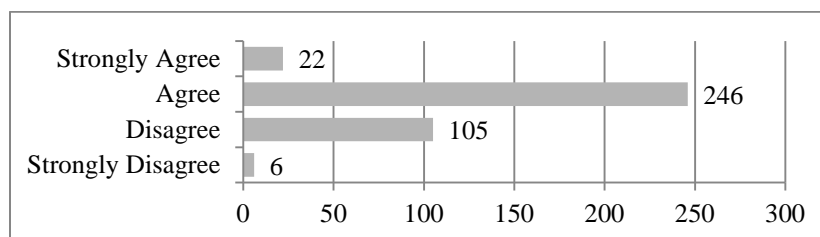


Figure 18: Responses to Question 19: *Social networks are detrimental to students' studies.*

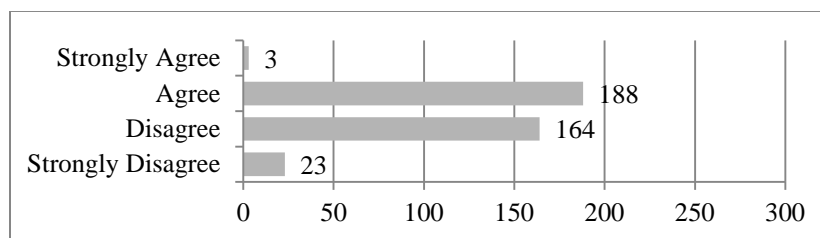


Figure 19: Responses to Question 20: *Cyberbullying and online harassment are a big problem for universities.*

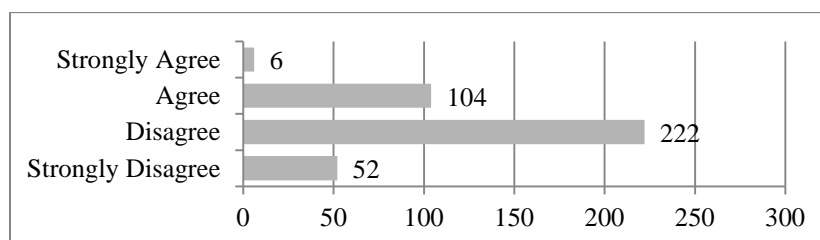


Figure 20: Responses to Question 21: *Social networking activity between students and faculty may compromise an important boundary, resulting in an inappropriate or questionable relationship.*

Frequency Distributions for Transparency questions (22-25)

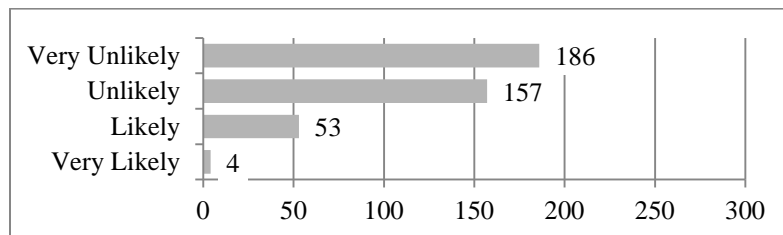


Figure 21: Responses to Question 22: *How likely are you to express your feelings openly via social media?*

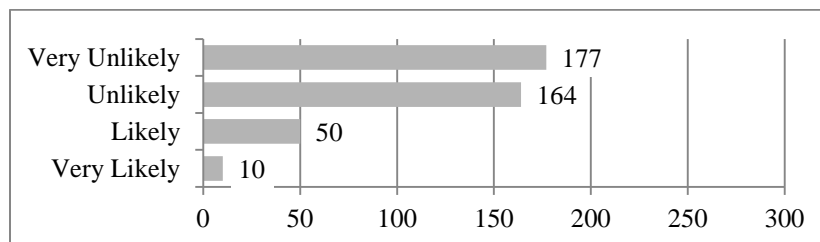


Figure 22: Responses to Question 23: *How likely are you to communicate or comment on an organizational motive via social media?*

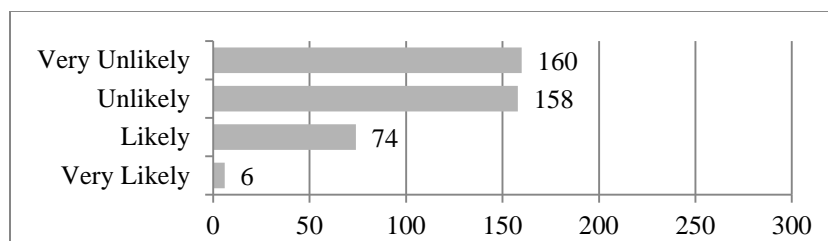


Figure 23: Responses to Question 24: *How likely are you to address a mistake via social media?*

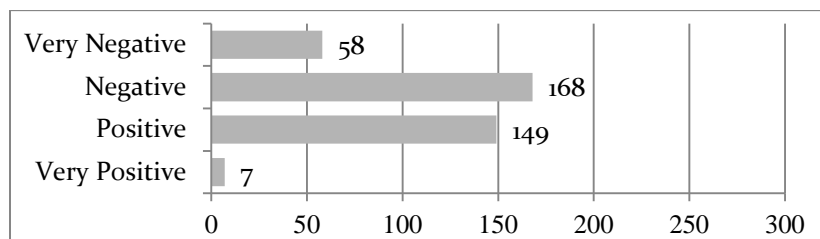


Figure 24: Responses to Question 25: *How do you feel about university employees using social media to share or comment publicly about the institution?*

Summary of Frequency Distributions

Frequency distributions are descriptive statistics used to describe characteristics of the participants. Frequency distributions for attitude questions are depicted on the previous four pages. A visual inspection of the charts suggests participants have a positive attitude regarding the use of social media for marketing, recruiting and maintaining relationships with constituents. Attitudes toward using social media for educational enhancement were divided. The majority of responses are in the middle of the scale for these questions, with responses divided somewhat evenly between positive and negative responses. Attitudes regarding threats to the institution are also mixed, and frequencies for individual questions within this group vary more than the other groups. Finally, participants have a generally negative attitudes regarding using social media as a vehicle for transparency, with most reporting they are very unlikely or unlikely to do so. The next section provides the strength of correlation analysis for each hypothesis in the study.

Strength of Correlation

"Inferential statistics strive to make inferences and predictions based on the data gathered" (Cohen, 2007, p. 504). "often it is the inferential statistics that are more valuable for researchers, and typically these are more powerful" (p. 504). Hypothesis testing and correlations are two types of inferential statistics used in this study. Strength of correlation was used to test four hypotheses:

H₁: A correlation exists between social media use and attitudes regarding transparency among leaders of higher education.

H₂: A correlation exists between social media use and attitudes regarding social media as a threat to the institution, among leaders of higher education.

H₃: A correlation exists between leaders' social media use and their attitudes regarding the use of social media to enhance education,

H₄: A correlation exists between higher education leaders' social media use and the use of social media for marketing and recruiting.

H₁: Social media use and attitudes regarding transparency

The first hypothesis tested the strength of correlation between hours of use and attitudes regarding transparency. The Real Statistics plug-in for Excel was used to calculate Spearman Rho. Spearman Rho reported a positive correlation of 0.42 ($r_s = .42$, $p = 2.9997E-07$, 2 tails), a moderate correlation according to Cohen, 1992 (p. 99).

H₂: Social media use and attitudes regarding threats to the institution

The second hypothesis tested the strength of correlation between hours of use and attitudes regarding threats to the institution. Spearman Rho reported a positive correlation of 0.19 ($r_s = .19$, $p = .03$, 2 tails), a small correlation .

H₃: Social media use and attitudes regarding educational enhancement

The third hypothesis tested the strength of correlation between hours of use and attitudes regarding educational enhancement. Spearman Rho reported a positive correlation of 0.24 ($r_s = .24$, $p = .005$, 2 tails), a small correlation.

H₄: Social media use and attitudes regarding marketing

The third hypothesis tested the strength of correlation between hours of use and attitudes regarding marketing. Spearman Rho reported a positive correlation of 0.13 ($r_s = .13$, $p = .13$, 2 tails), a small correlation.

A priori

Effect Size

The requirement for effect size was set at .30 *a priori*. Using Cohen's guidelines for effect size, the coefficient of correlation must meet the level for moderate effect size to meet the level of importance for the study.

Hypothesis	Coefficient of Correlation	Cohen's Effect Size
Hypothesis 1	.42	Moderate
Hypothesis 2	.19	Small
Hypothesis 3	.24	Small
Hypothesis 4	.13	Small

Alpha Level

The alpha level was set as $p < .05$ level *a priori*. This assumption was met for three hypotheses: H_1 , H_2 and H_3 . The assumption was not met for H_4 , and was used to fail to reject the null H_0 .

Sample Size

The sample size was set at 177 institutions *a priori*. The sample size of 142 did not meet the requirement.

Statistical Power

The requirement for statistical power was set at .80 *a priori*. Statistical power was calculated using a sample size of 142, alpha level of .05 and the effect size for each hypothesis. The StatsToDo online power calculator (StatsToDo, 2016) produced the results presented in Table 11.

Hypothesis	Observed Power	Assumption met?
Hypothesis 1	.9999	Yes
Hypothesis 2	.7359	No
Hypothesis 3	.8945	Yes
Hypothesis 4	.4610	No

Summary

Chapter 4 provided frequency distributions and measures of central tendency, along with a Spearman Rho strength of correlation for the four hypotheses. Participants were about 2/3 male and 1/3 female, with position titles equivalent to President (9%), Academic Vice President (17%), Administrative/Other Vice President (34%) and Dean (40%). Age was normally distributed between 32 and 87, with a mean of 55.48 (SD=8.69). About 85% of participants reported using at least one social media site for an average of 4.74 hours per week (SD=5.59). The mode and frequency distribution showed that most participants reporting using social media less than two hours per day, indicating the mean was skewed by a few large numbers.

A visual examination of the histograms of attitude responses revealed that participants had a generally positive view of using social media for marketing and recruiting; were divided regarding using social media for educational enhancement; generally do not think social media pose much of a threat to institutions, but are detrimental to students' studies; and are generally unlikely to use social media as a means of transparency. Finally, Spearman Rho was used to measure the strength of correlation between hours using social media and each of the four constructs, revealing a moderate correlation between hours and attitude regarding transparency; and small correlations

between hours of use and attitudes regarding educational enhancement, threats to the institution and marketing. These findings and a discussion of the results are presented in Chapter 5.

CHAPTER FIVE: FINDINGS AND CONCLUSIONS

Chapter 5 describes the findings reviews the correlations along with frequencies, measures of central tendency and many qualitative comments made by the participants at the end of the survey. Each hypothesis is presented and discussed. Limitations include sampling problems, insufficient power and threats to external validity. Limitations are presented along with an analysis of the sample and results. Finally, implications for practice are discussed and future related research is recommended.

Hypthesis 1

H₁ states “a correlation exists between social media use and attitudes regarding transparency and authenticity among leaders of higher education” and addresses Research Question 1: *Among leaders in higher education, what is the relationship, if any, between the use of social media and attitudes regarding transparency in leadership?* The results indicate a moderate correlation between hours of social media use and attitudes regarding transparency ($r_s = .42$, $p = 2.9998E-07$, 2 tails).

Transparency has been described as “being open and honest in presenting one’s true self to others (Northouse, 2013, p. 264), “having participation of stakeholders” (Rawlins, 2008, p. 71), and “trusting employees to communicate with the public and communicating company information” (Distaso & Bortree, 2012, p. 511).

Examinations of the frequencies for each question indicate that overall, respondents responded more negatively to questions regarding transparency and social media. Most respondents indicated they were very unlikely or unlikely to share feelings openly (85%), address a mistake (80%) or communicate or comment on an organizational motive (85%) via social media. The question that inquired how respondents feel about

university employees using social media to share or comment publicly about the institution drew a more mixed response; about 41% responded “positive” or “very positive.”

A number of qualitative comments were made regarding transparency. One respondent “consider[s] it problematic for individuals, staff or faculty, to use the internet with respect to institutional activities” but supports its use for “outreach, especially in the area of admissions.” Some respondents disliked the format of the transparency questions because the answer depends on context. Comments included “I’m likely to express positive feelings openly on social media, but am very hesitate (sic) to “bitch and moan” openly on social media, or to badmouth anyone or anything;” and “I don’t have any problem with employees commenting publicly in positive ways but have serious reservations about complaining about the university through social media.” Another leader shared the same sentiment, saying “I am more than willing to address an institutional mistake that way. Through private messaging, I am will to address something a student brings to me. However, I am unlikely to address a mistake in a way that exposes a student, or the institution, to negative public opinion.” While 41% of respondents express positive feelings about employees using social media to comment on the institution, one recommended “personal ramifications” for negative commentary.

Fourteen respondents commented that they do not use social media or they use it in a very limited way, but have personnel to handle their social media presence. Those who commented were in favor of a strong social media presence along with skilled, trained staff to manage it. Many of the respondents noted a lack of time to use it

effectively, and one noted “I am relieved that it is not part of my role to personally engage with it.”

The survey questions focused on participants’ willingness to use social media as a vehicle for transparency. The descriptive statistics indicated that overall, the leaders in the sample are skeptical or unwilling to do this. A moderate positive correlation exists between hours using social media and a high score on this construct, perhaps suggesting that leaders who use social media are more likely to use it to be transparent and trust their employees to do so. Further study is required to examine this issue, and it is an interesting area for future research.

Hypothesis 2

H₂ states “a correlation exists between social media use and attitudes regarding social media as a threat to the institution, among leaders of higher education” and addresses Research Question 2: *Among leaders in higher education, what is the relationship, if any, between the use of social media and attitudes regarding risk to the institution?* The results indicate a moderate correlation between hours of social media use and attitudes regarding social media as a threat to the institution ($r_s = .19$, $p .03$, 2 tails).

Concerns about social media revealed in the literature include damage to the brand (McNeill, 2012), negative effects on academic performance (Paul, Baker & Cochran, 2012; Junco, 2011), cyberbullying (Zallaquete & Chatters, 2014, p. 1; Minor, Smith & Braschen, 2013, p. 15) and potential for inappropriate relationships between students and faculty.

Overall, responses were split regarding threats to the institution. When asked whether they think social media is a potential for scandal or lawsuit, most respondents (88%) disagree or strongly disagree. About 80% agree or strongly agree that social media is detrimental to students' studies; and about 50% report thinking cyberbullying is a big problem. Finally, about 71% of leaders disagree or strongly disagree that social media may lead to inappropriate relationships between students and employees.

The comments regarding threats to the institution were some of the more passionate ones. One respondent commented "too many students are wasting hours and hours posting photos of themselves out and about. That is definitely a distraction from their academic pursuits."

Another expressed the same sentiment, stating "student use of social media seems to be epidemic and consumes far too much time that would be better spent on rigorous intellectual activities." The respondent believes that in some extreme cases "the availability of mobile access, social media, gaming, etc. has created a shallow generation of people who need instant gratification and don't really think deeply about anything."

One respondent has personal experience dealing with negative issues:

I don't believe our social mores or even our laws have caught up with its use.

This presents a great deal of risk. I have had to participate in cases where behavior on social media has had serious consequences for faculty and students.

Another bemoaned "the amount of conflict social media creates within student organizations and between students is far greater than any benefit I have seen for our institution." The respondent went on to say "It has also created some security/threat situations at our institution and lives in the gray area of FERPA when students disclose

personal information about others that should not be disclosed on a college medium.”

Another respondent addressed the dual relationships issue, stating “There are some significant risks to students and faculty through online interactions via social media, including blurring of professional boundaries. This can be managed, but it is potentially one more arena for bad behavior.”

The numbers suggest leaders are divided on issues surrounding threats to the institution. Most of the respondents felt social media may be detrimental to study, but do not seem as concerned about lawsuits, scandals, cyberbullying or dual relationships. Further research is also necessary in this area. While the survey questions attempted to address several areas of “threats,” the types of threats are dissimilar to one another and should be explored as separate issues, perhaps qualitatively.

Hypothesis 3

H₃ states “A correlation exists between leaders’ social media use and their attitudes regarding the use of social media to enhance education” and addresses Research Question 3: *Among leaders in higher education, what is the relationship, if any, between the use of social media and attitudes regarding the use of social media for educational enhancement?* The results indicate a moderate correlation between hours of social media use and attitudes regarding social media as a means of educational enhancement ($r_s = .24, p < .005, 2 \text{ tails}$).

Some studies indicate social media as part of a class enhances educational experiences. Hung and Yeun (2010) reported “the majority of participants developed strong feelings of social connectedness and expressed favorable feelings regarding their

learning experiences' (p. 703). Junco and Chickering (2010) reported "increased student engagement and improved grades" (p. 13).

The qualitative comments were interesting and insightful. Some indicated a sentiment that social media use in this area is immature and there is work to be done. One respondent commented "I don't think that universities do enough to encourage the responsible use of social media for legitimate academic purposes or to participate responsibly in discourse about important issues." Another noted "universities need to determine how to best leverage this tool and make it work for the teaching learning [...] process." Another notes seeing potential but "my university has not yet delved into [using social media] for educational purposes.

The numbers indicate leaders in this study were split on the issues discussed in the literature. A visual inspection of the frequency graphs shows the majority of the responses in the middle, with few responses of "strongly agree" or "strongly disagree." Fifty-seven percent (57%) agree or strongly agree that social media provides an effective way to engage students in scholarly activities. Fifty-two percent (52%) agree or strongly agree that social media is a good way for faculty to interact with students outside the classroom, while 52% disagree with the sentiment that students who use social media are more engaged in the college experience than those who do not.

The responses to these questions may have been biased by the large proportion of academic vice presidents and deans in the sample. Deans and academic vice presidents comprised 12% and 37% of the sample, respectively, for a total of 49%. Just over 56% of the survey participants were deans and academic vice presidents – 17% and 39% respectively. Over half of the respondents directly oversee the academic function in their

institutions and their attitudes are heavily weighted in this study. If there is bias, however, the direction of the bias is unknown.

Hypothesis 4

H₄ states “A correlation exists between higher education leaders’ social media use and the use of social media for marketing and recruiting” and addresses Research Question 4: *Among leaders in higher education, what is the relationship, if any, between use of social media and attitudes toward higher education marketing and recruiting?*

The results indicate a moderate correlation between hours of social media use and attitudes regarding social media as a means of marketing and recruiting ($r_s = .13$, $p = .13$, 2 tails). This result is the smallest correlation in the study, along with a high p-value.

Social media is well-established as a means of marketing and recruiting in colleges and universities. Thousands of articles have been published. Social media policies are commonplace, as are positions of Social Media Coordinator/Director. A handful of the survey invitations wound up in the hands of people in these positions – the leaders simply forwarded the survey to them. Through their employees and their own reading, leaders can be very well-informed about social media in marketing and recruiting without actually using social media tools. So, perhaps it is no surprise that there is no correlation between attitude and hours of use. Of the four constructs, this construct had the most positive responses.

Null Hypotheses

H_{0a}: There is no relationship between social media use and attitudes regarding transparency among leaders of higher education.

The results indicate a moderate correlation between hours of social media use and attitudes regarding transparency ($r_s = .42$, $p = 2.9997E-07$). The strength of the correlation is moderate and the p-value is less than the .05 level set *a priori*. The null hypothesis is rejected, indicating there is a relationship between social media use and attitudes regarding transparency among leaders in higher education.

H_{0b}: There is no relationship between social media use and attitudes regarding threat to the institution among leaders of higher education.

The results indicate a small correlation between hours of social media use and attitudes regarding social media as a threat to the institution ($r_s = .19$, $p = .03$). The strength of the correlation is small and the p-value is less than the .05 level set *a priori*. The null hypothesis is rejected, indicating there is a relationship between social media use and attitudes regarding threats to the institution among leaders in higher education.

H_{0c}: There is no relationship between social media use and attitudes regarding the use of social media in the classroom, among leaders of higher education.

The results indicate a moderate correlation between hours of social media use and attitudes regarding educational enhancement ($r_s = .24$, $p = .005$). The strength of the correlation is small and the p-value is less than the .05 level set *a priori*. The null hypothesis is rejected, indicating there is a relationship between social media use and attitudes regarding educational enhancement among leaders in higher education.

H_{0d}: There is no relationship between social media use and attitudes regarding the use of social media for marketing and recruiting, among leaders of higher education.

The results indicate a moderate correlation between hours of social media use and attitudes regarding social media as a means of marketing and recruiting ($r_s = .13$, $p = .13$).

The strength of the correlation is small and the p-value is greater than the .05 level set *a priori*. The study fails to reject the null hypothesis, indicating there is no relationship between social media use and attitudes regarding marketing and recruiting among leaders in higher education.

Summary of Findings

This study used Spearman Rho to measure the strength of correlation. Findings based on the null hypotheses are as follows:

1. A moderate positive correlation exists between hours of social media use and attitudes regarding transparency.
2. A small positive correlation exists between hours of social media use and attitudes regarding social media as a threat to the institution.
3. A small positive correlation exists between hours of social media use and attitudes regarding social media as a means of educational enhancement.
4. There is no relationship between hours of social media use and attitudes regarding social media as a means of marketing and recruiting.

Table 11 summarizes the *a priori* values for the study. The effect size was the coefficient of correlation, alpha is the p-value, and the observed power is the statistical power calculated using the effect size and p-value for each hypothesis test, along with the sample size of 142 institutions.

	Effect size	p-value	Observed power
Hypothesis 1	.42	2.9997E-.07	.9999
Hypothesis 2	.19	.03	.7359
Hypothesis 3	.24	.005	.8945
Hypothesis 4	.13	.13	.4610

Hypothesis 1 addressed social media use and transparency. The p-value was below the significance level set for the study and the effect size based on Cohen's (1992) conventions was moderate. The observed power was .9999, indicating a Type I error is unlikely. The effect size meets the criteria for importance of results and the observed power exceeds the .08 level set *a priori*.

Hypothesis 2 addressed social media use and threats to the institution. The p-value was below the significance level set for the study and the effect size was small. The observed power was .7359, which does not meet the criteria set *a priori*. The effect size does not meet the criteria set *a priori* for importance of results.

Hypothesis 3 addressed social media use and educational enhancement. The p-value was below the significance level set for the study and the effect size was small. The observed power was .8945, which exceeds the criteria set *a priori*. Though statistical power is sufficient, the effect size does not meet the criteria set *a priori* for importance of results.

Hypothesis 4 addressed social media use and marketing. The p-value exceeded the significance level set for the study and the effect size was small. The observed power was .4610, which does not meet criteria set *a priori*. The study failed to reject the null hypothesis, the effect size was small, and the statistical power was insufficient.

The discussion above describes the inferential statistics. This study also used descriptive statistics to describe the data. Figure 25, below, shows the relationship between the frequencies for attitude question responses.

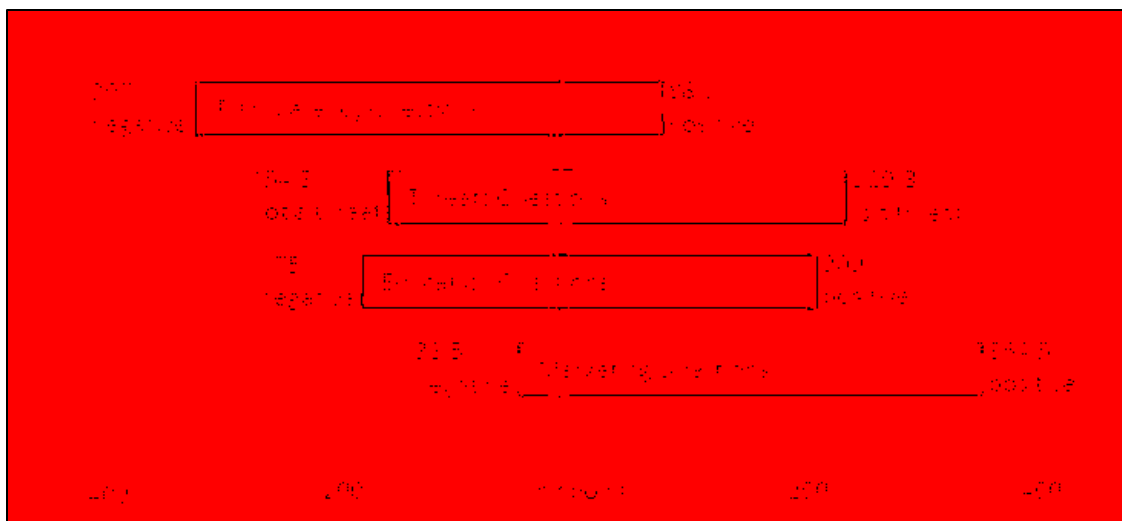


Figure 25. Ranges of frequency means for attitude questions

Frequency means were calculated to compare the four constructs to one another for Figure 24. This procedure took the count (frequency) of responses for each Likert scale item across the four questions for each construct. For example, in the Marketing construct, responses of “Strongly disagree” and “Disagree” were counted for each of the four questions. Then, the mean of responses was calculated for Strongly Disagree and Disagree (negative); and Agree and Strongly Agree (positive). The mean of negative responses, 38.5, is the distance from the midpoint on the negative side of the figure. The procedure was repeated for each question and construct, and used to create a range of responses for each construct.

Most of the leaders responded negatively to transparency questions, i.e. they were “Very unlikely” or “Unlikely” to participate in transparency behaviors via social media. The frequency means are 307 negative and 88.3 positive. The frequency means for questions regarding threats to the institution and education were closer to the midpoint and divided, leaning slightly toward positive. Finally, most leaders responded more positively to the marketing questions. As expected, Figure 25 tells the same story as the

frequency charts. However, it provides another way to look at the frequencies and visually compare them to another.

Limitations

A number of limitations were identified in the study. The sampling method required complex data analysis and observable errors were made during the sampling procedure. Though there was a good response rate, the sample of institutions (N) was insufficient and the effect sizes are small in three of four correlations, both threats to statistical power and generalizability

Sampling Method and Procedure. The sample can best be characterized as a random cluster sample. A population of institutions was selected using College Navigator, then a random sample of institutions was drawn. Using this sampling method was cumbersome and labor-intensive. Observable errors were made and some errors were not discovered until the data was analyzed. Issues with the population and sample, data acquisition and errors are described below along with an analysis of the resulting sample.

The sample was drawn when institutions were randomly selected from a population. During this process, however, two purposive stages occurred. First, institutions were removed from the population if they do not have a “traditional” leadership structure. Many private and non-profit institutions are owned by corporations and the leadership structure is that of a private-sector for-profit company. This decision was made after a false start. An initial population for the study was “Four-year degree granting institutions in the western states” and was larger than the final research population. After taking the sample and beginning to collect data, the researcher

observed that several of the schools were for-profit or non-profit institutions owned by corporations. The leadership was sometimes a CEO of a company that owned several institutions. This situation violated the cluster sample rule that each observation can only appear in one sample. The researcher did not think a CEO is necessarily a good representation of a leader in higher education. The population was modified to reflect the current model: four-year degree granting institutions with a “traditional” leadership structure. Population institutions were identified, and a sample was drawn from this new population. These institutions drawn were the clusters.

Then, the second stage of sampling occurred. A purposive sample of individuals was selected based on position title. Positions of president, chancellor, vice president (including associate and assistant vice presidents), provost and dean were selected from each cluster institution. Selecting individuals by position title was necessary – those individuals represent the leadership of each institution. Purposive sampling is associated with qualitative research and is not generally used in quantitative studies.

Another limitation was observed during data acquisition and analysis. The researcher observed an unexpectedly large number of parochial and bible colleges in the population. The population consisted of four-year colleges, so institutions such as community colleges, graduate institutions or research institutions were not included. This left what may be a disproportionate number of private institutions, many of which were bible colleges. The leaders in these schools tend to be male; are spiritual leaders as well as administrators; often have different position titles, and may have different social media habits and attitudes than that of the general population of higher education leaders.

Data Acquisition Errors. Errors were made while acquiring the data, and some were discovered in later phases of data analysis. The tool used to gather population schools provided inconsistent data and in some cases, institutions that should not have been included in the study. These issues are described below.

College Navigator was selected due to its ability to search for colleges using a number of different criteria – size, location, types of degrees, and the like. It was intended to be an objective way to select a population and sample. However, the data produced were inconsistent and sometimes inaccurate. For example, a small number of graduate institutions (even with the name Graduate in the name) were included in the initial query for four-year schools. A number of data-entry errors were made. Eighty-nine bounces were reported by Sendy, the email program. Bounces are caused when an email address doesn't exist. This can be due to an institution not updating the website, people leaving the institution between the time the data was collected and the email sent out, or data entry error. Sendy also found duplicate entries. All of the contact information for one institution had been entered twice. Some schools do not publish email addresses and so other means (general Google search of names) had to be used to find individuals. When all else failed, the researcher used a general address such as *president@school.edu*.

Insufficient Statistical Power

Statistical power is affected by three factors: significance, effect size and sample size. The p-value was used for statistical significance and set *a priori* at $p < .05$. The null was rejected based on p-value for three of four hypotheses. Effect size is the size of correlation and Cohen (1992) was used as a guide. A correlation of .30 was set *a priori*

as the level of importance -- strength of at least “moderate” was required to reject the null hypothesis. This only held for H_1 . The sample size, set *a priori* at 177 was not reached. The sample size was 142 institutions. Statistical power was insufficient for H_2 and H_4

Threats to External Validity

External validity refers to the way in which results of a study can be generalized to the population. Threats to external validity in this study have to do with the sample. The threats could be minimized with a larger sample size and a more random sample. The institutions in the sample and population were selected by geographic area rather than by characteristics of the institution themselves – i.e. there were a wide variety of schools – state schools, parochial schools, very small private specialized schools such as a midwife college and a canine college. This variety was an attempt to get a broad snapshot of leadership in education. However, a need for a “traditional” leadership structure introduced purposive selection into the sample, as did the second stage of the cluster sample. Though an effort was made to ensure randomness, the sample is not a truly random sample. This is a threat to external validity.

Discussion of Limitations

Analysis of sample. The sampling method was cumbersome and error-prone, but the resulting sample is a proportional representation of higher education leadership. In looking at characteristics of the sample we find data that is normally distributed and proportionate to published data about similar groups of people.

Age of respondents follows a normal distribution when the Empirical Rule is applied. All but one participant was three standard deviations from the mean. One would

expect a variable like age to be normally distributed, given a sufficient number of respondents.

One source (Rutgers Institute for Women's Leadership, 2010) reports that 22.6% of Presidents and 38.2% of Chief Academic Officers in four-year institutions are women. In our sample, 19% of the Presidents and 42.7% of those who identified themselves as “Academic Vice President / Equivalent Position” are women. The proportion of women in president and academic vice president positions are similar to the proportion of women in those positions in the Rutgers study.

The proportion of position titles in the participants is similar to that of the sample, as depicted by Figure 26 below.

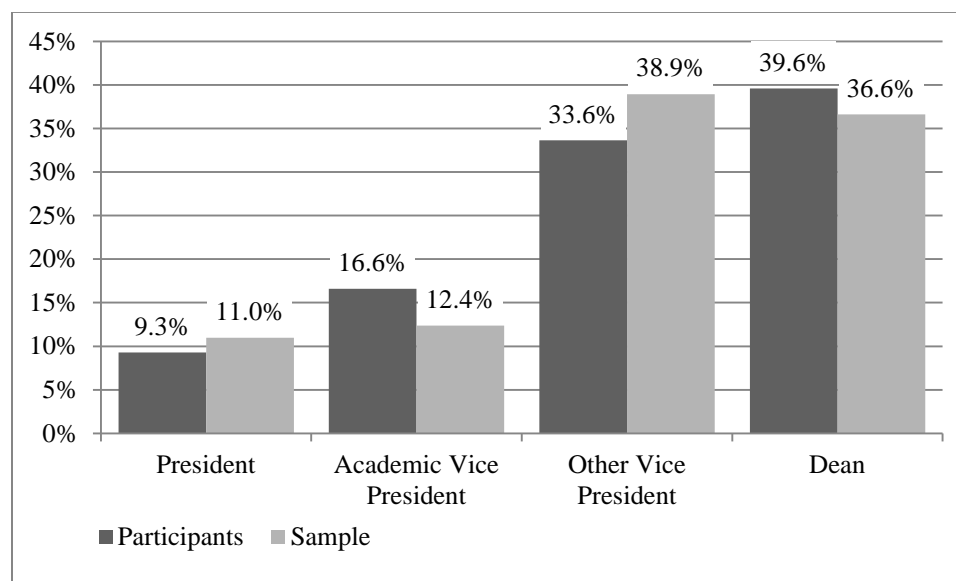


Figure 26. Proportion of Position Titles in Participants and Sample.

Table 13 compares the percentage of adults who use social media according to the Pew Report to that of participants in this study. Using the age ranges defined in the Pew report, it is clear that the percentage of respondents in this study use social media at a much higher rate than the general public.

Age Range	Pew Report	This Study
30 – 49	77%	92%
50 – 64	51%	84%
65+	35%	74%

Further, 76% of college graduates (p. 7) and 78% of those with household incomes of greater than \$75,000 (p. 8) use social media. University leaders likely meet both of these criteria.

Summary

The limitations in the study are due to the sampling method, procedural errors in sampling and insufficient statistical power. The next sections discuss implications for practice and recommendations for future research.

Implications for Practice

The qualitative comments made by the leaders who participated in the study guided implications for practice. Roughly one-third of the qualitative comments contained recommendations or insight on ways social media is used in their institutions, perspectives on how issues in the virtual world compare to issues in the “real” world, and thoughts about risk, training and policies.

A handful of leaders described social media as a “double-edged sword.” One commented on the permanence of anything posted online, noting “It’s easy to post something that you later regret. Too late. It’s out there.” Another opined “social media is innovative and viable but given its infancy the Wild West pervades more often than I

would like [...]. It can be incredibly damaging when poorly utilized.” One leader’s pragmatic comment stated “social media is a tool, [which] can be positive or negative depending upon how it is used. So, there is potential, often positive, sometimes negative, but it is a space we need to be in, exploring, using, [and] critically examining.”

The leaders in the study indicated a need to realize the positive aspects of social media while reducing risk. One comment summarized “I believe [social media] are a great tool for an institution to communicate with students and promote the university. However, I believe that users of social media are somewhat naïve in their use and that this media presents potential for abuse and miscommunication.” Another suggested “thoughtful application mitigates risk.” The leaders offered three suggestions: develop policy, train students and employees, and hire social media experts. Several leaders commented that their institution has a policy or that “having a social media policy is a good direction [...].” One commented “social media policies are critical to ensure there aren’t abuses and to protect the integrity of the institution.”

Many of the comments focused on a need for training. One leader was emphatic, stating “teaching everyone to use [social media] ethically and fairly is as important as teaching people how to behave in real-time.” Another leader addresses the risk of inappropriate relationships: “I think using social media for faculty-student communication or for educational purposes requires training and conversations with faculty and students about boundaries and appropriate use as well as how to respond if comments by students cross professional/educational boundaries.” As social media policies are developed at more schools, it is likely training will take place as per policy.

However, training and policy are not the entire answer. One leader provides a pessimistic view along with hope for the future:

Use parameters – of what is permissible – alone won't solve the issue nor [will] relying on individual judgment. I believe a balance of both along with time will hopefully help in an effort to harness and utilize the power and best aspects of social media as an educative tool.

An area of leadership studies looks at the differences between management and leadership. “Leaders think laterally, express passion, initiate change, and encourage diversity. Managers think linearly; they favor reason, stability and consensus. Managers are needed to oversee repetitive tasks, activities that can be catalogued in policy manuals and organized in guides to procedures” (Allio, 2005). The leaders who responded to the survey in this study have demonstrated both in regards to social media. Many leaders reduce risk and utilize employee talent by hiring staff to manage their institutions' social media presence. At least six of the participants noted they “understand the importance” of managing social media and have advancement staff, public relations consultants, a “young marketing specialist”, and similar staff positions to carry out the task. A few participants noted they “don't have time” or it is not a priority for the leaders' to interact with social media themselves, but have delegated the function. One leader noted “I believed it was important to engage this media with a person who understood it and could use it effectively for institutional advancement.”

Overall, the leaders who participated in the study seem to be aware of the advantages and potential pitfalls of social media. Institutions have developed policies and have hired specialists to manage their social media presence. A small number of

leaders have embraced social media and it has had a positive effect on public relations for themselves and their institution.

Recommendations for Future Research

This quantitative study used a custom instrument to gather demographic, social media usage and attitude data from a sample of leaders in higher education. The study can be described as broad – data were gathered about a number of different topics but did not explore any one topic in any depth. Thus, the study revealed interesting areas in the research that can be explored in more depth.

This study could be repeated with another round of changes to the instrument and a more random sample. A random sample of leaders from a well-defined set of institutions (for example, flagship schools for each state, or public institutions of a certain size) might be used rather than a cluster sample. Or, a stratified sample may be used. Either of these methods would reduce threats to generalizability. While this would improve the study, it is unlikely to add anything substantial to the body of knowledge. This study has done the job of identifying new research directions.

An interesting project to consider is the examination of whether cultural norms are being developed regarding social media, and whether those norms are different among different types of institutions or regions. For example, one leader who took the survey commented

My institution is a community college where traditional-age, full-time students are a minority. Many of our students are older, low-income working adults, often recent immigrants or refugees. Our experience suggests social media play a far

smaller role, if any, in the relationship between the college and those populations with, say, U.S.-born 18-year-olds.

This is an interesting comment that highlights the differences in culture between different institutions.

A number of questions can be explored quantitatively with the type of data collected in this study: Are there gender differences between social media use and attitudes? Are there differences between social media use and attitudes depending upon one's role in the university (i.e. academic vs. advancement.)? The questions asked in this study may be explored among other groups, such as students, faculty, athletics, or social media leaders in institutions.

Finally, it may be interesting to further examine the relationship between social media use and transparency. This study reports a moderate positive correlation between hours using social media and attitudes regarding transparency. At least one survey used to examine authenticity and transparency is commercially available, and could potentially be used to examine this relationship.

Conclusion

Social media are the "latest and greatest" way that technology and society have influenced one another. Social media changed the speed and methods used by humans to communicate, impacting every sector of our culture. This study explored social media in the context of educational leadership at higher education institutions.

Social media have presented yet another challenge for leaders in education – one they meet by engaging in it in small numbers and by hiring good people to manage it.

Like many emerging technologies, social media present the potential for great good and great problems. One leader summarizes well:

As for the downside of online communication, cyberbullying, potential lawsuits and the rest, I think these are real problems but no greater than the problems we deal with every day in all settings. I've yet to hear of an online school shootings or online rape. I believe I heard of both in the news this past week at American colleges. The world interacts online. Our university does too. [...] education is largely about sharing information and ideas while developing community in the process. The dynamics for this are different online than in person, but they are not inherently ineffective in either setting.

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APPENDIX A: POPULATION INSTITUTIONS

Alaska Bible College	California State University-Monterey Bay
Allied American University	California State University-Northridge
American Jewish University	California State University-San Bernardino
American Sentinel University	California State University-San Marcos
American University of Health Sciences	California University of Management and Sciences
Anthem College-Phoenix	Careers Unlimited
Antioch University-Los Angeles	Carrington College-Phoenix
Antioch University-Santa Barbara	Carroll College
Antioch University-Seattle	Chamberlain College of Nursing-Arizona
Argosy University-Inland Empire	Cogswell College
Argosy University-Los Angeles	Coleman University
Argosy University-Phoenix Online Division	College America-Cheyenne
Argosy University-San Diego	College America-Denver
Arizona State University-Skysong	College America-Phoenix
Arizona State University-Tempe	CollegeAmerica-Colorado Springs South
Arizona State University-West	Collins College
Art Center College of Design	Colorado Christian University
Azusa Pacific Online University	Colorado College
Azusa Pacific University	Colorado Heights University
Bastyr University	Colorado Mountain College
Bethesda University of California	Colorado School of Mines
Birthingway College of Midwifery	Colorado State University-Fort Collins
Boise Bible College	Colorado State University-Global Campus
Brigham Young University-Provo	Colorado Technical University-Colorado Springs
Bristol University	Concordia University-Portland
Broadview Entertainment Arts University	DeVry University-Arizona
Brookline College-Phoenix	DeVry University-California
Brown Mackie College-Phoenix	DeVry University-Colorado
California College of the Arts	DeVry University-Nevada
California College San Diego	DeVry University-Utah
California Institute of Integral Studies	Dixie State University
California InterContinental University	Dominican University of California
California Maritime Academy	Eagle Gate College-Layton
California Miramar University	Eagle Gate College-Murray
California Polytechnic State University-San Luis Obispo	Eastern Washington University
California State Polytechnic University-Pomona	Embry-Riddle Aeronautical University-Prescott
California State University-Bakersfield	Epic Bible College
California State University-Chico	Everest College-Ontario Metro
California State University-Dominguez Hills	Everest College-Phoenix
California State University-Fresno	

Fashion Institute of Design &
Merchandising-Los Angeles
Frank Lloyd Wright School of
Architecture
Grace Mission University
Grand Canyon University
Great Basin College
Holy Names University
Hope International University
Horizon University
Humboldt State University
Humphreys College-Stockton and
Modesto Campuses
Idaho State University
Independence University
International Academy of Design and
Technology-Henderson
International Academy of Design and
Technology-Sacramento
ITT Technical Institute-Aurora
ITT Technical Institute-Boise
ITT Technical Institute-Corona
ITT Technical Institute-Culver City
ITT Technical Institute-Murray
ITT Technical Institute-Orange
ITT Technical Institute-Phoenix West
ITT Technical Institute-Salem
ITT Technical Institute-San Bernardino
John F Kennedy University
Laguna College of Art and Design
Lewis & Clark College
Life Pacific College
Lincoln University
Linfield College-Adult Degree Program
Linfield College-McMinnville Campus
Loyola Marymount University
Marymount California University
Montana Bible College
Montana State University
Monterey Institute of International Studies
Mount Angel Seminary
Musicians Institute
Naropa University
National American University-Colorado
Springs
National American University-Colorado
Springs South
National Paralegal College
National University
Neumont University
New Hope Christian College-Eugene
New Saint Andrews College
New York Film Academy
Northcentral University
Northwest College of Art & Design
Northwest Nazarene University
Occidental College
Olympic College
Oregon State University
Otis College of Art and Design
Ottawa University-Phoenix
Pacific College
Pacific College of Oriental Medicine-San
Diego
Pacific Oaks College
Pacific States University
Pacific Union College
Pacific University
Palo Alto University
Peninsula College
Pepperdine University
Pima Medical Institute-Tucson
Platt College-Aurora
Platt College-Ontario
Platt College-Riverside
Pomona College
Portland State University
Providence Christian College
Rocky Mountain College of Art and
Design
Salish Kootenai College
Samuel Merritt University
Santa Clara University
Seattle Pacific University
Seattle University
Sierra Nevada College
Simpson University
South Baylo University
Southern Oregon University
Southwest University of Visual Arts-
Tucson

Stanford University
Stevens-Henager College-Boise
Stevens-Henager College-Logan
Stevens-Henager College-Murray
Stevens-Henager College-Ogden
The Art Institute of California-Argosy
University Orange County
The Art Institute of California-Argosy
University Sacramento
The Art Institute of California-Argosy
University-Silicon Valley
The Art Institute of Phoenix
The Art Institute of Salt Lake City
The Art Institute of Seattle
The College of Idaho
Touro University Worldwide
Trinity Lutheran College
Unitek College
University of Advancing Technology
University of Alaska Southeast
University of Antelope Valley
University of Arizona
University of California-Merced
University of Colorado Colorado Springs
University of Colorado Denver
University of Denver
University of Great Falls
University of La Verne
University of Nevada-Las Vegas
University of Nevada-Reno
University of Phoenix-Northern Nevada
Campus
University of Phoenix-Oregon Campus
University of Phoenix-Southern Arizona
Campus
University of Phoenix-Southern California
Campus
University of Phoenix-Southern Colorado
Campus
University of Phoenix-Western
Washington Campus
University of San Diego
University of Southern California
University of the Pacific
University of Utah
University of Washington-Seattle Campus
University of Washington-Tacoma
Campus
Warner Pacific College Adult Degree
Program
Washington State University
Weber State University
West Coast University-Ontario
West Coast University-Orange County
Western Governors University
Western Nevada College
Western State Colorado University
Westmont College
Westwood College-Los Angeles
Whittier College
Whitworth University
Willamette University
Woodbury University
World Mission University

APPENDIX B: RESEARCH INSTRUMENT JUSTIFICATION

The following pages provide a justification for the research instrument to be used in the dissertation study *Social Media Practices and Perceptions among Leaders in Higher Education*. The research instrument will consist of an online survey of participants in the sample.

The research for the question for the study is “Among leaders of higher education, what is the relationship, if any, between the use of social media and attitudes regarding issues defined in the literature?” The four subquestions explore four topics of interest in social media and higher education: transparency, marketing, educational enhancement and threats to the institution. The four subquestion topics are the constructs to be measured.

The data gathered will be analyzed to describe demographics among participants, how they use social media, and their attitudes about the use of social media in higher education, and whether or not there is a relationship between their use and attitudes about four topics of interest: transparency, marketing, educational enhancement and threats to the institution.

This justification provides information about each question including what data will be gathered, the type of data, how it will be used to support subquestions, and the literature that supports the question. Validity measures include supporting questions with published literature, peer evaluation of the questionnaire, and a pilot test. Internal consistency reliability -- the consistency of results across items -- will be measured by using Cronbach’s Alpha. The procedure is described in this document. This justification seeks to explain validity and consistency of the proposed research instrument.

Survey questions are organized into three categories – demographic questions, questions about social media use, and “topical” questions that provide Likert scale data to support each subquestion.

Demographic Questions. Questions 1 and 2 are general demographic questions. The age ranges used are the same as those used in the Pew report (Social Media Update 2013, 2013), and will provide some insight on whether participants’ social media use is typical for their age groups. Gender and age range are both nominal data. The Pew reports 71% of adults use social media (Social Media Update 2013, 2013). However, Wang, et al., 2012 indicated that users “older than age 50 were less likely to view social media as a professional medium of communication”; and “participants with more advanced degrees (MD or PhD) viewed social media less favorably than those with less advanced degrees” (p. 1161). University leaders are likely to fall in those groups, and so their social media use may differ from the general population.

1. Age range [18-29, 30-39, 40-49, 50-64, 65+]
2. Gender [Male, Female]

Question 3 addresses the leader’s position in his/her institution. Academic leaders may have different priorities than administrative leaders, and differences may exist between levels of leadership. Question 3 will provide nominal data to help explore this relationship.

3. Leadership Position [President, Academic Vice President, Administrative or other Vice President, Dean/Division Chair, other (please specify)]
[for pilot study -- use Academic Vice President, Dean/Division Chair,

Academic Program Director/Academic Department Chair/Equivalent,
 Administrative or Advancement Program Director /other (please specify)].

Questions About Social Media Use. Questions 4-7 address participants' social media use. Question 4 uses the some of the same categories that are used in the Pew report, and is nominal data. These data will help us gain a deeper understanding of the types of social media are used by the participants. From this, we can also calculate how many social media venues are used by each participant.

4. What social media do you use? [Facebook, Twitter, Pinterest, Instagram, Tumblr]

Question 5 appeared in a dissertation (Dey, 2013) and is used here with permission. Question 5 will collect data about the reasons participants are using social media. Questions 5 will provides nominal data

5. What do you use social media for? [Business or employment use, keeping in touch with family and friends, source of news and information, following companies and/or organizations, entertainment, Other (please specify)]

Questions 6 and 7 will collect ratio data to be correlated with data regarding participants' attitudes toward marketing, education, threat to the institution and transparency.

6. How many hours per month do you spend using social media for personal use?
7. How many hours per month do you spend using social media for professional use?

Attitude Questions. The remaining questions will collect the data regarding attitudes about social media. These data will be organized into constructs intended to support the research subquestions. They are presented here by construct – marketing, educational enhancement, threats to the institution and transparency. All questions were written based on topics represented by prior studies described in the literature.

Question Scoring. Attitude questions are scored on a Likert scale. Questions in the Marketing, Transparency and Educational Enhancement groups are scored as follows:

Strongly agree - 4

Agree - 3

Disagree - 2

Strongly disagree – 1

Questions that appear in the Threats to the Institution construct are assigned inverse values. Three of the four questions have a related question in one of the other constructs. So, for example, if one answered positively to social media increasing scholarly engagement, one would expect the same person to respond negatively to a statement about social media being detrimental to studies. So, question choices are scored as follows in this construct:

Strongly agree – 1

Agree – 2

Disagree – 3

Strongly disagree – 4

The sections that follow demonstrate how each question is supported by the literature.

Marketing. Questions 8-11 are designed to address Subquestion 4: What is the relationship, if any, between social media use and attitudes toward social media for higher education marketing, among leaders of higher education? Topics explored include relationship building, telling the story of the institution, and brand.

Questions 8 and 9 focus on relationship building: “for higher education institutions relationship marketing invokes building and maintaining a relationship of value exchanges between the institution and three main customer groups: alumni, current students and future students” (Constantinides & Zinck Stagno, 2011, p. 10).

8. Social media provides an effective means to build and maintain relationships with students, parents, alumni and supporters of the university. [Strongly agree, agree, disagree, strongly disagree]

Question 9 focuses specifically on the prospective student audience. “Relevant literature reveals that the majority of admissions officers prefer creating and maintaining accounts on various social media sites, because these allow them ‘direct contact’ with potential prospective students and it expands the recruitment base” (Nyangau & Bado, 2012, p. 39).

9. Social media provides an effective means to build relationships with prospective students. [Strongly agree, agree, disagree, strongly disagree]

According to Davis (2012 p. 13 lit review) “Social media allows for interaction in a richer format [...]. “A lot of what we do is storytelling” (Davis, 2012, p. 1).

10. Social media provides an effective means to tell the story of my institution. [Strongly agree, agree, disagree, strongly disagree]

Literature suggests brand be guided by an institution's mission and values: "Think of a college or university brand as being synonymous with the institution's personality— congruent with its mission, defined by its values" (Black, 2008, p. 2).

Question 11 focuses on brand.

11. Social media provides an effective means to convey my institution's brand, mission and vision. [Strongly agree, agree, disagree, strongly disagree]

Educational Enhancement. Questions 12-15 address Subquestion 3: What is the relationship, if any, between social media use and attitudes regarding the use of social media for educational enhancement, among leaders of higher education?

Hung and Yeun (2010) found that, in a class where social media was used to supplement a face-to-face course, "the majority of participants developed strong feelings of social connectedness and expressed favorable feelings regarding their learning experiences" (p. 703). Another study (Junco & Chickering, 2010) found the used of social media in a first-year seminar course "increased student engagement and improved grades" (p. 13).

12. Social media provides an effective means to engage current students in scholarly activities. [Strongly agree, agree, disagree, strongly disagree]

Caraher and Braselman, (2010) found "Twenty-seven percent [of surveyed college students] use social media to 'connect with faculty to study or work' on class assignments, at least several times per month" (p. 7).

13. Social media is a good way for faculty to interact with students outside of the classroom. [Strongly agree, agree, disagree, strongly disagree]

“[...] the need for effective and successful learners to have a sense of belonging to a group and form relationships with peers is well recognized” (Woodley & Catherine, 2012, p. 88). Question 14 addresses college engagement.

14. Students who use social media are more engaged in the college experience than those who do not use social media. [Strongly agree, agree, disagree, strongly disagree]

Tay and Allen (2011) concluded social media supports the type of collaboration necessary for constructivism in learning. “students learn best when they are required to engage actively with the curriculum material in ways that emphasize the individual construction of meaning and knowledge in a social setting involving interchanges between learners about the nature and intent of their studies” (p. 151).

15. When used for educational purposes, social media provides a means for students to construct deeper meaning and knowledge of course topics.
[Strongly agree, agree, disagree, strongly disagree]

Threats to the Institution. Questions 16-20 address Subquestion 2: What is the relationship, if any, between social media use and attitudes regarding risk to the institution, among leaders of higher education? Question topics were selected by looking at categories of threats revealed by the literature review. Values assigned the responses will be inverted for this set of questions [4-Strongly Disagree, 3-Disagree, 2-Agree, 1-Strongly Agree].

“Social media -- for better or worse -- has the potential to trouble institutions’ attempts to project a unified and controlled image of themselves to the world” (McNeill, 2012, p. 161). McNeill articulates a perceived threat of “reputational damage to

institutions caused by unregulated and unsupervised social media use by both staff and students” (p. 153) and cautions that brand needs to be managed (p. 153).

16. Social networks are a potential for scandal or lawsuits for institutions, their employees, and/or students. [Strongly agree, agree, disagree, strongly disagree]

Paul, Baker and Cochran (2012) revealed a statistically significant negative relationship between time spent by students on online social networks and their academic performance (p. 2117). Junco (2011) describes a study that indicated a significantly negative relationship between frequency of engaging in Facebook chat and time spent preparing for class” (p. 168).

17. Social networks are detrimental to students’ studies. [Strongly agree, agree, disagree, strongly disagree]

Zallaquete and Chatters (2014) report that “nineteen percent [of survey participants] reported being cyberbullied in college” (p. 1). Another study indicated that “33.8% of surveyed college instructors reported being cyberbullied by students” (Minor, Smith, & Brashen, 2013, p. 15).

18. Cyberbullying and online harassment are a big problem for universities. [Strongly agree, agree, disagree, strongly disagree]

Dual relationships are defined as those interactions involving "two or more distant relationships with the same persons" (Fraser & Grigg as cited in Endacott et al., 2006, p. 988)...] (Endacott, et al., 2006). Some authors (Donath & Boyd 2004, as cited in Duncan-Daston, Hunter-Sloan & Fullmer, 2013) question whether a [social media]

relationship constitutes a dual relationship and whether it can potentially benefit or hurt a student (Duncan-Daston, et al., 2013).

19. Social networking activity between students and faculty may compromise an important boundary, resulting in an inappropriate or questionable relationship.
[Strongly agree, agree, disagree, strongly disagree]

Transparency. Questions 20-23 address Subquestion 1: What is the relationship, if any, between use of social media and attitudes regarding transparency and authenticity, among leaders of higher education? These questions use a Likert scale with values attached to response values. They provide ordinal data to correlate with numbers of hours spent on social media.

According to Northouse, “Relational transparency refers to being open and honest in presenting one’s true self to others” (2013, p. 264). Relational transparency occurs when individuals share their core feelings, motives, and inclinations with others in an appropriate manner (Kernis, 2003, as cited by Northouse, 2013). Questions 20 and 21 address Kernis’ criteria for transparency.

20. How likely are you to use social media to express your feelings openly? [very likely, somewhat likely, somewhat unlikely, very unlikely/would not do]
21. How likely are you to use social media to communicate an organizational motive? [very likely, somewhat likely, somewhat unlikely, very unlikely/would not do]

Rawlins (2008) identified transparency as having three important elements: “being truthful, substantial or useful; having participation of stakeholders; and being objective, balanced and accountable (p. 71). Question 22 addresses accountability.

22. How likely are you to use social media to address a mistake? [very likely, somewhat likely, somewhat unlikely, very unlikely/would not do]

Distaso and Bortree, 2012 say meeting Rawlins' criteria involves "behaviors such as trusting employees to communicate with the public and communicating company information that helps others understand what the company does and why" (p. 511).

23. How do you feel about university employees sharing or publicly commenting on information about the institution via social media? [very positive, positive, somewhat negative, very negative]

Finally, Question #25 allows participants to elaborate on their responses or provide any other comments.

24. Is there anything else you would like to add?

This concludes the research instrument justification. Themes and topics found in the literature were used to design and justify each question. Upon approval of the justification, the survey was piloted with a small group of people who work in higher education. The survey was also subject to review by a professor of Educational Leadership and a statistician. The results of these efforts are described below.

APPENDIX C: PILOT SURVEY INSTRUMENT

Page 1: Consent Page and Peer Review Information

This page will have a consent acknowledgment for the dissertation study. Peer review is not subject to IRB, and data collected here will not be used for the dissertation and will not be published. I'll probably use it to practice my statistical tests on, though :) The study intends to learn more about how leaders in higher education use social media, and their attitudes regarding the use of social media in higher education contexts. This quantitative study will result in:

- a demographic description of participants,
- a description of participants' social media use,
- a description of attitudes regarding social media use in higher education contexts,
- strength of correlation between hours of social media use and attitudes.

For information about the study, measurement, and Validity and Reliability, read the justification here: <http://cs.rocky.edu/~melissa.holmes/justification.pdf>. The survey has three pages of questions. Each page has a large comment box at the bottom to collect your information anonymously. Please feel free to provide feedback via the survey, email (melissa.holmes@rocky.edu) or telephone (406.565.6079). Thank you so much for your participation!

Page 2: Demographic Questions

1. What is your gender?
 - a. Female
 - b. Male
2. Which category below includes your age?
 - a. 18-20
 - b. 30-39
 - c. 40-49
 - d. 50-64

- e. 65 or older
- 3. What is position title?
 - a. President, Chancellor or equivalent
 - b. Academic Vice president or equivalent
 - c. Administrative or other Vice President
 - d. Dean or Division Chair, or equivalent
- 4. What university function most closely describes your work?
 - a. Academics
 - b. Administration
 - c. Advancement
 - d. All of the above
 - e. Other
- 5. Comment box for peer review comments

Page 3: Social Media Questions

- 6. What social media do you use? [multiple categories may be selected]
 - a. Facebook
 - b. Twitter
 - c. Pinterest
 - d. Instagram
 - e. Tumblr
- 7. What do you use social media for? [multiple categories may be selected]
 - a. Business or professional use
 - b. Keeping in touch with family and friends
 - c. Source of news and information
 - d. Following companies and/or organizations
 - e. Entertainment
- 8. How many hours per week do you spend using social media for business or professional use? [comment box to enter number of hours]
- 9. How many hours per week do you spend using social media personal use? [comment box to enter number of hours]
- 10. Comment box for peer review comments

Page 4: Opinions about Social Media in Higher Education

- 11. Social media provides an effective means to build and maintain relationships with students, parents, alumni and supporters of the university.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
- 12. Social media provides an effective means to build and maintain relationships with prospective students.
 - a. Strongly agree

- b. Agree
 - c. Disagree
 - d. Strongly disagree
13. Social media provides an effective means to tell the story of my institution.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
14. Social media provides an effective means to convey my institution's brand, mission and vision.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
15. Social media provides an effective means to engage current students in scholarly activity.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
16. Social media is a good way for faculty to interact with students outside the classroom.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
17. Students who use social media are more engaged in the college experience than those who do not use social media.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
18. When used for educational purposes, social media provides a means for students to construct deeper meaning and knowledge of course topics.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
19. Social networks are a potential for scandal or lawsuits for institutions, their employees and/or students.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
20. Social networks are detrimental to students' studies.
- a. Strongly agree

- b. Agree
 - c. Disagree
 - d. Strongly disagree
21. Cyberbullying and harassment are a big problem for universities.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
22. Social networking activity between students and faculty may compromise an important boundary, resulting in an inappropriate or questionable relationship.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
23. How likely are you to express your feelings openly via social media?
- a. Very likely
 - b. Likely
 - c. Unlikely
 - d. Very unlikely
24. How likely are you to communicate or comment on an organizational motive via social media?
- a. Very likely
 - b. Likely
 - c. Unlikely
 - d. Very unlikely
25. How likely are you to address a mistake via social media?
- a. Very likely
 - b. Likely
 - c. Unlikely
 - d. Very unlikely
26. How do you feel about university employees using social media to share or comment about the institution?
- a. Very positive
 - b. Positive
 - c. Negative
 - d. Very negative
27. Is there anything else you would like to add? [Comment box]
28. Comment box for peer review comments

APPENDIX D: PILOT SURVEY EMAIL INVITATION

The following message was sent to pilot test participants via email and Facebook messaging:

Dear [Name]

I am in the process of designing a study for my dissertation *Practices and Perceptions of Social Media among Leaders in Higher Education*, in Educational Leadership at The University of Montana. I am asking a small group of knowledgeable reviewers to evaluate the instrument before it is pilot tested.

I hope to get feedback regarding the questions and wording of questions, any aspects of research design and evaluation, or anything else you would like to add. The survey has 24 questions and should only take a few moments of your time. I would greatly appreciate your input. A synopsis of the study and links to more information are on the first page of the survey.

The survey is here: <https://www.surveymonkey.com/s/KLM9T3D>

Thank you!

-Melissa

APPENDIX E: SURVEY INSTRUMENT PILOT TESTING NOTES

The following are the researcher's notes following the peer review and pilot test.

The pilot survey instrument was implemented using SurveyMonkey, an online survey tool. Comment boxes were added throughout the survey to request pilot participants to leave qualitative feedback for groups of questions. The pilot instrument, results and feedback are included in the appendices.

Seventeen faculty members and administrators from Montana Tech, Rocky Mountain College, The University of Montana, and Boise State University were invited to pilot test the survey instrument. Those invited included six teaching faculty, one college president, three vice presidents (two academic vice presidents and a vice president of advancement), three deans, a marketing director, a director of alumni relations, and two librarians. All of the participants currently work in higher education and hold master's or doctoral degrees. Of the seventeen, fifteen responded and took the survey, providing data to pilot test the statistical procedures as well as qualitative feedback regarding the instrument and questions presented.

Two face-to-face discussions provided more in-depth feedback of the instrument and pilot findings. Dr. Jo Swain, who has retired from the position as Billings School District #2 superintendent and is currently a faculty member in the Educational Leadership program at Rocky Mountain College, reviewed the instrument and the results. Dr. Swain provided detailed feedback during a face-to-face discussion. Dr. Ulrich Hoench, Professor of Mathematics and expert in statistical methods reviewed the Cronbach's spreadsheet and the tool being used for strength of correlation for the pilot data. Dr. Hoench indicated the statistical methods looked appropriate for the questions

and constructs without reviewing the instrument itself. Feedback from the peer review is summarized for each set of questions, below.

Page 1: Demographic questions

This set of questions inquired about participants' gender, age range, position title, and university function. The gender and age questions were straightforward and no comments were made. The position title caused some confusion, since the choices were administrative positions and many of the participants were not in an administrative position. One participant inquired "If you are asking a lot of faculty, why not include them in you (sic) option list?", while another noted "Is this really meant for administrators only? I'da thunk #3 should include 'chair' or 'prof' or similar." While these comments are very applicable for the participant group, they are not worrisome because the population will consist only of administrators.

Question #4 inquired about the university function of the participants. Choices included Academics, Advancement, Administration, or All of the Above. It appears as though many of the participants did not know what this meant, exactly. Further scrutinization of the data demonstrated that some participants responded incorrectly. For example, the directors of marketing and alumni relations clearly support an advancement function (and the two individuals actually work in a department with "Advancement" in the title), but they responded "Academics." Perhaps one of the librarians said it best: "The university functions were confusing to me, just because I wasn't sure what advancement referred to. Maybe it's just beyond my pay grade [...]."

This question, then, provided erroneous data from the participant group. The data was reviewed closely and results discussed with Dr. Swain. Subsequently, the decision

was made to retain the question, because it is assumed that those in administrative positions will recognize the difference between those functions.

Page 2: Social Media Questions

The second set of questions (Questions 6-9 on the pilot instrument) inquired about participants' social media use, including what social media are used, what it is used for, and how many hours are spent per week using social media for professional or personal use.

Upon review of the data, it was found that those who do not use social media (as indicated by the comments) did not answer the first two questions, since there was no option available for "none of the above" or "do not use." While this is not of particular concern, it was also found that 75% of these same participants did not go on to answer the attitude questions on Page 3. As such, choices for "None of the above" will be added to questions, along with an explanation that their attitudes are sought after even if they do not use social media.

Further, the choices of social media and reasons for using it were derived from the Pew report, which uses the same options. One participant suggested included an option for "Other." The same participant suggested differentiating between social media and social networking, suggesting some definitions may be helpful in the cover materials.

Page 3: Attitudes Questions

The third set of questions (11-26) inquired about participants' attitudes regarding social media. As stated above, participants who do not use social media did not respond to these questions. One question was created with checkboxes instead of radio buttons and two participants commented on that.

Six of the comments indicated a preference for a “neutral” or “don’t know” option in the questions. While some indicated they did not like being “forced to choose.” One participant was “having a hard time with these absolutes.” Though there was a fairly overwhelming preference for a “neutral” or “don’t know” option, it will not be added. As indicated by (cite), the participants should pick a side.

Some participants indicated that there were questions where they simply did not know what the answer should be. The questions on Page 3 are intended to capture attitudes, as opposed to measuring knowledge. Participants are not expected to “know” an answer, but rather to share an opinion. The survey instructions will make this clear to participants. Another interesting comment regarding this section was the use of the word “good.” One participant noted “In #16, what is ‘good’? Moral good? Procedural good? Institutional good?” The wording was changed, as indicated below.

Summary of changes based on peer review and pilot testing:

- Retain the question regarding university function, even though it caused some confusion among the participant group;
- Add choices to Question #6 to include “Other” and “Do not use social media”;
- Add a choice to Question #7 for “Do not use social media”;
- Request that participants who do not use social media still respond to the attitudes questions;
- Add explanations of social media versus social networking to the cover materials.

- Add instructions to indicate participants are being asked to share their opinions, as opposed to knowing an answer to the attitude questions.

On Question 16, the word “good” will be replaced with the word “effective.”

Though the feedback evaluated above discusses things that need to be changed, there was a good deal of positive feedback as well. Dr. Swain noted that the questions were worded well and the pilot findings are interesting. Some quotes included “This page is fine, very straightforward” and “Overall I believe your questions are good and should provide some interesting data about social media use.”

The peer review and pilot test provided excellent feedback on the design of the instrument. Peer review was collected via comment boxes on each page of the survey and a face-to-face interview. Feedback was carefully evaluated and changes were made in many cases.

Careful scrutiny of individual responses provided insight into ways each user thought about the questions, including any mistakes that were made (i.e. incorrect responses for university function for Question 4. Changes were incorporated into the final version of the survey instrument.

Cronbach’s Alpha was applied to the pilot data.. The results were:

Entire data set:	0.697
Marketing and Recruiting questions:	0.777
Educational Enhancement questions:	0.861
Threats to the Institution questions:	0.579
Transparency questions:	0.837

APPENDIX F: FINAL SURVEY INSTRUMENT

Page 1: Consent Page and Peer Review Information

You are invited to participate in a quantitative research project regarding the Practices and Perceptions of Social Media among Leaders in Higher Education. This online survey should take about 5 to 10 minutes to complete. Participation is voluntary, and responses will be kept anonymous to the degree permitted by the technology being used.

You have the option to not respond to any questions that you choose. Participation or nonparticipation will not impact your relationship with The University of Montana. Submission of the survey will be interpreted as your informed consent to participate and that you affirm that you are at least 18 years of age.

If you have any questions about the research, please contact the Principal Investigator, Melissa Holmes via email at melissa.holmes@rocky.edu or the faculty advisor, Dr. Frances O'Reilly at frances.oreilly@umontana.edu. If you have any questions regarding your rights as a research subject, contact the UM Institutional Review Board (IRB) at (406) 243-6672.

For information about the study, measurement, reliability, validity and definitions, please visit <http://cs.rocky.edu/~melissa.holmes/justification.pdf>.

Please print or save a copy of this page for your records.

** I have read the above information and agree to participate in this research project.* [Button to begin survey]

Page 2: Demographic Questions

1. What is your gender?
 - a. Female

- b. Male
- 2. Which category below includes your age?
 - a. 18-20
 - b. 30-39
 - c. 40-49
 - d. 50-64
 - e. 65 or older
- 3. What is position title?
 - a. President, Chancellor or equivalent
 - b. Academic Vice president or equivalent
 - c. Administrative or other Vice President
 - d. Dean or Division Chair, or equivalent
- 4. What university function most closely describes your work?
 - a. Academics
 - b. Administration
 - c. Advancement
 - d. All of the above
 - e. Other

Page 3: Social Media Questions

- 5. What social media do you use? [multiple categories may be selected]
 - a. Facebook
 - b. Twitter
 - c. Pinterest
 - d. Instagram
 - e. Tumblr
 - f. None of the above

Note to participants: if you do not use social media, we are still interested in your opinions about it. Please continue on and answer the questions to the best of your ability.

- 6. What do you use social media for? [multiple categories may be selected]
 - a. Business or professional use
 - b. Keeping in touch with family and friends
 - c. Source of news and information
 - d. Following companies and/or organizations
 - e. Entertainment
 - f. Other
 - g. I do not use social media
- 7. How many hours per week do you spend using social media for business or professional use? [comment box to enter number of hours]
- 8. How many hours per week do you spend using social media personal use? [comment box to enter number of hours]

Page 4: Opinions about Social Media in Higher Education

9. Social media provides an effective means to build and maintain relationships with students, parents, alumni and supporters of the university.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
10. Social media provides an effective means to build and maintain relationships with prospective students.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
11. Social media provides an effective means to tell the story of my institution.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
12. Social media provides an effective means to convey my institution's brand, mission and vision.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
13. Social media provides an effective means to engage current students in scholarly activity.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
14. Social media is an effective way for faculty to interact with students outside the classroom.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
15. Students who use social media are more engaged in the college experience than those who do not use social media.
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
16. When used for educational purposes, social media provides a means for students to construct deeper meaning and knowledge of course topics.

- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
17. Social networks are a potential for scandal or lawsuits for institutions, their employees and/or students.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
18. Social networks are detrimental to students' studies.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
19. Cyberbullying and harassment are a big problem for universities.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
20. Social networking activity between students and faculty may compromise an important boundary, resulting in an inappropriate or questionable relationship.
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
21. How likely are you to express your feelings openly via social media?
- a. Very likely
 - b. Likely
 - c. Unlikely
 - d. Very unlikely
22. How likely are you to communicate or comment on an organizational motive via social media?
- a. Very likely
 - b. Likely
 - c. Unlikely
 - d. Very unlikely
23. How likely are you to address a mistake via social media?
- a. Very likely
 - b. Likely
 - c. Unlikely
 - d. Very unlikely
24. How do you feel about university employees using social media to share or comment about the institution?

- a. Very positive
- b. Positive
- c. Negative
- d. Very negative

25. Is there anything else you would like to add? [Comment box]

26. Comment box for peer review comments

APPENDIX G: FINAL SURVEY EMAIL INVITATION

Request 1

Dear [Name]:

Greetings! My name is Melissa Holmes and I am a doctoral candidate at The University of Montana. I am conducting a brief survey regarding social media use and perceptions among leaders of higher education in the western United States. Your institution was randomly selected for participation, and you are receiving this message because you were identified as a leader of the institution by the institution website.

Please help me complete my dissertation by completing the survey below:

[link here]

This study has been approved by the Institutional Review Board at The University of Montana. Details about the study and contact information appears below. Please feel free to contact me with any questions you may have.

Thank you!

Melissa Holmes

Doctoral Candidate, The University of Montana

Assistant Professor of Computer Science, Rocky Mountain College

Study Title: Social Media Perceptions and Practices among Leaders in Higher Education

Investigator(s):

Dr. Frances L. O'Reilly, Associate Professor and Doctoral Committee Chair, Educational Leadership, The University of Montana, 406-544-8541

Melissa Holmes, Doctoral Candidate, Educational Leadership, The University of Montana, 406-565-6079, melissa.holmes@rocky.edu

Purpose of survey:

You are being asked to take part in a research study exploring the relationship, if any, between social media use and attitudes among leaders in higher education. You have been invited to participate because you are a President, Chancellor, Provost, Vice President or Dean (or equivalent position) at one of the institutions selected in a random cluster sample of four-year degree granting institutions in the western United States.

Confidentiality:

Your records will be kept confidential and will not be released without your consent except as required by law. This online survey is confidential, such that:

1. The investigator will provide the URL link to the survey via in the body of an email, but will **not** send it electronically through a feature of the survey software; and
2. The investigator will **not** include any potentially identifiable technical data (e.g., IP address) in my collection configuration. You will be asked to identify your institution and multiple responses from the same institution will be aggregated in the study. Melissa Holmes will be the only one to see the raw data. Neither individuals nor individual institutions will be identified in any presentation of the study, written or otherwise.
3. Identities of individuals in the sample will be kept private.

Voluntary Participation/Withdrawal:

Your decision to take part in this research study is entirely voluntary. You may refuse to take part in or you may withdraw from the study at any time.

Questions:

If you have any questions about the research now or during the study you may contact Dr. Frances O'Reilly, Faculty Supervisor, 406-544-8541 or Melissa Holmes, 406.565.6079 or melissa.holmes@rocky.edu. If you have any questions regarding your rights as a research subject, you may contact the UM Institutional Review Board (IRB) at (406) 243-6672.

Request 2

Email subject line: 5-minute Survey for Dissertation Study

Second round of emails – sent to addresses that were flagged as “not opened” by the Senty software. Sent 10/29/2015

Dear [Name]:

Please consider helping with my dissertation study by completing a 5-minute survey about your social media use. Even if you do not use social media, I am interested in your opinions regarding several higher education issues. Please click on the link below to take the survey:

[link here]

I need responses from just a few more institutions to reach the appropriate sample size from my survey, so I would very much appreciate your time and participation.

If you have already responded, I apologize for the repeat message. I would also like to THANK YOU for taking the time to help with my project! I am so grateful that so many people were willing to share their opinions.

My study has been approved by the Institutional Review Board at The University of Montana. Details are included below.

Thank you!

[Signature, study information and confidentiality omitted]

Request 3

Email subject line: 5-minute Survey for Dissertation Study – Final request

Dear [Name]:

Please consider helping with my dissertation study by completing a 5-minute survey about your social media use. Even if you do not use social media, I am interested in your opinions regarding several higher education issues. Please click on the link below to take the survey:

<https://www.surveymonkey.com/r/TW25QQ6>

I need responses from just a few more institutions to reach the appropriate sample size for my survey, so I would very much appreciate your time and participation.

If you have already responded to my survey, I apologize for the repeat message. This is the final message that will go out. I would also like to THANK YOU for taking the time to help with my project! I am so grateful that so many people were willing to share their opinions.

My study has been approved by the Institutional Review Board at The University of Montana. Details are included below.

Thank you!

[Signature, study information and confidentiality omitted]

APPENDIX H INSTITUTIONAL REVIEW BOARD (IRB) MATERIALS

Form RA-108
(Rev. 03/14)

THE UNIVERSITY OF MONTANA-MISSOULA
Institutional Review Board (IRB)
for the Protection of Human Subjects in Research
CHECKLIST / APPLICATION

IRB Protocol No.:

At the University of Montana (UM), the Institutional Review Board (IRB) is the institutional review body responsible for oversight of all research activities involving human subjects outlined in the U.S. Department of Health and Human Services' Office of Human Research Protection and the National Institutes of Health, Inclusion of Children Policy Implementation.

Instructions: A separate application form must be submitted for each project. IRB proposals are approved for no longer than one year and must be continued annually (unless Exempt). Faculty and students may email the completed form as a Word document to IRB@umontana.edu, or submit a hardcopy to the Office of the Vice President for Research & Creative Scholarship, University Hall 116. Student applications must be accompanied by email authorization by the supervising faculty member or a signed hard copy. *All fields must be completed. If an item does not apply to this project, write in: n/a.* Questions? Call the IRB office at 243-6672.

1. Administrative Information

Project Title: Social Media Practices and Perceptions Among Leaders of Higher Education	
Principal Investigator: Melissa E. Holmes	UM Position: Doctoral Candidate
Department: Educational Leadership	Office location: The University of Montana
Work Phone: 406-238-7381	Cell Phone: 406-565-6079

2. Human Subjects Protection Training *(All researchers, including faculty supervisors for student projects, must have completed a self-study course on protection of human research subjects within the last three years and be able to supply the "Certificate(s) of Completion" upon request. If you need to add rows for more people, use the Additional Researchers Addendum.)*

All Research Team Members (list yourself first)	PI	CO-PI	Faculty Supervisor	Research Assistant	DATE COMPLETED Human Subjects Protection Course
Name: Melissa Holmes Email: melissa.holmes@rocky.edu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12/12/2014
Name: Dr. Frances O'Reilly Email: frances.oreilly@umontana.edu	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5/13/2014
Name: _____ Email: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Name: _____ Email: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. Project Funding *(If federally funded, you must submit a copy of the abstract or Statement of Work.)*

Is grant application currently under review at a grant funding agency? <input type="checkbox"/> Yes <i>(If yes, cite sponsor on ICF if applicable)</i> <input checked="" type="checkbox"/> No		Has grant proposal received approval and funding? <input type="checkbox"/> Yes <i>(If yes, cite sponsor on ICF if applicable)</i> <input checked="" type="checkbox"/> No	
Agency	Grant No.	Start Date	End Date
			PI on grant

For UM-IRB Use Only

IRB Determination:

- _____ Not Human Subjects Research
- _____ Approved by Exempt Review, Category # _____ *(see memo)*
- _____ Approved by Expedited Review, Category # _____ *(see Note to PI)*
- _____ Full IRB Determination
 - _____ Approved *(see Note to PI)*
 - _____ Conditional Approval *(see memo)* - IRB Chair Signature/Date: _____
 - _____ Conditions Met *(see Note to PI)*
 - _____ Resubmit Proposal *(see memo)*
 - _____ Disapproved *(see memo)*

Note to PI: Non-exempt studies are approved for one year only. Use any attached IRB-approved forms (signed/dated) as "masters" when preparing copies. If continuing beyond the expiration date, a continuation report must be submitted. Notify the IRB if any significant changes or unanticipated events occur. When the study is completed, a closure report must be submitted. Failure to follow these directions constitutes non-compliance with UM policy.

Risk Level: _____

Final Approval by IRB Chair/Manager: _____ Date: _____ Expires: _____

<In an effort to be environmentally responsible, please expand/reduce box size as needed.>

- 4. Purpose of the Research Project:** Briefly summarize the overall intent of the study. Your target audience is a non-researcher. Include in your description a statement of the objectives and the potential benefit to the study subjects and/or the advancement of your field. **Generally included are literature related to the problem, hypotheses, and discussion of the problem's importance.** Expand box as needed.

This dissertation study investigates social media use and perceptions among leaders in higher education institutions in the western states. Social media has become an integral part of our society and a powerful vehicle of communication and influence. It is especially popular among teenagers and college students – an age group that is particularly interesting to colleges and universities. The perceptions, practices and knowledge of social media among higher education leaders are unclear. While some leaders of industry have embraced social media as a means to communicate with stakeholders and "promote transparency" (Charles, 2012; Friedman, 2013) the research regarding their perceptions and practices is sparse. Leaders of higher education should be aware of the implications of social media in order to use it effectively, maintain their own privacy, and mediate negative situations. However, it is unclear whether, or how, leaders of institutions of higher education use and perceive social media. This quantitative study seeks to bridge the gap in the research. Educational leaders will be surveyed regarding their own social media perceptions and practices. Descriptive statistics will be reported, and the strength of correlation between social media use and issues defined in the literature will be measured.

- 4.1 What do you plan to do with the results? If not discussed above, include considerations such as whether this is a class project, a project to improve a program/school system, and/or if the results will be generalized to a larger population, contribute to the general field of knowledge, and/or be published/presented in any capacity.

This project is a dissertation that will contribute to the general field of study of social media in higher education. The dissertation will be defended in a public forum. Parts of the dissertation or related topics may be published in journals, periodicals, or online.

Is this part of a thesis or dissertation? No Yes If yes and other than the PI's, then whose?

5. IRB Oversight

Is oversight required by other IRB(s) [e.g., tribal, hospital, other university] for this project? Yes No

If yes, please identify IRB(s):

The University of Montana

6. Subject Information:

6.1 Human Subjects (*identify, include age/gender*):

Participants include Presidents, Vice Presidents, Deans (and equivalent positions) of four-year degree granting institutions that are located in the western United States. Participants are of adults of both genders.

6.2 How many subjects will be included in the study? 218 institutions will be selected in a random cluster sample. Individuals at the schools will be identified. It is estimated that up to 1000 individuals will be selected to participate.

6.3 Are minors included (*under age 18, per Montana law*)? Yes No
If yes, specify age range: _____ to _____

6.4 Are members of a physically, psychologically, or socially vulnerable population being specifically targeted? Yes No

If yes, please explain why the subjects might be physically, psychologically or socially vulnerable:

6.5 Are there other special considerations regarding this population? Yes No

If yes, please explain:

6.6 Do subjects reside in a foreign country? Yes Specify country: _____ No

If yes, please fill out and attach Form RA-112, Foreign Site Study Appendix (<http://www.umt.edu/research/complianceinfo/IRB/Docs/foreign.doc>).

6.7 How will the subjects be selected or recruited? Include a bulleted list of inclusion/exclusion criteria. *(Attach copies of all flyers, advertisements, etc., that will be used in the recruitment process as these require UM-IRB approval)*

Participants will be recruited via an email link to a SurveyMonkey survey.

6.8 How will subjects be identified in your personal notes, work papers, or publications: *(may check more than one)*

Identified by name and/or address or other

(Secure written [e.g., ICF] or verbal permission to identify; if risk exists, create a confidentiality plan.)

Confidentiality Plan

(Identity of subjects linked to research, but not specific data [e.g., individuals identified in ICF but not included in publications]; identification key kept separate from data; or, data collected by third party [e.g., Select Survey, SurveyMonkey, etc.] and identifiers not received with data.)

Never know participant's identity

(An ICF may be unnecessary [e.g., anonymous survey, paper or online] unless project is sensitive or involves a vulnerable population.)

6.9 Describe the means by which the human subject's personal privacy is to be protected, and the confidentiality of information maintained. If you are using a Confidentiality Plan (as checked above), include in your description a plan for the destruction of materials that could allow identification of individual subjects or the justification for preserving identifiers.

SurveyMonkey is a secure site requiring a username and a password. Only the researcher will have access to the data collected. Electronic identifiers will not be received with the data. Email invitations will be sent outside of SurveyMonkey. Electronic copies of survey data will be kept on a personal computer located in a private office, and connected to a secure network. Any notes and paper materials will be stored in a locked file cabinet in the researcher's private office. Neither individuals nor individual institutions will be identified in the dissertation, the dissertation defense or any related publications that may result from the work.

6.9a Will subject(s) receive an explanation of the research – separate from the informed consent form (if applicable) – before and/or after the project? Yes *(attach copy and explain when given)* No

7. Information to be Compiled

7.1 Explain where the study will take place *(physical location not geographic)*. If permission is required to conduct the research at the location or to use any of the facilities, indicate those arrangements and **attach copies of written permission**:

The study will take place in the researcher's office on the Rocky Mountain College campus, and in her home at 236 Custer Avenue, Billings MT. Permission is not required to conduct research at these locations.

7.2 Will you be working with infectious materials, ionizing radiation, or hazardous materials? Please specify.

No

7.3 Subject matter or kind(s) of information to be compiled from/about subjects:

General demographic information and attitudes and practices regarding social media use.

7.4 Activities the subjects will perform and how the subjects will be used. Describe the instrumentation and procedures to be used and kinds of data or information to be gathered. **Provide enough detail** so the IRB will be able to evaluate the intrusion from the subject's perspective *(expand box as needed)*:

Participants will take a quantitative survey that gathers demographic information, information about social media use, and Likert scale data regarding attitudes about social media issues that appear in the literature.

7.5 Is information on any of the following included? *(check all that apply)*:

Sexual behavior

Drug use/abuse

Alcohol use/abuse

Illegal conduct

- Information about the subject that, if it became known outside the research, could reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability.

7.6 Means of obtaining the information (check all that apply). **Attach questionnaire or survey instrument, if used:**

- | | |
|---|--|
| <input type="checkbox"/> Field/Laboratory observation | <input type="checkbox"/> In-person interviews/survey |
| <input type="checkbox"/> Blood/Tissue/Urine/Feces/Semen/Saliva Sampling (IBC Application must be submitted) | <input type="checkbox"/> Telephone interviews/survey |
| <input type="checkbox"/> Medical records (require HIPAA form) | <input type="checkbox"/> On-site survey |
| <input type="checkbox"/> Measurement of motions/actions | <input type="checkbox"/> Mail survey |
| <input type="checkbox"/> Use of standard educational tests, etc. | <input checked="" type="checkbox"/> Online survey (attach Statement of Confidentiality) |
| <input type="checkbox"/> Other means (specify): | <input type="checkbox"/> Examine public documents, records, data, etc. |
| | <input type="checkbox"/> Examine private documents, records, data, etc. |

7.7 Will subjects be (check all that apply):

- Videotaped Audio-taped Photographed N/A
(securing an additional signature is recommended on consent/assent/permission forms)

Explain how above media will be used, who will transcribe, and how/when destroyed:

7.8 Discuss the benefits (does not include payment for participation) of the research, if any, to the human subjects and to scientific knowledge (if the subjects will not benefit from their participation, so state):

This research will add to the body of knowledge regarding social media and higher education, and social media and leadership.

7.9 Cite any payment for participation (payment is not considered a benefit). If grant funding is not indicated in item #2, please specify the source of the funding and in what form it is to be dispersed.

N/A

7.9a Outline, **in detail**, the risks and discomforts, if any, to which the human subjects will be exposed (Such deleterious effects may be physical, psychological, professional, financial, legal, spiritual, or cultural. As a result, one can never guarantee that there are no risks – use "minimal." Some research involves violations of normal expectations, rather than risks or discomforts; such violations, if any, should be specified):

Minimal risk is expected from participating in the survey. A confidentiality plan has been established to protect the identity of participants.

7.9b Describe, **in detail**, the means taken to minimize each such deleterious effect or violation::

Records will be kept confidential and will not be released without participant consent except as required by law. The online survey is confidential, such that:

1. The investigator will provide the URL link to the survey via in the body of an email, but will not send it electronically through a feature of the survey software; and
2. The investigator will not include any potentially identifiable technical data (e.g., IP address) in my collection configuration. You will be asked to identify your institution and multiple responses from the same institution will be aggregated in the study. Melissa Holmes will be the only one to see the raw data. Neither individuals nor individual institutions will be identified in any presentation of the study, written or otherwise.
3. Identities of individuals in the sample will be kept private.

8. Informed Consent

An informed consent form (ICF) is usually required, unless subjects remain anonymous or a waiver is otherwise justified below. (Templates and examples of Informed Consent, Parental Permission, and Child's Assent Forms are available at <http://www.umt.edu/research/complianceinfo/irb/forms.aspx>).

- A signed copy of the consent/assent/permission form **must be offered to all subjects**, including parents/guardians of subjects less than 18 years of age (minors).
- Use of minors
 - All minor subjects (under the age of 18) must have written parental or custodial permission (45 CFR 46.116(b)).
 - All minors from 10 to 18 years of age are required to give written assent (45 CFR 46.408(a)).

- o Assent by minor subjects: All minor subjects are to be given a clear and complete picture of the research they are being asked to engage in, together with its attendant risks and benefits, as their developmental status and competence will allow them to understand.
- o Minors less than 10 years of age and all individuals, regardless of age, with delayed cognitive functioning (or with communication skills that make expressive responses unreliable) will be denied involvement in any research that does not provide a benefit/risk advantage.
 - Good faith efforts must be made to assess the actual level of competence of minor subjects where there is doubt.
 - The Minor Assent Form must be written at a level that can be understood by the minor, and/or read to them at an age-appropriate level in order to secure verbal assent.
- Is a written informed consent form being used? Yes (attach copy) No (justify below)
To waive the requirement for written informed consent (45 CFR 46.117), describe your justification:
- Is a written parental permission form being used? Yes (attach copy) No
(If yes, will likely require minor assent form)
- Is a written minor assent form being used? Yes (attach copy) No
(If yes, will likely require parental permission form)

Principal Investigator's Statement

By signing below, the Principal Investigator agrees to comply with all requirements of The University of Montana-Missoula IRB, the U.S. Department of Health and Human Services Office of Human Research Protection Guidelines, and NIH Guidelines. The PI agrees to ensure all members of his/her team are familiar with the requirements and risks of this project, and will complete the Human Subject Protection Course available at <http://www.umt.edu/research/complianceinfo/irb>.

I certify that the statements made in this application are accurate and complete. I also agree to the following:

- I will not begin work on the procedures described in this protocol, including any subject recruitment or data collection, until I receive final notice of approval from the IRB.
- I agree to inform the IRB in writing of any adverse or unanticipated problems using the appropriate form. I further agree not to proceed with the project until the problems have been resolved.
- I will not make any changes to the protocol written herein without first submitting a written **Amendment Request** to the IRB using form RA-110, and I will not undertake such changes until the IRB has reviewed and approved them.
- It is my responsibility to ensure that every person working with the human subjects is appropriately trained.
- All consent forms and recruitment flyers must be approved and date-stamped by the IRB before they can be used. The forms will be provided back to the PI in PDF format with the IRB approval email. Copies must be made from the date-stamped version. All consent forms given to subjects must display the IRB approval date-stamp.
- I understand that it is my responsibility to file a **Continuation Report** before the project expiration date (does not apply to exempt projects). This is not the responsibility of the IRB office. *Tip: Set a reminder on your calendar as soon as you receive the date.* A project that has expired is no longer in compliance with UM or federal policy.
- I understand that I must file a **Closure Report** (RA-109) when the project is completed, abandoned, or otherwise qualifies for closure from continuing IRB review (does not apply to exempt projects).
- I will keep a copy of this protocol (including all consent forms, questionnaires, and recruitment flyers) and all subsequent correspondence with the IRB.
- I understand that failure to comply with UM and federal policy, including failure to promptly respond to IRB requests, constitutes **non-compliance** and may have serious consequences impacting my project and my standing at The University of Montana.

Signature of Principal Investigator: Melissa Elizabeth Holmes

Date: 12/16/2014

(Type for electronic submission; sign for hard copy)

NOTE: I AM AWARE that electronic submission of this form from my University email account constitutes my signature.

Students and Faculty Research Supervisors: Student applications must be accompanied by either an email authorization from the supervising faculty member or by a signed hard copy (below):

Faculty Supervisor: Dr. Frances L. O'Reilly
(Type or print name)

My signature confirms:

- 1) I have read the IRB Application and attachments.
- 2) I agree that it accurately represents the planned research.
- 3) I will supervise this research project.

Faculty Supervisor Signature: _____ Date: _____
(Type for electronic submission; sign for hard copy)

Department: _____ Phone: _____

THE UNIVERSITY OF MONTANA-MISSOULA
 Institutional Review Board (IRB)
for the Use of Human Subjects in Research

ONLINE SURVEY
 (SurveyMonkey, Select Survey, Qualtrics, etc.)

Statement of Confidentiality

When developing the online survey instrument for my project, "PRACTICES AND PERCEPTIONS OF SOCIAL MEDIA AMONG LEADERS IN HIGHER EDUCATION," my signature below certifies that:

- 1) I will design my online survey so that the front page of the instrument includes the project description, a risk/benefit statement, and contact information for questions. Participants will not be forced to respond to a question before being able to move on to the next question. Participation will be clearly voluntary and subjects' consent will be implied by their proceeding into the survey; and,
- 2) If my survey is anonymous,
 - a. I will provide the URL link to the survey via a hand-out, or in the body of an email, but will **not** send it electronically through a feature of the survey software; and
 - b. I will **not** include any potentially identifiable technical data (e.g., IP address) in my collection configuration. If, however, I am unable to deselect and technical data is captured by default, I, as the instrument designer, will destroy it immediately. As a result, I will be the only one (of my research team, if applicable) to see this data, and it will not be used in any way.

The highest form of online security available utilizes secure sockets layer (SSL) and ensures data is transmitted in an encrypted fashion. *Select Survey* does not use SSL and for some survey software (e.g. SurveyMonkey), this security is available only via purchase.

The survey software I am using is
 _SurveyMonkey_____

It utilizes SSL: Yes No

Melissa Elizabeth Holmes

12/16/2014

 Signature of Principal Investigator

 Date

I AM AWARE that electronic submission of this form from my University email account constitutes my signature.

EXAMPLES OF WORDING FOR INFORMED CONSENT FORMS

Informed consent is a process that involves a comprehensive discussion between the investigator and subject in order to ensure the subject's understanding of a proposed research study. This process is documented and reinforced by a written consent form.

Informed Consent Forms, Parental Permission Forms, and Assent Forms for minors, which accompany a proposal for human research submitted to the UM IRB, need to be written in a manner so that they can be easily understood by the targeted readers. Each form should be modeled on the following examples, and will be date stamped/approved at the bottom of each page by the IRB; as a result, the submitted version should be clean with enough room at the bottom margin for the approval stamp.

- The consent document must be written using lay language, at an 8th grade reading level (similar to the level used in popular magazines and newspapers) or as is appropriate for the participant population. Avoid technical jargon. The form should be written as if the investigator and participant are engaged in conversation.
- The form should be written in the second person (e.g., *you* are invited to participate, *you* will be asked, etc.), except for the very last item, the “Statement of Consent.”
- The use of bulleted lists and/or tables may be helpful to explain study procedures, timelines, inclusion/exclusion criteria, etc.

Typically, written informed consent is required (45 CFR 46.117(a)) unless a waiver is requested and approved.

If you are doing an **online** or **telephone survey**, a waiver of the requirement for written informed consent may be requested. However, if granted because informed consent is “implied,” an informed consent process is still required and the components of written informed consent as detailed below are still necessary.

- **Online:** Typically, these components will be cited on the front page of the online survey and an “I accept” button will then provide participants access into the survey. An example of an online informed consent form is posted at the end of this document.
- **Telephone:** Typically, these components will be written as the beginning of the “script” and verbal consent will be requested before beginning the telephone survey. A copy of the script must be provided to the IRB.

All categories below are required (45 CFR 46.116) for written informed consent unless “if applicable” is noted. If you have questions or need assistance, please contact the IRB office at 243-6672.

The University of Montana IRB

Expiration Date _____

Date Approved _____

Chair/Admin _____

SUBJECT INFORMATION AND INFORMED CONSENT

Study Title: Social Media Perceptions and Practices among Leaders in Higher Education

Investigator(s):

Dr. Frances L. O'Reilly, Associate Professor and Doctoral Committee Chair, Educational Leadership, The University of Montana, 406-544-8541
 Melissa Holmes, Doctoral Candidate, Educational Leadership, The University of Montana, 406-565-6079

Special Instructions:

This consent form may contain words that are new to you. If you read any words that are not clear to you, please ask the person who gave you this form to explain them to you.

Purpose:

You are being asked to take part in a research study exploring the relationship, if any, between social media use and attitudes among leaders in higher education. You have been invited to participate because you are a President, Chancellor, Provost, Vice President or Dean (or equivalent position) at one of the institutions selected in a random cluster sample of four-year degree granting institutions in the western United States. You must be 18 or older to participate in this research.

Procedures:

It will take about 10 minutes to complete the survey.

Risks/Discomforts:

There is no anticipated discomfort for those contributing to this study, so risk to participants is minimal.

Benefits:

There is no promise that you will receive any benefit from taking part in this study.

Confidentiality:

Your records will be kept confidential and will not be released without your consent except as required by law. This online survey is confidential, such that:

4. The investigator will provide the URL link to the survey via in the body of an email, but will **not** send it electronically through a feature of the survey software; and
5. The investigator will **not** include any potentially identifiable technical data (e.g., IP address) in my collection configuration. You will be asked to identify your institution and multiple responses from the same institution will be aggregated in the study. Melissa Holmes will be the only one to see the raw data. Neither individuals nor individual institutions will be identified in any presentation of the study, written or otherwise.
6. Identities of individuals in the sample will be kept private.

Voluntary Participation/Withdrawal:

Your decision to take part in this research study is entirely voluntary. You may refuse to take part in or you may withdraw from the study at any time.

Questions:

If you have any questions about the research now or during the study contact Dr. Frances O'Reilly, Faculty Supervisor, 406-544-8541 or Melissa Holmes, 406.565.6079 or melissa.holmes@rocky.edu. If you have any questions regarding your rights as a research subject, you may contact the UM Institutional Review Board (IRB) at (406) 243-6672.

The University of Montana IRB

Expiration Date _____

Date Approved _____

Chair/Admin _____

Statement of Your Consent:

I have read the above description of this research study. I have been informed of the risks and benefits involved, and all my questions have been answered to my satisfaction. Furthermore, I have been assured that any future questions I may have will also be answered by a member of the research team. I voluntarily agree to take part in this study. I understand I will receive a copy of this consent form.

Printed Name of Subject

Subject's Signature

Date

Subject's Signature

Date

ONLINE SURVEY CONSENT FORM

You are invited to participate in a research project about Social Media Practices and Perceptions among Leaders in Higher Education. This online survey should take about 5 to 10 minutes to complete. Participation is voluntary and responses will be kept confidential.

You have the option to not respond to any questions that you choose. Participation or nonparticipation will not impact your relationship with The University of Montana. Submission of the survey will be interpreted as your informed consent to participate and that you affirm that you are at least 18 years of age.

If you have any questions about the research, please contact the Principal Investigator, Dr. Frances L. O'Reilly at Francee.O'Reilly@mso.umt.edu or Melissa Holmes at melissa.holmes@rocky.edu or 405-565-6079. If you have any questions regarding your rights as a research subject, contact the UM Institutional Review Board (IRB) at (406) 243-6672.

Please print or save a copy of this page for your records.

* By clicking the "Enter Survey" button below, I acknowledge that I have read the above information and agree to participate in this research project.

_____ Enter survey

The University of Montana IRB	
Expiration Date	_____
Date Approved	_____
Chair/Admin	_____