January 2019

Competing By Tweeting: A Content Analysis Of University Presidents' Tweets

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COMPETING BY TWEETING:
A CONTENT ANALYSIS OF UNIVERSITY PRESIDENTS' TWEETS

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A Dissertation Proposal
Submitted to the Graduate Faculty
Department of Educational Leadership

of the

University of North Dakota

in partial fulfillment of the requirements
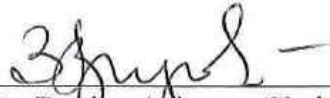

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota

August
2019

This dissertation, submitted by Susan Balcom Walton in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, had been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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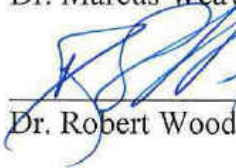Dr. Zarrina Azizova, Chair

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This dissertation is being submitted by the appointed advisory committee as having met all of the requirements of the School of Graduate Studies at the University of North Dakota and is hereby approved.

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PERMISSION

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Department   Educational Leadership

Degree   Doctor of Philosophy

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Susan Balcom Walton
May 15, 2019

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ACKNOWLEDGEMENTS

I wish to express my greatest appreciation and respect for my dissertation committee members, Dr. Zarrina Azizova, Dr. Deborah Worley, Dr. Marcus Weaver-Hightower, and Dr. Robert "Bo" Wood. They displayed high expectations and rigor when the occasion demanded, while at the same time demonstrating great creativity, positivity, and support of both the mass communication and education components of my doctoral education. Without their expertise and encouragement, I could not have accomplished this goal. My committee chair, Dr. Azizova, in particular was a positive force of steady forward motion who continually inspired me with the confidence that this goal was achievable.

I also extend my thanks to Mr. Scott Andersen, who lent his considerable expertise in using Excel spreadsheet data to create reports and data cuts. Thanks, too, to Ashleigh Kathryn White, who served in the important role of intercoder in the data collection phase of the study. Her patience, persistence, and dedication to detail contributed greatly to the success of the research design. I would also like to thank Rebekah Kunz, who assisted in finding some of the background information used in the case studies. In addition, I'd like to thank Dr. Tina Bobe McCorkindale. Her scholarship, public relations knowledge and sound counsel helped me to design a methodology and deliver a research product that complemented and strengthened my own academic and professional roots in public relations. And finally, but no less importantly, I'd like to thank Carol Booton and Mark Walton for their superb copy editing. Their thorough knowledge and application of APA style contributed greatly to the quality of the document.

To my mother, Imogene Kelly Balcom,

who taught me that a person is never too old

to achieve their educational dreams.

And to Mark,

who in this endeavor–as in all others–

has been my constant support and partner.

ABSTRACT

Some university presidents have engaged with stakeholders by using Twitter content to interact with them and strengthen institutional image. However, little research has been published concerning how university presidents use social media to connect with audiences in areas that directly impact institutional image, specifically, college rankings such as those provided by *U.S. News & World Report*.

This study addressed two questions: What is the content of the Twitter posts of top public university presidents who use Twitter, and how does that content relate to criteria that reinforce institutional image, such as the *U.S. News & World Report* rankings?

These questions were contextualized as case studies of three high ranking institutions in the 2018 *U.S. News & World Report* top public university rankings whose presidents personally used Twitter. The content of these presidents' tweets was analyzed, building on a theoretical framework of four theories of communication: reader-response theory, agenda-setting theory, contagion theory, and homophily. The researcher examined whether these presidents employed common themes and messages that aligned with the 2018 *U.S. News & World Report* selection criteria.

The study revealed that the Twitter content of these presidents was multidimensional. While it related to at least two 2018 *U.S. News & World Report* selection criteria, it also related to many other priorities, needs, and daily developments. Further, audiences for these tweets engaged most with the same content categories the presidents tweeted most about

(indicating shared interest). Finally, the study suggested an opportunity for presidents to use

Twitter to connect more closely with alumni and donors.

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CHAPTER I

PURPOSE OF STUDY

Background

The landscape of higher education is changing, motivating college chancellors and presidents (hereafter, "presidents") to seek new and innovative ways to connect with and capture the interest of stakeholders, such as potential students, donors, and parents. One way presidents may seek to establish this connection is by finding ways to show stakeholders they recognize the measures of university quality, such as published college ranking systems, that influence these stakeholders.

The changing landscape that is evoking this reaction from presidents has some distinct features. The first is shifting enrollment patterns. While more students than ever are enrolled in colleges and universities, with overall enrollment in degree-granting postsecondary institutions increasing 28% between 2000 and 2016 (McFarland et al., 2018, p. 158), these enrollment numbers peaked in 2010; between 2010 and 2016, enrollment decreased by 7%, but has been projected to grow by 3% between 2016 and 2027 (McFarland et al., 2018, p. 158). The State Higher Education Executive Officers Association (SHEEO) report confirmed that enrollment has declined each year since 2011 (Laderman, 2018, p. 19).

This changing landscape has proven increasingly challenging for college presidents, particularly those at public institutions. During the post-peak period, enrollments at public universities have decreased by 4 percent–from 13.7-13.1 million (McFarland et al., 2018,

p. 161). This trend has some alarming revenue implications. In 2017, net tuition revenue accounted for 46.4% of all education revenues (Laderman, 2018, p. 8). In fact, for the first time in history, a higher number of states have relied more heavily on tuition for revenue than on educational appropriations from their state legislatures (Laderman, 2018, p. 8). Thus, the decline in enrollment has had real–and negative–consequences for institutions of higher education, particularly public ones, creating financial pressure on top administrators.

A second challenge for presidents, possibly related to current enrollment challenges, is that the average tenure of a president has been declining. A 2006 survey of college and university presidents showed an average tenure of 8.5 years for those surveyed (American Council on Education [ACE], 2007, p. 49). In 2011, however, the average had decreased to seven years (ACE, 2012, p. 40). In fact, a study of presidential transitions occurring between 1988 and 2013 at 256 private and public institutions found that after 2007, the number of presidents who involuntarily left their positions increased at a faster rate than the rate of those who left voluntarily (Harris & Ellis, 2018, p. 302). Indeed, Tekniepe (2013) noted, "increases in political conflict, internal pressures, external stakeholder demands, and fiscal stress have statistically significant effects on college president turnover" (p. 143).

In response to the fast-paced, high-pressure environment and declining enrollments, it is possible presidents may be prompted to increase their connection with stakeholders. For example, a 2017 study indicated that 65% of all college presidents surveyed believed that one such form of stakeholder connection, fundraising and donor relations, "ranks among the three most important responsibilities in their current role" (Selingo, Chheng, & Clark, 2017, p. 11).

A 2013 report by the American Association of Colleges and Universities also spoke to the importance of stakeholder collaboration for presidents, noting

Only through collaborative leadership can we hope to (1) develop greater understanding of our enterprise among the public, policy makers, students, parents, and members of the media in order to garner the financial and regulatory support we need to maintain healthy institutions (Humphreys, 2013).

A nationwide study of community college presidents published jointly in 2013 by The Aspen Institute and Achieving the Dream (nonprofit educational organizations), also described collaboration as a key quality, noting that

> Presidents effective at leading positive change have strong listening and communications skills and demonstrate an authentic appreciation for dialogue. They collaborate and build strong relationships across campus, paying significant attention to faculty and student support staff, understanding that they have the most contact with students. (p. 7)

As noted earlier, presidents may seek to establish this connection with stakeholders through demonstrating their understanding of the measures of university reputation such as published college ranking systems. These ranking systems include data about various institutional features and are published by outlets such as *U.S. News & World Report*, *Forbes*, Unigo, College Prowler [now Niche.com], *Princeton Review*, *Newsweek* and *Washington Monthly* (Wiener-Bronner, 2010).

It is important to establish what is meant by institutional "reputation" in the context of this study, as universities are also characterized by other terms such as performance, quality, and prestige. The term *quality* often relates to specific assessment of learning:

> Virtually everyone who has thought carefully about the question of assessing quality in higher education agrees that "value added" is the only valid approach. By value added we mean what is improved about students' capabilities or knowledge as a consequence of their education at a particular college or university. (Bennett, 2001, p. 40

Determining the potential improvement of student capabilities at a given institution is outside the scope of this study, and so quality assessment as defined in Bennett (2005) is not a part of the study's analysis.

The idea of *institutional performance* is often tied primarily to research and can include more specific and narrow measures. The Center for Measuring University Performance, for example, includes nine measures to rank research universities in its annual report "The Top American Research Universities," including the number of National Academy members and postdoctoral appointees an institution has (Lombardi, Capaldi Phillips, Abbey, & Craig, 2017, p. 17).

The study at hand, however, examines the engagement of university presidents from the broader standpoint of university reputation, or what Thelin (2011) refers to as *prestige*–fueling "a competitive rush by institutions to meet the operational criteria that would qualify them to be placed in another allegedly more prestigious category" (p. 320). This study defines and considers *reputation* as an institution's aspirational desire to be counted among prestigious peers, and considers college rankings as one means of attaining and exemplifying such prestige or reputation.

Not all presidents view college rankings systems as reliable measures of institutional performance. For example, in ACE's 2017 demographic profile of American university and college presidents, some of those surveyed viewed the *U.S. News & World Report's* rankings as one of the "least legitimate" measures of institutional performance (Gagliardi, Espinosa, Turk, & Taylor, 2017, p. 53). In fact, many presidents have publicly criticized the rankings systems. In 2007, Christopher B. Nelson, then leading St. John's College (Annapolis, Maryland), said there was "real evil" in *U.S. News & World Report's* ranking system (as quoted in Hoover & Farrell, 2007, p. A30). In fact, Nelson was part of a group of presidents who announced that their institutions would not participate any longer (p. A30). In addition, Frances Lucas (as quoted in Hoover & Farrell, 2007), president of Millsaps College (Jackson,

Mississippi), noted the role of external stakeholders in elevating the importance of such rankings and in pressuring university leaders to do likewise: "the worst tragedy is that leaders like me have been persuaded, oftentimes by external constituencies, predominantly trustees, to manage toward winning in the rankings" (p. A30).

Some public university presidents share these concerns. When the University of Arkansas dropped 15 places in the rankings in 2018, Chancellor Joe Steinmetz was cited in an interview with the school newspaper as "attributing the slide in part to changes in the rankings methodology to evaluate the retention of students receiving Pell grants" (Steinmetz, cited in Adame, 2018, para. 2). Louisiana State University president F. King Alexander was more blunt: in 2017 he declared, "I think U.S. News has done more damage to the higher education marketplace than any single enterprise that's out there" (Alexander, cited in Wermund, 2017, para. 15)

Nor are all presidents willing to accept full blame if the rankings do slide. When the University of Iowa slid seven spots in 2018, president Bruce Harreld responded by noting "Resources do matter, and without adequate resources from the state, we aren't able to make the needed investments in student outcomes that would lead to higher rankings" (Harreld, cited in News Staff, 2018, para. 3).

It is clear that many presidents recognize that these rankings are meaningful to stakeholders and therefore attach great importance to rankings. In 2000, Hobart and William Smith Colleges (Geneva, New York) reportedly fired a senior vice president after her failure to submit updated information for the *U.S. News and World Report* rankings resulted in a significant decline in the school's ranking (Graham & Thompson, 2001, p. 10). Richard Beeman (2002), former Dean of the College of Arts and Sciences at the University of

Pennsylvania (Philadelphia, Pennsylvania), wrote, "I breathed a sigh of relief when my university continued to appear among the [*U.S. News*] top 10 in the 'national universities' category" (para. 1).

Authors of a 2007 Law School Admission Council report reached a similar conclusion about university administrator behavior:

> This research indicates that a powerful mechanism for explaining the influence of rankings on legal education is that administrators perceive that the behavior of influential external audiences is affected by the USN ranking of their law schools. This goes a long way toward explaining why, despite the disdain that many administrators have for the rankings, they expend the energy and resources to improve the rank of their school. (Sauder & Espeland, 2007, p. 2)

Another more troubling body of evidence confirming the importance of these rankings is the actions of institutions whose leaders deliberately submitted false or distorted data to the rankings organization. Diver (2016) noted, "rankings create powerful incentives to manipulate data and distort institutional behavior for the sole or primary purpose of inflating one's score" (p. 136). One such example reportedly occurred at Tulane University (New Orleans, Louisiana), when a new business school dean alerted University officials to a possible misreporting of Master of Business Administration (MBA) program data (Anderson, 2013, para. 21). Tulane retained a law firm to investigate; according to reports, the investigators found that data concerning full-time MBA students had been inaccurately reported for five consecutive years, that average GMAT test scores had been "falsely increased" by 35 points, and that the number of completed applications had been inflated–all to give the appearance that the school was more selective than it actually was (Anderson, 2013, para. 18). Tulane laid the blame at the feet of a former employee; Provost Michael A. Bernstein stated, "this was not inadvertent. It was a goal-oriented manipulation" (Bernstein, cited in Anderson, 2013, para. 19).

In the researcher's opinion, the need for revenue has clearly played an important role in driving this level of institutional attentiveness to–and even fear of–college rankings. The growing reliance of universities on tuition as a revenue stream, as noted in the SHEEO report, has meant that steady and increasing enrollment is essential, particularly of students who have the financial means to pay. Monks and Ehrenberg (1999) found that a drop in *U.S. News & World Report* ranking motivated university leaders to accept lower-quality students, resulting in the need to court applicants by offering greater financial incentives–thus creating a drain on institutional resources (p. 8). As F. King Alexander, president of Louisiana State University (Baton Rouge, Louisiana), explained, the rankings scores emphasize "spending the most amount of money on the fewest amount of students–and generally, students you already know are going to succeed" (Alexander, cited in Wermund, 2017, para. 17). Carol Christ, chancellor of the consistently high-ranking University of California, Berkeley, called the rankings' ability to influence schools to accept wealthier students "mind-boggling" (Christ, cited in Wermund, 2017, para. 18). Generating more admissions enables colleges and universities to be more selective in those admissions–which can mean less outlay for financial aid.

As mounting financial and enrollment pressures persist, it is becoming increasingly important for presidents to connect with stakeholders on issues that are important to stakeholders and that influence stakeholder behavior. Many presidents have been managing this goal using social media. In fact, many have started using social media directly and personally (Twitter in particular)–not only as an official organ of their institutions, but also as a personal, first-person means of communication. This approach has added the personal touch of an individual–not an institution–to outreach so as to better connect with audiences.

Problem Statement

A key challenge facing presidents is to maintain enrollment and attract good students. To do this, institutions–and their presidents–must find ways to connect with stakeholders and build positive images, thereby encouraging students to explore their offerings and ultimately submit applications. Presidents have been taking a prominent role in engaging directly with stakeholders by using Twitter. However, little research has been conducted concerning how social media is used to connect with these audiences in areas that directly impact institutional image–specifically, college rankings such as those provided by *U.S. News & World Report*.

Research Questions

In this study, the researcher explored the extent to which using Twitter as a direct stakeholder engagement strategy is related to institutional image. Two specific questions were addressed in this study: (a) what is the content of the Twitter posts of top public college and university presidents who use Twitter? and (b) how does that content relate to criteria that reinforce institutional image, such as the 2018 *U.S. News & World Report* rankings? Case studies of Twitter usage of the presidents of three of the top three public institutions listed in the 2018 *U.S. News & World Report* Best Colleges rankings were developed to answer these questions.

Study Focus and Purpose

In this study, the researcher explored how presidents of successful public institutions (as defined by the 2018 *U.S. News & World Report* rankings of top public universities) used Twitter to build institutional image. The process employed by this study was a case study strategy, featuring a case study of each of the presidents (who frequently use Twitter) of three high ranking public institutions in the 2018 *U.S. News & World Report* evaluation, and

including an analysis focused on the content of their Twitter posts. A goal of this study was to discover whether presidents who had an active Twitter presence used that medium to connect with stakeholders, reinforcing the selection criteria included in the 2018 *U.S. News & World Report* rankings and thereby contributing to their status as top-ranked universities.

In these case studies, the researcher studied whether selected presidents used common ideas, messages, and subjects in the content of their tweets that aligned with *U.S. News & World Report's* 2018 selection criteria. *U.S. News & World Report* employed up to 15 selection criteria in its 2018 rankings, which represented general indicators that were used to rank an institution's performance (Morse & Brooks, 2017a, p. 67). This aspect of the case study strategy and approach was accomplished through the use of content analysis, discussed in greater detail later.

The selection criteria (referred to herein as "categories" when the researcher's content analysis is discussed) included: *Financial Resources ($$); Alumni Giving Rate (AGR); Faculty Resources (FR); Graduation & Retention Rates (GRR); Student Selectivity (SEL); and Undergraduate Academic Reputation (UAR*). For consistency and enhanced reader understanding, the research has formatted the 2018 *U.S. News & World Report* selection criteria for which Twitter content was evaluated in title case and italics throughout this study.

In this study, the *2018 U.S. News & World Report* selection criterion "Retention" was combined with the selection criterion "Graduation Rate Performance" due to their common subject matter. After an examination of the sample field of tweets, the researcher determined that given the similarity between the two criteria, confusion and lack of clarity would result from trying to analyze them separately, especially in light of a tweet's limited content (140

characters). The researcher renamed this criterion "Graduation & Retention Rates." Chapter III of this study provides a summary of the 2018 *U.S. News & World Report* rankings.

This study's findings could benefit college and university leaders, including provosts deans, and other senior administrators, by providing additional data and insights into presidents' use of Twitter. This research may help determine whether there is a relationship between personal Twitter use by presidents, institutional image, and the perceptions of their institutions as defined by the 2018 *U.S. News & World Report* rankings. Together, these analyses may provide higher education administrators with a better understanding of connections that may exist between the institution's reputation and its president's use of Twitter. This is important because some research has shown that a lack of confidence in using Twitter and other forms of social media, as well as concern about unintended consequences, are key factors in why many presidents avoid using social media.

Gardner (2015) reported examples of presidents' reluctance about using social media in an interview with the author of *#FollowtheLeader* (Zaiontz, 2015). Zaiontz conducted interviews for his book, with 22 college and university presidents about use of social media (para. 2-3); Gardner wrote "While the presidents Mr. Zaiontz interviewed for his research were already engaged with various platforms, they remained 'very, very concerned about saying the wrong thing on social media and having it spin wildly out of control'" (para. 9). Understanding how presidents of highly ranked public institutions have used social media could help presidents who do not currently use Twitter make better-informed decisions about whether personal use of Twitter could benefit their schools.

Study Importance

The study's purpose was to determine whether the tweets posted by the presidents of some of the high-ranking institutions employed common categories that aligned with the selection criteria used in 2018 by *U.S. News & World Report*.

The findings may help other leaders decide whether to use Twitter. The study featured case studies of the top three ranked public universities whose presidents personally use Twitter in accordance with criteria set forth in Chapter III. Findings from the case studies helped to illuminate categories in the Twitter posts that reflected or reinforced the 2018 *U.S. News & World Report* rankings. These findings provided insight about the effectiveness of Twitter for influencing stakeholder opinion and bolstering institutional *U.S. News & World Report* ratings and thereby enhancing institutional image and reputation.

Inquiry Framework

Increasing enrollment is a goal of many colleges and universities, and enhancing an institution's reputation and awareness with prospective students and their parents may be one means of accomplishing that goal. Although many other factors–such as location or tuition cost–may factor into students' decisions to apply (or their parents' encouragement to do so), enhancing the institutional image and favorable views of an institution may also be relevant.

At the beginning of this study, the researcher identified a sample of presidents whose institutions enjoy a favorable institutional image and who personally use Twitter to communicate. The researcher used content analysis methods–embedded within the strategic framework of case studies–to examine the behaviors of these leaders through detailed descriptions and explanations and applied a theoretical framework (see Chapter III) to collect insights and form opinions regarding Twitter use, including content and audience. The

researcher also analyzed Twitter content in the context of the categories employed in the 2018 *U.S. News & World Report* rankings. This research provides insights for other institutional leaders or college presidents who wish to use Twitter.

Theoretical Framework

Seeking to establish a relationship between university presidents' use of Twitter and institutional image presupposes that such tweets are actually read by those who act on these rankings or help to inform them–such as students, donors, parents, and leaders of other institutions. Therefore, the researcher included a consideration for and analysis of that process.

Reader-Response Theory

A critical approach known as reader-response theory, in contrast to other critical methods, focuses on the text, or content, of a reading passage; a reader-response critical approach focuses on "finding meaning in the act of reading itself and examining the ways individual readers or communities of readers experience texts" (Delahoyde, n.d., para.1).

Fish (1970), whose work was seminal in creating of this school of criticism, described the interplay between reader and content as mainly a reader experience: "it is an experience; it occurs; it does something; it makes us do something" (p. 131). The empowering nature of the reader-response approach was noted by Tucker (2000); he postulated that approaching content through a reader-response lens provides four primary benefits to the reader:

> [The reader-response] approach enables students to experience relevance in the reading task, involves them in an active, not passive, encounter with the literature, validates them as critical readers who are capable of determining meaning in texts, and provides them with the opportunity to express themselves freely. (p. 199)

Therefore, the researcher proceeded with that critical framework in mind, with the opinion that these presidents' tweets are experienced by readers in meaningful and unique ways, that these readers assign unique meanings to the passages (which may include an

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increased interest in or affinity with that institution), and that they can and do express their responses (which might include liking tweets, responding to tweets or retweeting). It should be noted that in this study the researcher primarily formed opinions about authorial intent and not readers' responses. Consequently, this study primarily involved the front end, or authorial, aspect of reader-response theory, not the back end, or audience response component.

Because of this limitation, this study is not ideally suited for a thorough invocation of reader-response theory, but it can provide some indications as to what the interplay between the content creators (the presidents studied) and their audiences might be. In short, it can clarify and simplify the idea that the audiences for these tweets are active agents. As Becker (1999) describes it, in the reader-response process, "The reader, aware and part of the context, infuses meaning into the textual squiggles and early in the reader-event selects, either consciously or unconsciously, a predominant stance" (p. 105).

Further, the researcher surmised that images and experiences evoked by passages, including tweets from university presidents, could drive alumni to engage more fully with tweets because such passages and images could evoke memories and positive feelings about their own experiences at the school. This development could also relate closely to agenda-setting theory, described below, which suggests that the Twitter content topics viewed as important by the presidents would be viewed as important by audiences as well.

To further elucidate how this transaction occurs and what the intended or hoped-for audience responses to presidents' Twitter posts may be, the theoretical framework drew from three other well-known communication theories: agenda-setting theory (Miller, 2007); contagion theory (Im, Park, & Storey, 2013); and the theory of homophily (Currarini, Matheson, & Vega-Redondo, 2016). These theories interact with each other and play an interrelated and integral role in the chain of communication. Since a "social act [is] any

activity that demands the services of more than a single party to complete" (Athens, 2012, p. 431), participation in social media such as Twitter is by definition a social act, and the three theories correspondingly encompass the social impact of such communication on readers.

Agenda-Setting Theory

Agenda-setting theorists hold that "media attention to an issue presumably causes a change in a mediating variable in the minds of citizens, which in turn produces a change in importance" (Miller, 2007, p. 690). In other words, the more media attention a particular topic or issue received, the more importance or significance people ascribed to it.

Within an agenda-setting framework, information shared by a president on Twitter (e.g., comments about campus activities, amenities, athletic successes, faculty quality, and program breadth) could influence readers (potential students, parents, and donors) to believe that those things are important as well–particularly if such tweets occur frequently. A shared view of the importance of a particular university feature could build the audience's affinity toward that university, and if this relates to a 2018 *U.S. News & World Report* category, it could build audience perceptions that the school is strong in that particular area.

Contagion Theory

Contagion theorists examine how beliefs, viewpoints, or emotions spread among groups or networks; contagion occurs when "individuals are influenced by others in the same network and develop similar thoughts, attitudes and behaviors" (Im et al., 2013, p. 3848). After a 20-year longitudinal study, Fowler and Christakis (2009) noted,

> While there are many determinants of happiness, whether an individual is happy also depends on whether others in the individual's social network are happy. . . . changes in individual happiness can ripple through social networks and generate large scale structure in the network, giving rise to clusters of happy and unhappy individuals. . . . In addition to their internal and psychological relevance, emotions have a specifically social role: when humans experience emotions . . . they tend to show them. (pp. 26-27)

Ferrara and Yang (2015) found "positive emotions are more prone to contagion, and that highly-susceptible users are significantly more inclined to adopt positive emotions" (p. 11).

Contagion theory has a bearing on audiences' encounters with presidents' Twitter postings because positive reactions to such tweets could be "spread" to friends and peers (via retweets, for example), thus amplifying the power of social media to enhance institutional image. Presidents' ability to touch readers one at a time through Twitter would likely not begin to approach the level of outreach that could be achieved if readers also shared positive opinions about particular institutions with one another, thus greatly expanding the network of influence, awareness, opinion, and institutional image. The researcher also gained additional relevant insights by evaluating the tweets for positivity.

Theory of Homophily

Proponents of the theory of homophily have hypothesized that people tended to build more frequent contacts with similar "agents" than with dissimilar ones (Currarini et al., 2016, p. 18). If that were the case, the kinds of Twitter conversations that resonated most strongly with a president's Twitter audiences would be those that reflected values and aspirations already attractive to the audiences. As Lewis, Gonzales, and Kaufman (2012) noted in their study on peer influence within social networks, "Our findings would support a view of contemporary online interaction as having less to do with influencing our neighbors and more to do with strengthening social ties among those whom we already resemble" (p. 71).

If homophily was indeed a factor in effective Twitter use by presidents, the researcher expected to find Twitter content that reflected priorities already important to readers (Lewis, Gonzalez, & Kaufman, 2012, p. 70). In addition, the researcher expected to see tweets from presidents that in the researcher's opinion intentionally emphasized specific characteristics and values as well as content that appealed to stakeholders with particular goals, preferences,

applications, likes, or dislikes–and possibly specific religious, ethnic and gender characteristics as well. Homophily, then, could apply to both the content of tweets and the tendency of readers to share such information, as well as their opinions about that information, with others who are similar.

Reader-response theory: Sender intends audience to receive and interpret content in meaningful ways

Presidents post Twitter content	Homophily Agenda-setting theory
Reader engagement: Like, comment on, share (retweet) posts	Contagion theory
Content influences and spreads positive institutional perceptions	Homophily Agenda-setting theory
Goal: Enhance institutional reputation	

Content Analysis

Figure 1.
The Framework of the Research Proposal.

Working from the top of this funnel diagram downward, the end goal–a goal of many public universities, including the type of institution examined in this study–is to enhance institutional image, as manifested by, for example, high placement in published college rankings. Tweeting information about the institution is one way presidents may seek to build interest and awareness. This occurs within the foundational critical framework of reader-response theory, which holds that audiences will read content and then process and interpret it in ways that are meaningful to them (Davis, 1992, p. 71).

The researcher suggested that positioning such content as important on Twitter might elevate its importance in the minds of readers. Further, the researcher suggested that the theory of homophily indicates that the most frequent readers will be those who have preferences, values, and educational goals congruent with that institution, based on the tenet that "contact among similar people occurs at a higher rate than among dissimilar people" (McPherson, Smith-Lovin, & Cook, p. 416). So, as Figure 1 indicates, the theory of homophily came into play early in the communication process (yellow band).

Also early in this process–again during the period in which presidents selected, created and shared content–agenda-setting theory came into play. Agenda-setting theory, as has been noted, posited that the more attention or prominence an issue was given, the more importance it assumed in the minds of audiences. The researcher surmised that the presidents would communicate frequently in their tweets about issues or topics important to them, with the intent or hope that these subjects would also be important to audiences.

Contagion theories "contend that contagion processes over time should lead to a convergence in (or homogenization of) attitudes or actions, and to some form of network knowledge equilibrium where similarities in attitudes are achieved through interaction" (Pressey, Peters, & Johnston, 2011, p. 4). The researcher also examined the volume of retweets as one means of determining whether this occurred. The researcher surmised that this suggests readers would pass their opinions on to peers within their network during the reader engagement period (green band). If so, this would amplify the effect of the social media postings. Hence, contagion theory is seen in Figure 1 as influencing this.

If indeed this sharing of content by audiences did influence and build positive perceptions around the institution (as illustrated in the salmon colored band), then homophily and agenda-setting theory would again influence this part of the process.

And finally, the question underlying this study was whether the content of presidents' posts connected conceptually in any way to the selection criteria of the 2018 *U.S. News & World Report* rankings. The text and arrow diagrams to the left of the funnel in Figure 1 indicate the important step of determining a potential connection through content analysis of the tweets. The results of the content analysis, and the implications for connecting this content to those selection criteria, will be discussed in Chapter V.

Study Boundaries

Definitions

For the purposes of this study, the following definitions were employed:

- **Social media use.** Referred primarily to presidents' use of Twitter, the form of social media analyzed in this study.

- **Self-authored or personal social media use.** Referred to Twitter posts that are: (a) written in the first person; and (b) published on the president's personal Twitter account as opposed to the institution's Twitter account.

Limitations

The researcher identified the following limitations:

- **Time.** Most social media use by presidents extends back only a few years. Twitter was launched in 2006; by 2009, usage had increased exponentially (Schroeder, 2009, para. 4). In addition, many presidents had not been in office more than a few years

(and consequently had only been tweeting as presidents, if they tweeted at all, for a few years); thus, it was clear that the period for the study must be relatively recent.

- **Rankings of universities studied.** In this study, the researcher studied public universities that were all highly ranked (top ten) in the 2018 *U.S. News & World Report* rankings. While examining public universities at various rankings levels (such as schools that appeared low, midway and high in the rankings) might have provided a broader look at the messaging and reputational aspirations of a greater variety of universities, the researcher believed that restricting the examination to three universities with similar academic reputations and rankings was important for three reasons: (a) given the emerging nature of the phenomenon, such as university presidents' tweeting and its content, it was important to understand it in some depth with little contextual variance at this point and without restricting it to a singular site; (b) the case studies of institutions with similar rankings were more likely to yield findings that could serve as best practices for other universities, and (c) had the researcher chosen schools with dissimilar rankings, this approach would likely have introduced many other variables that could distract from the focus of the study. By examining similar institutions, the researcher was able to better maintain the focus on the two essential research questions.

- **Number of universities studied.** The researcher examined three high ranking public universities included in the 2018 *U.S. News & World Report* evaluation whose presidents personally use Twitter, as defined by criteria presented in Chapter III.

- **Number of factors that influence student and parent perception/institutional reputation.** The researcher examined only college and university presidents' use of

Twitter as a factor potentially influencing 2018 *U.S. News & World Report* rankings and influencing reputation and perception. The researcher selected Twitter as the medium of analysis primarily because many presidents maintain an individual Twitter account instead of or in addition to an institutional account (including some presidents of public institutions that were high in the 2018 *U.S. News & Public Report* rankings).

In addition, tweets are in the public domain and are easily findable through public search means, whereas other social media (Facebook, Instagram, Snapchat, blogs) are available only to closed groups, and would therefore be more difficult to access and analyze, and may not be as straightforward in allowing their authors to disseminate to general broad audiences–a key theoretical aspect of this study. Other factors that may also influence students' enrollment decisions–cost, persuasive marketing campaigns, legacy of family member attendance at the institution–could not be considered within the scope of this study.

Delimitations

Two main delimitations affected this study:

- **The study covered only public four-year colleges and universities.** The researcher selected this type of institution because of professional familiarity; in addition, the commonalities among such schools helped reduce or eliminate some of the other potential variables that could affect applications, such as swings in tuition costs.

- **The study covered only Twitter.** The researcher did not explore other communication media, styles, and content, and also did not seek to discern how other kinds of communication may also influence stakeholders and college rankings.

Summary

This chapter has established that presidents may be looking for new and innovative ways to connect with stakeholders and that social media, specifically Twitter, provides a means of doing that. Further, the use of Twitter for this purpose is supported by a conceptual framework of reader-response theory, agenda-setting, contagion, and homophily theories, which suggested that presidents' tweets are experienced by readers in unique and meaningful ways, that these readers assign unique meanings to the passages, and that readers express their responses (which might include responding to tweets or retweets). With the research field (presidents of three high ranking public universities who personally use Twitter) identified, the study turned to an examination of the relevant literature regarding (a) the impact of social media as an institutional marketing tool, and (b) theoretical models that help to explain the impact of social media communication on its intended receivers. Chapter II provides a brief review of this literature.

CHAPTER II

LITERATURE REVIEW

Overview

In this literature review, the researcher examined contemporary research in two primary subject areas: (a) the impact of social media as an institutional marketing tool, and (b) theoretical models that help to explain the impact of social media communication on its intended receivers. Together, this review of the literature provided context for understanding the value of social media in disseminating content related to the 2018 *U.S. News & World Report* Best Colleges rankings, engaging stakeholders at public colleges and universities, and enhancing institutional image.

Selection and Review Process

First, the literature selected for this review focused broadly on the use of social media, particularly Twitter, in marketing. Since university marketers frequently employ social media such as Twitter in their marketing efforts, this broad-level examination provided insight into the value–and occasional pitfalls–of social media used for this purpose. The review then narrowed more specifically to contributions in the field of management and business (research on business leaders' social media use appeared earlier and more often in the literature than did research on university presidents' social media use). An overview of the general literature on social media use was followed by a more specific review of literature concerning the primary theories forming the framework of the study–agenda-setting theory, contagion theory, theory of homophily, and reader-response theory. Chapter II summarizes this review

in the narrative order of the study itself, moving from general background literature to business-leader research to college and university studies to the theoretical framework.

<p align="center">**Major Works and Substantive Findings**</p>

Social Media Use in Marketing and Stakeholder Engagement

Beginning in the early 1990s, with the advent of Internet search engines, the value of social media in business marketing began to emerge (Knowles, n.d.). In the present day, noted Liu, Burns, and Hau (2017), "social media marketing has grown to rival traditional promotion techniques and has become a viable component of integrated marketing communication" (p. 236). Current researchers studying the use of social media in marketing have established the clear role of social media in shaping stakeholder perceptions. For example, Spence, Sellnow-Richmond, Sellnow, and Lachlan (2016) determined in a study of college students who viewed only news reports about a controversial product reported lower levels of trust in the product than did those who viewed additional online information about the product (pp. 208-209).

In addition, a clear link has been established between the use of social media and increasing demand for products or services in various industries. Cheney, Gowin, and Wann's (2015) study of storeowners's use of social media for marketing activities such as promoting discounts, specials, and loyalty programs (p. 16). Buchanan, Kelly, and Yeatman (2017) found that the use of digital marketing for energy drinks positively influenced young adults' attitudes toward and intent to buy energy drinks (p. 1). Moreover Lobstein, Landon, Thornton, and Jernigan (2017) found that consumers of "harder" drinks were similarly influenced by social media marketing. This study also found that subjects exposed to digital marketing of alcohol exhibited increased drinking behavior (p. 21).

<p align="center">23</p>

However, companies' promotion of alcohol for strategic marketing purposes online has tended to promote corporate and social responsibility through the same media (Pantani et al., 2017, p. 74); therefore, marketing efforts may have some altruistic purposes as well. In addition, in evaluating the marketing outreach, the opinions of peers about the product may matter more than the actual product marketing itself. For example, Alhabash, McAlister, Quilliam, Richards, and Lou (2015) found that in deciding whether to consume alcohol, participants may have focused on and evaluated social media status updates for others more than they focused on display advertisements (p. 366). These findings indicated more factors may affect the process of persuasion than simply the presentation of product information.

Social media marketing techniques appear to affect other industries. For example, Huesch, Galstyan, Ong, and Doctor (2016) found that online advertising platforms "could play a role in targeted public health interventions" (p. 1273). In addition, in a study of the effectiveness of travel advertising, Stavrianea and Kavoura (2016) found that Facebook was the third-highest ranked source of advertisements to which respondents strongly agreed they paid attention, ranking far ahead of traditional media (p. 318).

Although the studies just described indicate positive consumer responses to product marketing, the research has also shown mixed perceptions among stakeholders about the efficacy of social media marketing efforts. For example, authors of the Edelman Trust Barometer survey reported that younger audiences (18-29 year-olds) have significantly more trust in social media than do those 65 and older (Edelman Insights, 2014, slide 19). However, Vorvoreanu (2009) found that college students who used social media were not more likely to trust or buy products from corporate entities simply because those entities had a social media presence (p. 78).

In the fields of science and health, one of the primary benefits of social media involvement has been the engagement of stakeholders. Collins, Shiffman, and Rock (2016) found in a study of 587 cross-disciplinary academic scientists that although this group had not yet widely adopted social media, many scientists used these platforms to exchange scientific information and found it highly advantageous (p. 1). Cameron (2015) found in a study of organ donors that when conversations about becoming an organ donor moved to social networks, participants' willingness to register to donate increased (p. 44). Further, Wang, Madnick, Li, Alstott, and Velu (2015) noted a similar outcome in their study of constructing a registration scenario for a virtual competition. In analyzing the mobilization process, which enlisted people to complete tasks, they found that participants invited by Facebook to join a virtual competition were 1.84 times more likely to join than were respondents who were invited by e-mail (Wang et al., 2015, pp. 1-2).

In addition, social media marketing may facilitate better support and consensus for ideas. Karamat and Farooq (2016) concluded in a study of students at two Pakistani universities that online networking was the most effective way for this group to obtain information (p. 395). Lorenzo-Romero, Alarcón-Del-Amo, and Constantindes (2012) found in an analysis of female Dutch social network users that only a minority of these users conducted marketing-related activities online; the majority used social network sites for information gathering or communication channels (p. 412). In a study regarding community sourcing of a grant proposal for a new course, Schirr (2013) found that stakeholders' increased involvement in reviewing the proposal through online networking resulted in increased involvement from community business members (as well as faculty and students) and facilitated a faster launch of the course (p. 231).

In a study of the pharmacy profession, Sabato, Barone, and McKinney (2017) found social media posts to the group had both a higher total reach and a higher reach per post after specific interventions were implemented to encourage maximum engagement from study subjects. The authors noted, "the results of this study imply that pharmacy professional organizations may be able to leverage the use of social media to engage members in real-time and with widespread reach" (pp. e73-e74).

In sports marketing sponsorship promotion, the assessment of the value of social media has been less clear. Delia and Armstrong (2015) found in a study of the French Open that few social media exchanges by followers of the event mentioned specific sponsors, calling into question the effectiveness of social media as a means of promoting sports sponsorship (pp. 191-192). And, the value of social media marketing efforts by business-to-business appears less robust compared to business-to-consumer (B2C) entities as noted by Plangger (2012) who found that the value of social media investment was highest for B2C industries (p. 145). Additionally, Flanigan and Obermier (2016) noted that as of 2016 many of the most successful B2B companies had little or no social media presence (p. 19).

Previous researchers on social media marketing have explored the most effective social media channels for engaging audiences for marketing purposes and assessed the benefits and features users seek from their social media experiences. For example, Freeman et al. (2014) found that the most common Facebook marketing methods consisted of competitions. The competitions were based on user-generated content, interactive games, and apps (p. 56). Popular social media campaigns, such as the Old Spice campaign, have been studied to develop a formula for viral marketing (the wide and fast dissemination of social media information) called the "SPIN" framework (Mills, 2012, p. 166). The SPIN framework

indicates that the most effective viral campaigns possess the attributes of spreadability (likeability and shareability), propagativity (time frame and content), integration (between online and offline use), and nexus (reinforcement of the campaign through viral content; Mills, 2012, pp. 165-168).

Implications for this study. Social media use has been found to increase demand for products and services (Buchanan et al., 2017, p. 1) and the one of the most effective factors in the success of social media appears to be the positivity of the content (Ferrara & Yang, 2015, p. 11). Therefore, the sharing of social media content around important aspects of university reputation (as indicated by *U.S. News & World Report* rankings) by presidents may influence stakeholder opinions of the university. In addition, the findings from previous literature have shown that the presidents' choice of content in these posts may be significant–a hypothesis that will be addressed in the content analysis section of Chapter III of this study.

Social and Emotional Aspects of Social Media Marketing

The tone and tenor of the social media exchange used in online marketing influences consumer perceptions. Ferrara and Yang (2015), in a study of Twitter use, found that positive emotions were more subject to "contagion" (spreadability by other users) than were negative ones. In particular, users that were highly susceptible were more likely to adopt positive emotions into their own social media use than they were to adopt negative emotions (p. 11). Previously, Botha and Reyneke (2013) noted evidence that these positive emotional reactions led to increased sharing of social media (p. 168). Chin, Lu, and Wu (2015) extended this analysis and found that user motivations–including hedonic, utilitarian, compliance, conformity, and affiliation–positively affected attitudes toward "like-clicking" behaviors (p. 579). Interestingly, Murthy, Bowman, Gross, and McGarry (2015) found that negative

language was used more frequently when tweets were sent from mobile devices than when they were sent from computers (pp. 830, 834).

The social and emotional nature of social media may have some downsides for users. Sriwilai and Charoensukmongkol (2016) found that users with high social media addiction levels also demonstrated lower mindfulness levels, compared to users with lower addiction to social media, and that social media "addicts" may have dealt with stress by choosing emotional coping strategies instead of problem-focused coping strategies (pp. 432-433). Dhar and Jha (2014) observed that extroverts often tended to be more involved with social media activities than were introverts (p. 797). Stronge et al. (2015) similarly found that Facebook profiles of introverts had lower feelings of belongingness than did extroverts; the authors suggested that online social connections could do such individuals more harm than good in such cases (p. 4).

In a study that tracked posts about autism spectrum disorders, Bail (2016) surmised that organizations might be more successful in their social media outreach if they invited emotional dialogue rather than merely pushing out information. In addition, Bail found that angry language may be a factor in the viral spread of misinformation (such as, in Bail's study, the incorrect misperception that autism spectrum disorders are caused by vaccines; p. 1173). Similarly, Greer and Ferguson (2011) found in a study of the Twitter accounts of nearly 500 U.S. television stations that adding interactivity to Twitter use added more followers, though it also limited the average output of Twitter accounts (p. 209). Junco, Heiberger, and Loken (2011) noted a similar outcome for Twitter users, finding that students who used Twitter for various types of academic discussions had higher engagement levels and higher grade-point averages than did the control group (p. 199). However, in an

examination of higher education institutions' use of Twitter, Kimmons, Veletsianos, and Woodward (2017) observed, "although many institutions are using Twitter, the vast majority are not capitalizing on the platform's dialogic affordances. In other words, they do not appear to use Twitter as the efficient two-way communication platform it is designed to be" (p. 98).

Content appears to matter in the effectiveness of tweets. Veale et al. (2015) found that the individuals who most successfully engaged large numbers of users posed questions as part of their online posts in a study of online sexual health promotion (p. 1). In addition, the emotional appeal of such content appears to affect how others perceive that content. In a study of health organizations' use of Twitter, Oh and Syn (2015) found through a content analysis of 1,500 tweets that content played a prominent role in providing informational and emotional support (as well as in seeking instrumental support; p. 669). Further, the "retweet" feature of Twitter may provide an added dimension to content by enabling rapid and broad information sharing not found in all forms of social media. Kenett, Morstatter, Stanley, and Liu (2014) observed that the retweet feature was a factor in the rapid organization of protests in situations such as the Arab Spring and Occupy Wall Street movements (p. 1).

Implications for this study. Positive emotion appears to increase the receptivity of stakeholders to social media as well as to facilitate higher levels of engagement and sharing of posts (Ferrara & Yang, 2015, p. 11). Assuming these phenomena hold true, a major implication of the literature for this study is that the content of the presidents' social media posts could reflect similar positivity of emotion and content. The researcher expected to observe this positivity of emotion and content; results are reported in the content analysis section of Chapter III. In addition, interactivity was indicated in the literature as a catalyst for

greater stakeholder engagement with social media; consequently, the interactivity level of posts was also considered as a factor or parameter in the content analysis review.

Sources of Social Media Content

User responses to social media marketing appear to be influenced by the *source* of the information provided in addition to being influenced by content, and not just by its *medium* (social media). For example, Koumpouros, Toulias, and Koumpouros (2015) found that for healthcare users, the vast majority (78.5%) sought healthcare information on the Internet, with 62% seeking advice about specific conditions. The majority of users indicated they planned to use that information in making healthcare decisions, provided the information was "valid and credible" (for example, if it came from a respected doctor or hospital; Koumpouros et al., 2015, pp. 496-497). In an analysis of Facebook posts, Kite, Foley, Grunseit, and Freeman found video posts attracted the highest user engagement, and posts focused on emotional appeal attracted higher levels of engagement than did those appealing to either authority or sponsorship (p. 1). These findings validate Delia and Armstrong's (2015) observations concerning the French Open social media marketing effort and its inability to build online conversations with stakeholders about sponsors (pp. 191-192). At the same time, however, Nam-Hyun (2016) found that "celebrity endorsement in social media contexts (e.g., Facebook, Twitter) is effective" (p. 1830).

Social media endorsement power is not limited to celebrities. In fact, the social media experience and credibility of the provider of the information, not just the provider's celebrity status or professional expertise, seems to affect that person's "authority factor" for social media users; Fu and Shen (2014) found Twitter users were more likely to reply to tweets posted by well-established users, and tweets posted by novices got fewer replies (p. 1613).

Much of the general literature on the use of social media in marketing has focused on the nature of the social media interaction itself, rather than on the marketing of products and services or on the outcome of that marketing. Palmer (2013) concluded, "value for an organization that is derived from a social media presence comes not from the social media systems themselves, but how they are used to interact with stakeholders" (p. 343). In addition, a number of personal characteristics seem to determine which stakeholders do–and do not–use the medium and the degree to which they are susceptible to social media influence or engagement. Sojung and Nam-Hyun (2016), for example, found that individuals with a lower existing involvement in social causes were more motivated by the social recognition of a cause (including its presence in social media) than were individuals who already had high involvement in that cause (p. 1893). In other words, the most fertile ground for engagement proved to be those who had not yet reached a strong level of awareness.

The literature has shown that individuals who choose to use social media for networking purposes exhibit a high level of individual choice about how they engage and what they share. In a study of college undergraduates, Kapidzic and Martins (2015) found that frequent users of Facebook tended to model their online visual presentation on sexual attractiveness stereotypes derived from mainstream media (p. 278). In addition, in a study of social networks, De Meo, Ferrara, Fiumara, and Provetti (2014) found that "individuals in online social networks self-organize to create well-connected communities" (p. 83).

Investment in the use of social media for marketing appears, at least in some cases, to have been rewarded. Plangger (2012) reported a positive correlation between marketing investments in social media programs and the perceived value of the firms that conducted those programs. Correlation also grew along with social media network size (pp. 151-152).

Implications for this study. Social media endorsement power can be based on a number of factors, including the poster's "celebrity" (Nam-Hyun, 2016, p. 1830), social media expertise (Fu & Shen, 2014, p. 1613), and credibility (Koumpouros et al., 2015, pp. 496-497). Therefore, the researcher's content analysis considered the president's level of social media (through frequency of tweeting and through inclusion of links, photos, and videos) and the amount of content related to significant campus- and school-related events.

Social Media Use by Business Leaders

Organizations use social media extensively to provide information to stakeholders and to engage, influence, and market products. Often, the task of developing, populating, and managing this activity falls to advertising agencies and marketing or information technology departments. Organizational *leaders'* role in engaging with stakeholders via social media has been reported in the literature, including a survey of over 1,500 leaders from diverse industries in which 78% of respondents believed that achieving digital transformation (including the use of social media) would become critical to their organizational goals within the next two years (Fitzgerald, Kruschwitz, Bonnet, & Welch, 2013, p. 4). In addition, a social media leadership survey of CEOs showed that over 80% of survey participants believed social media to be an important channel for CEO communication and engagement with stakeholders such as customers and investors and was an effective tool to increase brand loyalty (BRANDfog, 2013, p. 6).

Such positives notwithstanding, confidence that social media contributes to the bottom line has appeared to vary by industry. DiStaso, McCorkindale, and Wright (2011) found that executives of communications and public relations firms had mixed beliefs about social media's influence on their firms' bottom lines (p. 326). Hwang (2012) found that Twitter use

by CEOs positively influenced audiences' perceptions of those CEOs as transformational leaders; in turn this positively influenced their attitudes toward the CEOs's firms (p. 159).

Notwithstanding the perceived value of using social media, CEOs and managers have been slow to adopt social media as a tool. Porter, Anderson, and Nhotsavang (2015) found:

> Even though practitioners embrace new media and feel perceived benefits from its implementation in raising their own power and credibility, senior managers remain generally slow to accept engagement and legitimization of social media. . . . A handful of socially active CEOs of Fortune 500 and Inc. 500 companies already demonstrated some possibilities of engaging on Twitter in a meaningful way, even if the conversation so far has been predominantly one-sided. However, the number of engaged CEOs remains a minority. (pp. 281-282)

CEOs have cautioned social networking use could cause problems due to regulations like the Sarbanes-Oxley Act (Barclay, as cited in CEOs Cautious About Social Networking, 2010, p. 10). The Sarbanes-Oxley Act was signed into law by U.S. President George W. Bush in 2002 "in response to corporate scandals" (Simon, n.d., para. 1). Such hesitancy may stem from a fear of making high-profile mistakes that create personal or institutional embarrassment. In fact such mistakes have occurred, such as the 2013 blunder of AngelHack CEO Greg Gopman, who reportedly posted the following controversial tweet:

> Just got back to SF. I've traveled around the world and I gotta [sic] say there is nothing more grotesque than walking down market st [sic] in San Francisco. Why the heart of our city has to be overrun by crazy, homeless, drug dealers, dropouts, and trash I have no clue. Each time I pass it my love affair with SF dies a little. (O'Connor, 2013, para. 3)

The Twitter post received widespread public criticism in publications such as *Slate Magazine* (Oremus, 2013). In fact, criticism about the post has continued to affect Gopman– this tweet was reportedly a factor in his firing from Twitter a few years later, just two days after being hired (Rodriguez, 2016, para. 3).

Implications for this study. The literature has reported that a majority of business leaders representing a diverse group of industries believe that using social media for engagement is either important at the present time, or will be important in the future, to achieving organizational goals (Fitzgerald et al., 2013, p. 4). The findings from the current study add to the body of literature by showing whether, in the researcher's opinion, college and university presidents who are successful at certain types of stakeholder engagement have also developed an effective approach for using social media as an element of their stakeholder engagement activities.

Social Media Use by Colleges and Universities

Whatever the risks posed by social media engagement, many presidents have not been deterred from adopting the tactic. In fact, Barnes and Lescault (2013) found more college and university top officials were on Facebook and Twitter (over 50%) than were CEOs. In addition, 40% of *Inc. Magazine* 500 CEOs were on Facebook, and 8% of *Fortune Magazine* 500 CEOs used Facebook (p. 3). Twenty-nine percent of *Inc. Magazine* 500 CEOs and 4% of Fortune *Magazine* 500 CEOs were on Twitter (Barnes & Lescault, 2013, p. 3).

Nevertheless, college presidents have exhibited the same concern about making social media gaffes as have CEOs. As noted in Chapter I, Gardner (2015) reported that even while engaged in social media, presidents were "very, very concerned about saying the wrong thing on social media and having it spin wildly out of control" (para. 9). Indeed, presidents are not immune to such missteps, and contemporary publications and news media outlets have covered a number of such gaffes. For example, in 2015, East Stroudsberg University (East Stroudsberg, Pennsylvania) president Marcia Welsh reportedly tweeted a photo of herself posing with a shirtless group of self-styled male "exotic dancers" known as the "Hawthorne

Hotties" (Mahoney, 2014; Murphy, 2014). The tweet received widespread criticism from both activist media (Mahoney, 2014) and faculty (Murphy, 2014). Similarly, former University of Cincinnati (Cincinnati, Ohio) president Santa Ono, a prolific and admired social media user, was swiftly criticized for a tweet picturing himself with a predecessor who had come under condemnation for forcing a popular basketball coach to resign; and he reportedly removed the photo less than five minutes after posting it (Duque, 2016, para. 11).

Given the risks associated with the use of social media, why are so many college and university leaders jumping into the social media fray? One reason is the economic and financial pressures facing institutions and the resulting need to bolster recruitment, application numbers, and donations through any stakeholder engagement means available. Data from the Center on Budget Policy and Priorities indicates that spending on public institutions remains

> . . . well below historic levels, despite recent increases. Overall state funding for public two- and four-year colleges in the 2017 school year (that is, the school year ending in 2017) was nearly $9 billion below its 2008 level, after adjusting for inflation. (Mitchell, Leachman, & Masterson, 2017, p. 1)

Such budget cuts can have severe impact and create pressure to increase revenue from other sources. Through mathematical modeling, de Pillis and de Pillis (2001) found that budget cuts can potentially severely affect how well universities function, both in the short term and as the impact of such cuts is felt more fully over the long term (p. 872). Holley and Harris (2010) noted "state appropriations have continued a slow decline and now represent the lowest level of support since 1980 . . . and colleges and universities increasingly rely on student enrollment and tuition as a revenue source" (p. 17).

Stuart (2016) identified three main factors in these pressures on recruitment and enrollment efforts: (a) the continued effects of the 2008 economic downturn; (b) rising costs of college attendance; and (c) lawmakers' declining support of higher education, coupled

with their push for performance-based funding (p. 12). In addition, institutional leaders have been following a pattern set by the corporate world in turning to social media as a recruiting, enrollment, and stakeholder engagement tool, and 92% of U.S. companies used social media for recruitment in 2013 (Rawson, 2013, para. 4). The habits and preferences of college students and prospective college students validate this as an effective approach; the Pew Research Center reports that young adults ages 18-29 are the group most likely to use social media; 90% of them engaged in some form of social media (Perrin, 2015, p. 3).

Lu, Newman, and Miller (2014) found that 95% of the high school students they surveyed concerning social media use reported using Facebook, and 99% of college students did as well (p. 58). Ulusu (2010) found that among a group of prospective college students, the main uses of Facebook were "social networking," "writing on wall," "entertainment," "searching for friends," and "free time" (p. 2953). Rowe (2014) found that college students who use non-university student-run websites had a strong sense of social media autonomy and believed university leaders should not interfere with the content of comments made on such websites (pp. 249-250). Parrot and Tipton (2010) reported that 58% of surveyed students relied primarily on the Web to obtain college information, while only 3% indicated a reliance on print material (pp. 52-53). In addition, many students prefer to communicate with college admissions offices through online channels (Hayes, Ruschman, & Walker, 2009).

However, the extent to which social media networking sites actually guide students' college selection decisions is not well defined in the literature. Parrot and Tipton (2010) reported that only 18% of students indicated that, of the Web-based resources available, social networking websites were significantly important to them in obtaining information to make decisions about colleges. Nevertheless, when students moved from gathering

information to making final decisions, they tended to focus on "personal fit"; thus, social networking websites can provide valuable insights into the kinds of people who attend a particular institution (pp. 52-53). In short, an understanding of these usage patterns and preferences is essential to the successful use of social media. Waters, Burnett, Lamm, and Lucas (2009) concluded, "social networking sites can be an effective way to reach stakeholder groups *if* [emphasis added] organizations understand how their stakeholders use the sites" (p. 106). However, this can be a big "if." For example, Sandlin and Peña (2014) found prospective college students preferred "authentic" (i.e., student-written) blogs, even when topic of the blog discussed college-related activities (p. 333).

College admissions departments have responded to these trends and preferences by enhancing their social media efforts. Barnes and Mattson (2010) reported that by 2009, 95% of college admissions departments were using some sort of social media, and 91% of admissions department representatives believed using social media would be at least somewhat important in their future admissions plans (pp. 3-5).

Most of the research on this subject, including the works cited herein, has focused primarily on websites or social networking maintained and created by institutions themselves rather than by the institutions' presidents. Literature on presidents' own use of social media is sparse. One of the aims of this dissertation was to help fill this research gap.

Social Media Use by Donors

Private universities have been actively involved in donor development since the early 1900s; public institutions only began to approach philanthropy strategically in the 1980s (De Sawal & Maxwell, 2014, p. 46). More recently, the president's role as a fundraiser has been

clearly established. Trombley (2007) noted that role has evolved to be "a symbol, politician, fundraiser, financial officer, problem-solver, and human-resource manager" (p. 14).

Moreover, many presidents take their fundraising role seriously and engage in fundraising activities, including online. A 2015 survey of Council for Advancement and Support of Higher Education members indicated that 57% of respondents used social media to raise funds, compared to 47% in 2014 (Mack & Stoner, 2015, p. 3). However, 83% of respondents also said that actual online donations represented only 5% of the total funds raised (p. 3). These data indicate that money collection itself is not the primary outcome of donor outreach on social media. Davis (2012) noted that use of social media, along with social media scoring tools, can more precisely identify potential donors. Further,

> Organizations now can discover which constituents use social media and engage them more effectively, integrate joint e-mail and social-media campaigns more effectively, and identify influencers and have them help "friendraise." This allows organizations to identify their most "socially connected" constituents and create opportunities to position themselves in mutually beneficial relationships. (para. 3)

Key implication of the literature. Presidents play a key role in fundraising, including online activity, although social media's primary benefit appears to be in building relationships rather than in raising money.

About the 2018 *U.S. News & World* Report Rankings

A review of the literature would be incomplete without a discussion of the *U.S. News & World Report* rankings system, the rankings indicators, and the rationale for considering these rankings to be a measure of institutional quality. The 2018 *U.S. News & World Report* Best Colleges rankings system was based on two factors: (a) a formula using "quantitative and qualitative statistical measures that education experts have proposed as reliable indicators

of academic quality," and (b) *U.S. News's* own "researched view of what matters in education" (Morse & Brooks, 2017a, p. 67).

To construct its ranking system, *U.S. News & World Report* gathered "data from each college on up to 15 indicators of academic excellence . . . Each factor is assigned a weight that reflects our research about how much a measure matters" (Morse & Brooks, 2017a, p. 67). The weighted sum of each eligible school's standardized scores provided the school's initial ranking and

> The scores were rescaled so the top college or university in each category received a value of 100 and the other schools' weighted scores were calculated as a proportion of the top score. Final scores were rounded to the nearest whole number, and ranked in descending order. Tied schools appear in alphabetical order. (Morse & Brooks, 2017a, p. 69)

In 2018, *U.S. News & World Report* ranked schools from several types of institutions, including national universities, liberal arts colleges, historically black colleges and universities, best value schools, and top public schools (the research field for this study; UT-Knoxville, 2017, p. 1). To determine categorization across the institutionally diverse system, *U.S. News & World Report* followed the Basic Classification framework (Carnegie Classification of Institutions of Higher Education, 2016, p. 2). The Carnegie framework, the basis of the "Best Colleges" ranking system since its origin in 1983, is broadly used in higher education research (Morse & Brooks, 2017a, pp. 66-67).

2018 *U.S. News & World Report* Rankings Indicators

The selection criteria used by *U.S. News & World Report* in 2018 numbered up to 15; for public universities, the selection criteria for public universities fell into seven general categories, discussed in the following paragraphs and listed in descending order of the criterion's 2018 weighted value.

Retention **(22.5%)**. This measure included both six-year graduation rates (80% of the score) and first-year retention rates, or the proportion of students who reenrolled in the institution the fall after their first year (20% of the score). This ranking's weight was based on the assumption that if more first-year students return to campus and ultimately graduate, the more likely it is that the institution is offering courses and services that enable students to succeed (Morse & Brooks, 2017a, p. 68). As explained on page 9 of Chapter I, the researcher combined *Retention* and a similar selection criterion, *Graduation Rate Performance* into a single category for this study, *Graduation & Retention Rates*.

Undergraduate Academic Reputation **(22.5%)**. This indicator, which is referred to as "Assessment by Peers and Counselors" in some 2018 *U.S. News & World Report* documents, was based on the opinions of education subject-matter experts who provided "assessments [that] allow presidents, provosts and deans of admissions and provosts to account for qualitative attributes of peer institutions, such as faculty dedication to teaching" (Morse & Brooks, 2017a, p. 68). Other indicators of academic quality, that are rated by the top academic experts by a scale ranging from "marginal" to "distinguished" include factors such as innovative approaches to teaching (Morse & Brooks, 2017a, p. 68).

Faculty Resources **(20%)**. This indicator was based on research that established a cause-and-effect relationship between student satisfaction with faculty content and graduation success. Forty percent of this measure was class size, with top scores given for institutions with undergraduate classes that averaged fewer than 20 students. Classes with 20 to 29 students scored second highest, 30 to 39 students third highest, and 40 to 49 students fourth highest. No credit was given to institutions whose average class size was 50 students or higher. Average faculty salary made up 15% of this score; in addition, the proportion of

professors who hold the highest degree in their fields accounted for 15% of the score. Student–faculty ratio and proportion of faculty who are full-time versus adjunct both accounted for 5% (Morse & Brooks, 2017a, p. 68).

Student Selectivity **(12.5%)**. This indicator was based on the assumption that the greater the students' abilities and ambitions, the richer the school's academic environment. Factors that comprised this indicator were SAT and ACT scores (65% of the *Student Selectivity* score), the proportion of first-year college students who had graduated in the top 10% of their high school class (25%), and the ratio of students admitted versus the number of applicants (10%; Morse & Brooks, 2017a, p. 69).

Financial Resources **(10%)**. The economic resources of institutions were assessed using an assumption that high per-student spending indicates a high number of student programs and services offered. "*U.S. News* measures financial resources by using the average spending per student on instruction, research, student services, and related educational expenditures in the 2015 and 2016 fiscal years. Spending on sports, dorms, and hospitals does not count" (Morse & Brooks, 2017a, p. 69).

Graduation Rate Performance (7.5%). This indicator measured graduation rates after controlling for spending and student characteristics (i.e., standardized test scores, high school class standing, and the proportion receiving Pell Grants). To determine the graduation rate, *U.S. News & World Report* measured the gap between the school's actual six-year graduation rate for the class entering six years ago, and the graduation rate *U.S. News & World Report* had predicted for that class. If the actual graduation rate for that class was higher than the rate predicted, then the institution was characterized as "enhancing achievement" Morse & Brooks, 2017a, p. 68). If a school's actual graduation rate was lower than the predicted rate,

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then it was characterized as "underperforming" (UT-Knoxville, 2017, p. 26). For this study, the researcher combined *Graduation Rate Performance* with *Retention* into a single category.

Alumni Giving Rate (5%). Alumni philanthropy was included as a factor in the rankings as recognition that former students' donations supporting their alma mater can be an "indirect measure of student satisfaction." This ranking was based on the average percentage of living, bachelor's degree-holding alumni who gave to their alma mater during the assessment period (Morse & Brooks, 2017a, p. 69).

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Rationale for Using the 2018 *U.S. News & World Report Rankings*

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The researcher used the 2018 *U.S. News & World Report* rankings system because of its general acceptance as a respected measurement. However, the rankings system is not perfect; the system has frequently received criticism from both the academic and professional sectors. Criticisms included accusations that the metrics frequently change, leading to confusion. Because these modifications sometimes changed the rankings, critics also claimed these changes were a marketing ploy intended to induce consumers to continue purchasing the reports to see what rankings have changed (Tierney, 2013, para. 5). Authors of a report for the Center for College Affordability and Productivity wrote

> Minute adjustments to what criteria are used, how these criteria are weighted, and how institutions are classified and chosen for ranking can result in wide swings or even complete disappearance of a school's rank, even though the characteristics of the institution remain unchanged. (Myers & Robe, 2009, p. 23)

In fact, mathematicians at the University of California, Berkeley, found that the rankings are highly variable (Huggins & Pachter, 2008, p. 14). By adjusting weighting of the different criteria and using *U.S. News's* data, the mathematicians concluded that a school's "specific placement by *USNWR* is essentially arbitrary" (p. 3).

Other evidence indicates that the rankings' popularity has caused some school leaders to go to extraordinary lengths to do well in the rankings, including cheating–for example, reportedly at Tulane University (mentioned in Chapter I), and at Claremont-McKenna College (Claremont, California), whose spokesperson reported that one of its senior administrators had submitted falsified SAT figures for years (Tierney, 2013, para. 5).

Diver (2005), a former law school dean and president of Reed College of Portland, Oregon at that time (Reed College did not participate in the 2018 *U.S. News & World Report* rankings) reported,

> Some law schools have found that they can raise their "student selectivity" (based in part on LSAT scores and GPAs for entering students) by admitting fewer full-time first-year students and more part-time and transfer students (two categories for which data do not have to be reported). At least one creative law school reportedly inflated its "expenditures per student" by using an imputed "fair market value," rather than the actual rate, to calculate the cost of computerized research services (provided by LexisNexis and Westlaw). The "fair market value" (which a law firm would have paid) differed from what the law school actually paid (at the providers' educational rate) by a factor of eighty! (Diver, 2005, p. 137)

However, despite the constant modifications to its rankings methodology and the potential for gaming the system, the *U.S. News & World Report* rankings remain, according to some experts, the most comprehensive of all college rankings. For example, experts at the Center for College Affordability and Productivity have called the rankings "the most popular rankings today" (Myers & Robe, 2009, p. 9). In fact, "no other regular large-circulation publication provides rankings covering the number of graduate and professional programs included by *U.S. News*" (Myers & Robe, 2009, p. 20). Other ranking instruments exist (i.e., *Forbes's* America's Best Colleges), but *Forbes* surveys only 600 schools (O'Shaughnessy, 2009). In contrast, *U.S. News & World Report* reviewed 311 national universities, 233 liberal

arts colleges, 659 regional universities, 324 regional colleges, and 74 historically black colleges in 2018 (a total of 1,601 institutions; Kelly, 2017, pp. 71, 81, 88, 102, 108).

In addition, the *U.S. News & World Report* rankings have achieved high significance for many university presidents–in short, they matter. Karaim (2015) stated,

> The rankings have been increasingly influential in shaping the reputation of colleges and universities and swaying students' choices for admission. Being rated a top-tier school can bring an institution more recognition, donations, and qualified applicants, while a low ranking can discourage good students from applying. (p. 1)

Further, institutional ranking can affect presidential job ratings. A reporter in *Politico* noted, "in some states, the rankings are built into accountability systems for university presidents" (Wermund, 2017, para. 25).

Another possible reason for the rankings' high credibility with university leaders is that improved rankings have been associated with increased admissions. Bowman and Bastedo (2009) found that admissions data for top-tier institutions from fall 1998 to fall 2005 showed

> ". . . the *U.S. News* rankings provided a substantial boost in the following year's admissions indicators for all institutions. In addition, the effect of moving up or down within the top tier has a strong impact on institutions ranked in the top 25, especially among national universities." (Bowman & Bastedo, 2009, p. 415)

Thus, because of the size of the field surveyed, the rankings' influence, and the rankings' importance among both consumers and university presidents, the researcher elected to use the 2018 *U.S. News & World Report* rankings as the basis for determining the top public universities to be studied.

Summary of Key Findings of the Literature Review

From the literature review, the researcher discerned several key points about social media that have been validated across a number of studies and which have implications for presidents using (or contemplating using) social media to engage stakeholders:

- A majority of college students obtain much or most of their information about colleges from the Internet (Parrot & Tipton, 2010, pp. 52-53).

- Leaders believe that use of social media by their institutions can play an important role in achieving institutional business goals (Fitzgerald et al., 2013, p. 4).

- Social media can build demand for products and services (Buchanan et al., 2017, p. 1; Lobstein et al., 2017, p. 21).

- One of the primary benefits of social media involvement has been simply the ability to engage stakeholders in conversations and build their support ("friendraising"; Davis, 2012, para. 3).

- The use of social media may build better support and consensus for ideas (Karamat & Farooq, 2016, p. 395; Lorenzo-Romero et al., 2012, p. 412).

- The use of social media for fundraising is on the rise (Mack & Stoner, 2015, p. 3).

- Emotion, particularly positive emotion, is a powerful persuasive device in social media content (Ferrara & Yang, 2015, p. 11; Botha & Reyneke, 2013, p. 168; Chin et al., 2015, p. 579).

- The source of social media content is important to users, as is the experience level of the poster (Fu & Shen, 2014, p. 1613).

These key points show that the use of social media such as Twitter by presidents can be beneficial in engaging potential students, current students, and donors; at the same time, the content, format and source of such social media interactions should be thoughtfully considered. In this study, the researcher delved into social media exchanges to determine whether, in the researcher's opinion, these key findings were consistent with an analysis of the presidents' social media use. In addition, the researcher determined whether, in the

researcher's opinion, the content of their social media focused on enhancing institutional image as reflected by the 2018 *U.S. News & World Report* categories.

The review of literature also revealed that, while disagreement and controversy exist around the efficacy of the *U.S. News & World Report* rankings for determining top universities, the size of the field surveyed by the rankings, the influence of the rankings, and their importance among both consumers and university presidents made them a viable and important indicator of institutional performance. Consequently, the researcher elected to use the 2018 *U.S. News & World Report* rankings as the basis for determining the top public universities to be studied.

Theoretical Models

The researcher employed several communication theories relevant to social media use and its impact on potential students in this study: reader-response theory, agenda-setting theory, contagion theory, and the theory of homophily.

Reader-Response Theory

This critical approach focuses on text and content of a reading passage, ascribing the primary meaning to the act of reading and focusing on how the reader experiences the text (Delahoyde, n.d., para. 1). This critical approach was developed in sharp contrast to the formalist school of criticism, whose proponents claimed the effect of a text on the reader should be completely disregarded in the examination of the text (Graff, 1974, pp. 74-75; Pavlovski, 2004, para. 3). Through the reader-response lens, reading can draw out deep responses and emotional connections as Brooks and Browne (2012) noted, concluding that this framework provides "powerfully personal evocations" from readers (p. 65). Duffus (2011) noted that readers impose their own subconscious values and desires onto the story

they are reading (p. 55). Although little literature exists on the relationship between reader-response theory and social media, the researcher assumed in this study that social media passages (postings by presidents) were intended to evoke powerful, emotional responses in stakeholders, thus potentially increasing stakeholder opinion of or affinity with that school.

Agenda-Setting Theory

This theory, introduced by McCombs and Shaw (1972), holds that "media attention to an issue presumably causes a change in a mediating variable in the minds of citizens, which in turn produces a change in importance" (Miller, 2007, p. 690). The literature on agenda-setting theory is voluminous; hence, this study referenced only those articles that relate to social media.

Several authors have questioned the application of agenda-setting theory to social media. Meraz (2009) noted that little research has been done on the agenda-setting effects of traditional mass media in spaces controlled by everyday citizens, such as the Internet (p. 284). Because the concept of agenda-setting was originally established to explain how news is created and received, McCombs (2005) questioned whether agenda-setting theory for Web-based communications worked in the same manner as for traditional media. McCombs wrote, "the agendas to which people are exposed on the Web are highly divergent rather than the highly redundant agendas found in the traditional news media" (p. 545). On the other hand, McCombs and Shaw (1993) noted:

> Agenda setting is considerably more than the classical assertion that the news tells us *what to think about*. The news also tells us *how to think about it*. Both the selection of objects for attention and the selection of frames for thinking about these objects are powerful agenda-setting roles. (p. 62, emphasis in original)

Thus, this theory is applicable to a study of social media. Indeed, tweets could provide a powerful "frame" for the Twitter user who selects what stakeholders "see" and

subsequently think and talk about. For example, frames could include athletic records, research laboratories, student wellness centers, and advisor characteristics. Further, agenda-setting theory fosters the possibility that reading social media descriptions of campus features could cause stakeholders to view these features and attributes as important, thus building those stakeholders' preference for institutions that possess these features and attributes.

Contagion Theory

This communications theory was first articulated when Le Bon (1895) described the powerful influence a crowd may have on individuals in his book *Psychologie des foules* (*The crowd: A study of popular mind*). Also referred to as social contagion theory, contagion theory suggests that an individual responds to the influence of others–that an individual "reaches evaluations about ambiguous objects such as communication media through a social process in which the evaluations of all the proximate others in the system are weighed" (Chang & Johnson, 2001, p. 351). As noted previously, Fowler and Christakis (2009) described the "contagious" nature of social media:

> While there are many determinants of happiness, whether an individual is happy also depends on whether others in the individual's social network are happy. . . . Indeed, changes in individual happiness can ripple through social networks and generate large scale structure in the network, giving rise to clusters of happy and unhappy individuals. . . . In addition to their internal and psychological relevance, emotions have a specifically social role: when humans experience emotions . . . they tend to show them. (pp. 26-27)

Thus, the emotions expressed by individuals online depend on the emotions expressed by others in the network (Coviello et al., 2014, p. 5). In addition, social media users who are susceptible to emotions through this media are more likely to be susceptible to positive emotions (Ferrara & Yang, 2015, p. 9). In sum, stakeholders such as potential donors, potential students, or parents who are pleased, intrigued, delighted, or impressed with a

particular university might infuse other members of their social networks with those feelings, thus amplifying and multiplying the efforts of the college and university leaders who planted the seeds of such good impressions with their social media posts.

Theory of Homophily

First observed by biologists in describing the tendency for a member of a species to mate with others of the same species (Fu, Nowak, Christakis, & Fowler 2012, p. 1), for human interaction, homophily is defined as "the individual tendency to interact preferentially with people perceived as similar" (Gargiulo & Gandica, 2017, p. 2).

At first glance, it may seem that the theory of homophily has an "either-or" relationship to contagion theory. According to contagion theory, people affinitize with friends or social network members because of their friends' or networks' influence (Chang & Johnson, 2001, p. 351). According to homophily, people affinitize with friends or social network members because they have basic similarities (Baccara & Yariv, 2013, p. 69). However, in the theoretical framework of this paper, contagion theory and homophily were not positioned as "either-or" theories. Rather, it allowed for both contagion and homophily to contribute to affinities within social networks. As Shalizi and Thomas (2011) noted, "this brings us to our fundamental point: to attempt to assign strengths to influence or contagion as opposed to homophily presupposes that the distinction is identifiable, and there have been grounds to doubt this for some time" (p. 216). The researcher assumed contagion theory and homophily are interrelated; both potentially explain why and how social media postings by presidents could appeal to groups of stakeholders within social networks.

Summary

The literature review showed that researchers have extensively documented the benefits and perils of social media, particularly from a theoretical basis and in the business sector. Further, at least some college and university leaders appear to have recognized the value of social media as a tool for engaging stakeholders and enhancing perceptions of their institutions. The literature established that value. A key implication of the literature was that this trend is expected to continue for both businesses and institutions of higher learning. What was less clear, however, was the impact, if any, of direct personal involvement in this process by presidents. The literature published thus far made little contribution in this area; hence, in this study, the researcher sought to bring additional data and clarity to that question.

CHAPTER III

RESEARCH METHODS AND PROCEDURES

Research Design

Chapter III presents the research methods and procedures used to construct and conduct this study and to explore how some presidents of successful institutions (as defined by the 2018 *U.S. News & World Report* rankings of top public universities) used Twitter. Specifically, the study consisted of case studies of the presidents (those who frequently used Twitter) of the top three public universities in the 2018 ranking, after applying the selection criteria designated by the researcher. The purpose of this study was to discover whether the presidents of three high ranking institutions, who personally used Twitter, employed common themes, messages, and subjects in the content of their tweets that aligned with the selection criteria used by *U.S. News & World Report* for its 2018 Best Colleges rankings. The 2018 *U.S. News & World Report* selection criteria included *Financial Resources, Alumni Giving Rate, Faculty Resources, Retention, Graduation Rate Performance, Student Selectivity,* and *Undergraduate Academic Reputation* (Morse & Brooks, 2017a, pp. 67-68).

This research design provided the data necessary to address the following two research questions: (a) how do presidents use Twitter to connect with audiences? and (b) how does the content of their Twitter posts relate to the criteria used in 2018 by *U.S. News & World Report* to rank institutions? These questions were contextualized in case studies of the top three institutions whose presidents used Twitter, according to the selection criteria developed by the researcher.

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The strategy of using case studies strengthened the research study. Kohlbacher (2006) established the case study as a viable methodology for research about organizations, noting

> Case studies are widely used in organizational studies and across the social sciences, and there is some suggestion that the case study method is increasingly being used and with a growing confidence in the case study as a rigorous research strategy in its own right. (p. 2)

Following this conception of a case study strategy, the researcher employed the case study structure and specific approach espoused by Stage and Hubbard (2012). Regarding university student affairs administrators and students in professional programs, Stage and Hubbard noted that utilizing case studies is beneficial in four ways: (a) it encourages out-of-the-box administrative thinking and action; (b) it enables efficient consideration of multiple perspectives at once; (c) it allow for a fuller consideration of the differences and uniqueness of each of the institutions examined; and (d) case studies can take into consideration and address individual institutional constraints–legal, institutional, and political (p. 5). In other words, case studies are context-bound, context-sensitive, and process-oriented.

In this study, the researcher conducted a content analysis–embedded within the strategic framework of case studies–on the three identified presidents and their Tweets, using the first six steps of Stage and Hubbard's (2012) case study analysis process, which are:

1. Define the decision issues in the case. This part of the case study provided the decision issues faced by the actors. This was an a priori definition with which the researcher approached and set the boundaries for each case.

2. Determine the facts essential for understanding and dealing with the issues. This included essential facts surrounding the presidents' social media use and how the decision issues, above, were discussed in other communications media by the president or other stakeholders.

3. Identify additional information that must be collected. For this step, the researcher considered whether–and where–further information needed to be gathered. This included campus conditions or issues, legal or policy precedents, and backgrounds of the presidents. It also included backgrounds of the organizations, histories, and timelines of social media. The background information provided about the universities and the presidents was limited to the information that the researcher determined had a direct bearing on the content of these presidents' tweets and its relationship, if any, to the 2018 *U.S. News & World Report* rankings. This step also involved separating assumptions from facts.

    Specifically, after examining the presidents tweets, so as to help establish proper context and settings for the case studies, the researcher also reviewed various materials from all three presidents and schools, including media stories and news reports about the institutions written during or close to the study period; background information from the institutions' web sites and publications; institutional news announcements and campus letters posted on the universities' web pages; the universities' alumni organization web sites and; the universities' athletics web sites.

4. Determine the principal decision makers and assess the roles they play. In addition to identifying the chief actors in these case studies (the presidents of the institutions), the researcher identified other stakeholders. This list included those to whom the presidents' Tweets were directed, such as alumni, students, and faculty, as well as critics, if the use of Twitter generated criticism or unfavorable results.

5. Identify any theories that might be relevant to the decision issues. In this part of the case studies, the researcher attempted to link theory to the cases. The case studies were

explored in the context of the four theories of the theoretical framework–contagion theory, agenda-setting theory, reader-response theory, and the theory of homophily.

6. Determine alternatives available to principal decision makers. The researcher identified possible alternative solutions for each of the issues described in Step 1. These solutions included identifying other means of stakeholder communication that a president might have chosen, and determining whether the president might have communicated differently, or emphasized different topics, on Twitter.

Applying Stage and Hubbard's (2012) process was a sound approach for three reasons. First, following the process described by Stage and Hubbard, the researcher determined that the actions of presidents regarding social media should be examined outside of conventional administrative thought and action because the actions of the presidents involve behaviors and media that are not conventional, but rather are new and emerging–hence, the case-based approach to understanding this phenomenon. Second, their actions should promote consideration of multiple perspectives, because the study of multiple presidents' campuses and audiences has shown that multiple perspectives do in fact exist (Stage & Hubbard, 2012, pp. 5-6). In addition, this study featured three case studies representing three different campus environments, thus facilitating a comparative analysis useful for examining whether differences or similarities existed in the three presidents' use of Twitter in connection with the ranking pressures–an important analysis tool embedded in the case study strategy. Finally, the case study format helped address constraints as they emerged (Stage & Hubbard, 2012, p. 9). As these case studies involved an analysis of institutions based on information about those institutions, such constraints included incomplete or inaccessible information. Examining the case study holistically facilitated the researcher's ability to consider alternative approaches and sources when these constraints were encountered.

The three case studies focused on three different college and university presidents who were frequent personal users of Twitter at three different public research universities. The researcher selected the case study subjects by identifying the top-rated public universities on the 2018 *U.S. News & World Report* top public colleges and universities ranking list and cross matching the name of each institution's president. The researcher then used Twitter Advanced Search to determine whether each president had a personal Twitter account and met the criteria for frequent personal Twitter use established for this study. To qualify as a "frequent personal user" of Twitter for the purposes of this research study, the selected president must have:

- Maintained a personal (in his or her own name) Twitter account or tweet as himself or herself (not through a spokesperson or other school representative or on the institution's Twitter handle).

- Devoted a majority of his or her tweets to institution-related content such as campus events and happenings; interactions with students, faculty, and staff; institutional honors, awards, and milestones; and thought leadership in higher education (the researcher reviewed the tweets of the presidents selected for the study and determined that this was in fact the case).

- Written in the first person ("I" or "me").

- Posted tweets an average of at least once a week during the period analyzed.

- Generated tweets in his or her presidential role for at least a year.

- Must not have announced plans to retire or otherwise leave his or her role prior to or during the established time frame of the tweets analyzed for this study (August 1, 2016 through August 31, 2017).

The 13-month time frame was necessary to establish a pattern of Twitter use, in accordance with the opinions of digital media experts from companies such as Converse Digital and Business 2 Community. At least six months are required to generate a social media following and realize the results of a social media campaign (Martin, 2012; Power, 2014). Since a new university president would need to gain some familiarity with the institution and begin generating content, the study parameters required the selected presidents to have been on the job at least one year to be considered a frequent personal user. Similarly, a resignation or retirement announcement prior to or during the established time frame could significantly influence the content or frequency of a president's tweets; therefore, this parameter was adopted to help maintain content consistency.

In examining presidents' personal Twitter accounts, the question could be raised as to whether these posts are actually written by ghostwriters or University personnel, even though the twitter account is identified as belonging to the president. While a detailed analysis of tweets from the universities' Twitter accounts to determine potential similarities or shared content was outside the scope of this study, the researcher made the assumption that the presidents did indeed author their own posts, based on some specific observations:

- An examination of tweets from one month of the university Twitter accounts revealed that the university accounts generally did not communicate using the first person voice of the president (I, me).

- All three of the university Twitter accounts (@UNC, @UF and UMICH) opened in 2009–about five years before the three presidents created their own Twitter accounts. This indicates there was a prior and clearly-established communication channel for the three institutions established independently of the presidents' Twitter accounts.

The researcher observed that the university accounts at all three of these institutions issued significantly more tweets than did the presidents' individual accounts. The total number of tweets issued by the presidents over the entire 13-month field were 385 (Folt), 172 (Fuchs) and 120 (Schlissel). However, in August 2017–just one month out of the 13-month study field (in other words, in only 1/13th of the study timefame)–the @UF and @UNC Twitter accounts issued well over 100 tweets each (Twitter Advanced Search, 2019a; 2019c), and the @UMICH account issued over 70 tweets (Twitter Advanced Search, 2019b). The smaller number of tweets generated by the individual presidents' accounts supports the idea that only one person–rather than a communications team–was managing that.

Using Twitter Advanced Search, the researcher reviewed the Twitter histories of presidents of the top public schools in the 2018 *U.S. News & World Report* rankings, as well as their job histories, to determine how long they had been tweeting in their current roles and to determine whether they met the criteria for being a "frequent personal user" of Twitter as defined by the researcher. The top three college presidents who met these criteria, and for whom the case studies with embedded Twitter content analysis were created in this study, were (a) Dr. Mark Schlissel, President, University of Michigan-Ann Arbor (fourth in *U.S. News & World Report*'s 2018 list of top public schools); (b) Dr. Carol Folt, former Chancellor, University of North Carolina-Chapel Hill (fifth); and (c) Dr. W. Kent Fuchs (pronounced "Fox"), President, The University of Florida (three-way tie for ninth; Kelly, 2017, p. 78). (Chancellor Folt announced her resignation in January 2019, while this data analysis was being completed. Chancellor Folt's tweets examined in the study were generated over a year before her resignation was announced. In March 2019, the University of Southern California announced that Folt would become that institution's next president.)

The three schools and presidents selected for this analysis were not the top three-ranking schools on the top public schools list; rather, they were the schools ranked fourth, fifth, and ninth (three-way tie). They were selected because the presidents of the other highest-ranking schools (two schools tied for 1; schools 6, 7, and 8; and the other two schools tied for 9) did not meet all of the criteria established by the researcher. In some cases, the leaders of the institutions that were not selected did not have personal Twitter accounts; in others, the presidents either did not generate enough tweets to meet the required weekly average or had been on Twitter for less than a year. And, in one case, the president had announced her pending resignation before the data-gathering process began.

Sampling and Data Collection Techniques

The research study was both qualitative and quantitative, using the methods of case study development and content analysis. This design follows the admonition of Kohlbacher (2006) who espoused the value of a complementary and collaborative relationship between "case study research as a research strategy, and qualitative content analysis as a method of examination of data material" collected through research (p. 4).

Hence, the data collection techniques involved a content analysis embedded in a case study approach. The content analysis was conducted in relation to the specific context of each institution (case) to yield a greater insight and understanding of (1) the emerging phenomenon (which in this study was presidential Twitter use); and (2) the organizational context of a college or university, following the assumption that these higher education institutions had an operational mission of maintaining and enhancing rankings.

This research includes both qualitative and quantitative elements. The qualitative elements involved delving into the Twitter content generated by three selected presidents who

frequently and personally used Twitter. The researcher examined a variety of sources to describe each case, including public statements, institutional histories, and internal and external news reports. Detailed descriptions and explanations of these factors were also presented. In this study, the researcher sought to apply a theoretical framework to obtain insights from this Twitter use regarding content, topics, and audiences. Content was analyzed according to the parameters used to define the top public institutions in the 2018 *U.S. News & World Report* rankings. The unit of analysis was a message unit–a single discreet tweet–along with any links or forwarded material attached to the message. The researcher performed the analysis manually, using a codebook, discussed later, that contained specific terms examined in each of the *U.S. News & World Report* rankings categories, described below.

This study focused only on Twitter use for three reasons. First, Twitter routinely ranks as one of the top forms of social media used for posting messages (Statista, 2016). Tweets are easily accessible through public archives; thus, postings are straightforward to find and analyze. Second, it can be inferred that the postings have some degree of readership, as many of the postings were liked, commented on, or shared by readers. Third, Twitter focuses primarily on text, which was important to the content analysis phase of this study. Twitter posts, which at the time of this study had a maximum of 140 characters (in late 2017, shortly after the study period closed, Twitter announced it was expanding the number of allowable characters per tweet from 140 to 280 for most languages; Rosen & Ihara, 2017, para. 3) are also more efficient to analyze as compared to longer Facebook postings.

Furthermore, two of the newer forms of social media, Snapchat and Instagram, are primarily image-based (Tyagi, 2017, paras. 3-4); in 2017, Snapchat also had fewer users than did Twitter (Spredfast, 2018, paras. 5, 7). Additionally, messages sent on these social media

platforms have limited (or no) availability in public archives. Instagram, which began

offering an archiving feature in 2017, engineered its archiving feature so that archived posts

are "only visible" to the poster of the original message (Shepherd, 2017, para. 5). For

Snapchat, "delete is our default. This means most messages sent over Snapchat will be

automatically deleted once they've been viewed or have expired" (Snapchat, n.d., para. 1).

Figure 2 illustrates the process of executing a case study strategy with content analysis

as an embedded tool of analysis. In providing and analyzing both context and content, the case

studies examined a number of inputs–information from and about each of the three institutions

studied, media stories and other external coverage and perspectives about the institution, and

the tweets of the presidents. In Figure 2, content analysis exists within the "Case Study

Strategy" circle, and is also the primary tool of analysis for the tweets; hence, important

findings from the tweets inform the case study vis-à-vis the use of the content analysis tool.
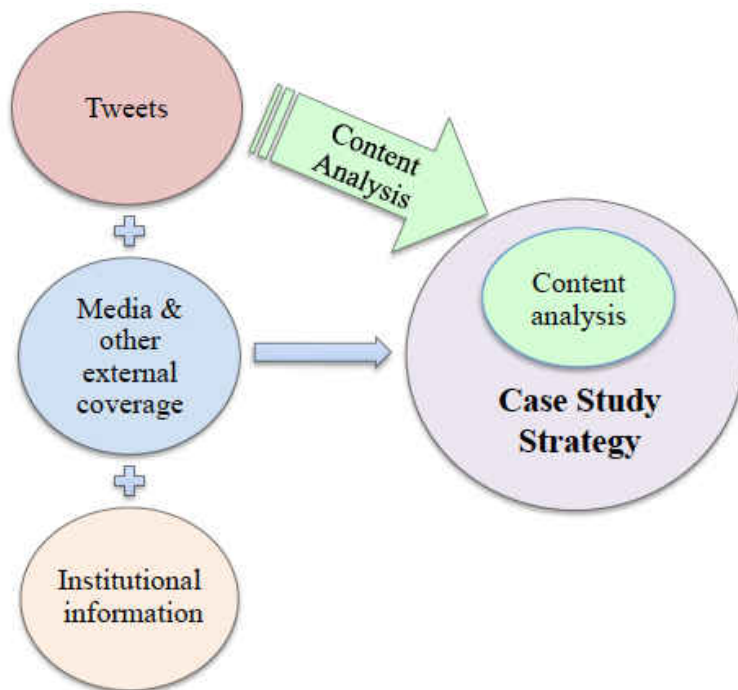
Figure 2.
Content Analysis as an Element of the Case Study Strategy.

Data Collection and Analysis

The researcher collected data for a content analysis of the content of tweets authored by the three presidents identified as meeting the criteria the researcher developed, focusing on the specific categories listed in a Codebook. The Codebook for this study's content analysis may be found in Appendix A. The researcher analyzed a sample of tweets to determine the frequency at which those categories occurred. To perform the research study, the researcher accessed a Twitter archive tool, Twitter Advanced Search. The researcher was already familiar with this tool through professional use. This tool enabled the researcher to identify the field of tweets for this study.

The researcher analyzed the data collected from the sample tweets and determined, based on the occurrence of such terms, the dominant category of each tweet, along with several other important aspects of the tweets' content, such as positive and negative sentiment and whether the tweet contained manifest or latest content. This process is discussed in detail in a later section of this chapter.

For this study, the researcher used Twitter Advanced Search to find the total number of tweets generated by the three selected presidents during a 13-month period. This 13-month period began August 1, 2016 and ended August 31, 2017. The rationale for this time window was that including August of both 2016 and 2017 facilitated incuding a higher number of tweets during the August lead-up to the school year, unlike the summer months of June-July, in which less communication regarding campus activities can sometimes take place at college campuses. Examining tweets from a relatively compressed period (13 months) provided a robust body of data that allowed the researcher to look at the totality of the institution's news,

developments, issues, academic calendars, and campus and world events across seasons, as opposed to simply using randomly selected tweets generated over a longer period.

Following the conventions of a case-study design, time was an additional boundary-setting element, meaning that the findings and conclusions in this study pertain only to a particular snapshot of the institutional history and context and its president's tweeting strategies, and content cannot be assumed as generalizable to a lifespan of the institution. All three of the selected presidents met the original parameter of a minimum average of one tweet per week. A total of 677 tweets were analyzed for this study. Each coded tweet was assigned to a specific main category. At the end of the data collection, the occurrences of the categories the presidents Tweeted about most often were counted. The researcher recorded these frequencies before interpreting the content qualitatively.

Content Analysis

Content analysis formed an important embedded aspect of the study's case study strategy, and was applied to the tweets for the presidents of three high ranking institutions who used social media and were selected for this study. Hsieh and Shannon (2005) affirm content analysis as a broadly used technique that consists of "three distinct approaches: conventional, directive, or summative. . . . The major differences among the approaches are coding schemes . . . and threats to trustworthiness" (Hsieh & Shannon, 2005, p. 1277). The approach employed in this study is summative analysis, which "involves counting and comparisons, usually of keywords or content, followed by the interpretation of the underlying context" (Hsieh & Shannon, 2005, p. 1277). According to Kolbacher (2006), integrating quantitative and qualitative steps of analysis in a case study design establishes data

triangulation and enables greater analytical depth (pp. 2-3). This integration of quantitative and qualitative steps is fundamental to the design of this study.

Mayring (2000) wrote that content analysis may be applied to "all sort [sic] of recorded communication" and defined content analysis "as an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytical rules and step by step [sic] models, without rash quantification" (p. 2). This type of analysis has two chief advantages: (a) It can be strictly methodologically controlled, and (b) the material can be analyzed systematically (Kohlbacher, 2006, p. 14). In this study, the analysis focused on a set of a priori categories derived from an examination of theory and literature, which were applied to the text. This *theory-guided analysis* (Kolbacher, 2006, pp. 2-3) echoes Mayring's (2000) strategies. Mayring (2000) described two means of developing and analyzing categories:

- Inductive category development's main idea is "to formulate a criterion of definition, derived from the theoretical background and the research question" (Mayring, 2000, p. 3). This idea determines which aspects of the text are analyzed, and as feedback is gathered through this analysis, the categories are revised. This revision loop leads to a narrower set of main categories that are tested for reliability (Mayring, 2000, p. 3).

- Deductive category application–the method employed in this study–on the other hand, "works with prior formulated, theoretically derived aspects of analysis, bringing them into connection with the text" (Mayring, 2000, p. 4). The main idea of such analysis, Mayring explained, is "to give explicit definitions, examples and coding rules for each deductive category, determining exactly under what circumstances a text passage can be coded with a category" (Mayring, 2000, p. 5).

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This study deduced such a group of explicit definitions and examples, which were combined into a complete, specific coding process.

Manifest and Latent Content

A primary purpose of this study was to discover whether presidents who had an active Twitter presence used that medium to connect with stakeholders, reinforcing the selection criteria included in the 2018 *U.S. News & World Report* rankings. The content analysis process for this study was intended to describe two types of content: *manifest* content, or "the elements that are physically present and countable" (Gray & Densten, 1998, p. 420) and *latent* content, which examines concepts that "cannot be measured directly but can be represented or measured by one or more . . . indicators" (Hair, Jr., Black, Babin, & Anderson, 2010, p. 614). The Codebook (Appendix A) contained instructions on identifying and recording both manifest and latent content.

Coding

Braun and Clarke (2006) defined *coding* as identifying a "feature of the data (semantic content or latent) that appears interesting to the analyst" (p. 88). Boyatzis (1998) described coding as identifying "the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon" (p. 63). The number of tweets analyzed for this study (677) was sufficiently constrained for conducting a manual coding process, with the researcher serving as the only coder (although an intercoder was preliminarily engaged, as explained later in Chapter III).

To ensure appropriate specificity, clarity, and consistency across the coding exercise, a Codebook and a corresponding coding form (a Microsoft Excel spreadsheet) were used for each tweet analyzed, including the content of any links, forwarded information, videos, or

photos the tweet included. Neuendorf (2017) noted that the codebook is the tool in which "all measures for human content analysis coding need to be fully explicated" (p. 156) and that a corresponding coding form should be used along with the codebook. The coding form "provides spaces appropriate for recording the codes for all variables measured . . . together, the codebook and coding form (i.e., the coding scheme) should stand alone as a protocol for content-analyzing messages" (Neuendorf, 2017, p. 156).

Before discussing the specific coding categories indicated by the Codebook for these tweets, the researcher thought it would be helpful to provide an explanation of a tweet's structure.

Structure of a Tweet

Figure 3 shows an example of an actual tweet from a university account. The tweet appears as a single square panel on a computer or mobile device screen. The top left of the visible field identifies the tweet's sender, and is followed by the "Twitter handle," Twitter's term for a username; the Twitter handle is also the means by which Twitter identifies the sender (Lister, n. d., para. 1). Twitter handles appear with an @ symbol before the username.

The text comprises the next portion of a tweet, and is the content of the message the Twitter account owner is sending. During the period of this study (August 1, 2016 through August 31, 2017), the maximum number of characters Twitter allowed in a single tweet was 140. In September 2017, Twitter announced it was expanding the maximum allowable length of a tweet to 280 characters for most languages (Rosen & Ihara, 2017, para. 3).

Hashtags and links are indicated by their blue font color and are found after the body of the tweet's text. A hashtag is an optional feature; the hashtag symbol (#) is placed in front of a related keyword or phrase to help users categorize tweets and make them more likely to

appear in Twitter searches. Clicking on a hashtag takes viewers to other tweets that include the same hashtag. Hashtags can be placed anywhere in a tweet (Twitter, 2017, paras. 3-5).

Figure 3.
Sample Tweet.

An embedded link, such as the URL shown in Figure 3 (https://www.byui.edu/ newsroom/2-8-19-winter-2019-enrollment), redirects viewers to the link's Internet location. When the link is clicked, the user is redirected to the URL's content (Reference, n.d., para. 1). Like hashtags, links can be placed anywhere in the tweet. If the user sending a tweet chooses to include a photo or video, it appears in the center area of the tweet following the text.

Directly underneath the message (or the photo or video, if included) is a row of four small icons. The first icon, to the far left, resembling a balloon quote, signifies the number of replies (comments from people who have viewed the tweet) that the tweet has received

(IFAC, 2017, p. 15). The second icon, the square arrows diagram, is the "retweet" icon

(IFAC, 2017, p. 14). A retweet is a reposting of the tweet by others who wish to share that

tweet with their own Twitter networks (Twitter, n.d., para. 1). The third icon, the heart,

indicates how many "likes" the tweet has received (IFAC, 2017, p. 15). Finally, the fourth

icon, a small envelope, represents the "Direct Message" function. This function allows

readers to reply with a private message that other viewers cannot see (IFAC, 2017, p. 16).

The Codebook and coding form used in this study are described in Appendix A. The

Codebook required certain standard information for each tweet, namely:

- Name of college/university president who tweeted.

- Sender's Twitter handle.

- Number of followers for the president's Twitter account.

- Posting date of tweet.

- Clarification of whether this was a tweet or retweet (y/n; retweets were examined in
  the same manner as tweets).

- The number of times the tweet was retweeted.

- The number of "likes" for the tweet.

- The number of comments the tweet received.

After collecting this information, several questions involving content analysis were

addressed, such as whether certain of the tweets' categories (both in primary tweet content and

in the content of any attachments) aligned with the 2018 *U.S. News & World Report* categories

for top public universities, or whether that content aligned with two additional categories

added by the researcher:

- *Financial Resources ($$)*.

- *Alumni Giving Rate (AGR)*.

- *Faculty Resources (FR)*.

- *Graduation & Retention Rates (GRR)*–note that all tweets that dealt with graduation generally were coded as *GRR*, because even general messages called attention to and focused on graduation as a goal and a significant event.

- *Student Selectivity (SEL)*.

- *Undergraduate Academic Reputation (UAR)*.

For content that did not match one of the 2018 *U.S News & World Report* ranking categories, two additional possible categories were developed:

- *University Sports Programs (USP)*. Although not a 2018 *U.S. News & World Report* rankings category, *USP* was included as an a priori category because the researcher theorized that the presidents' tweets could frequently include such content, as all three of these institutions had strong sports programs. Across all sports, UF, UNC, and U-M hold 36, 44, and 35 Division I National Collegiate Athletic Association (NCAA) national championship titles, respectively (NCAA, 2019, p. 2). Further, the speed and ease of tweeting has made Twitter a desirable platform for communicating important, real-time sports information (Burns, 2014, para. 6).

- *OTHER* category (topics not covered by one of the categories above). The *OTHER* category was created to capture emerging categories that the a priori categories did not capture. The *OTHER* category was further analyzed after the coding was completed, yielding some emergent, distinctive categories; *School Spirit* (including posts about school colors, mascots, etc.); messages to or activities for *New Students*; *Campus Life*, including routine announcements, messages about campus facilities or

activities; *Diversity and Inclusion*, including organizations and activities for or by diverse campus groups, speakers or events around these topics, and campus responses to events displaying hate speech; and *Sympathy and Support* for national (external to the campus) events, crises, and initiatives.

In addition, the tweets were coded for other features:

- *Crisis Management*. While this was not a 2018 *U.S. News & World Report* selection criterion, the researcher theorized a priori that tweets that dealt with a crisis at the universities could be significant in this study. Tweets were coded as *Crisis Management* if their primary content included elements such as apologies or explanations around unfavorable events concerning administrators, students, sports teams, etc., and what the university was doing to address this; crimes on campus; complaints, unfavorable reviews or sanctions from governance organizations such as accrediting bodies, the NCAA; and the president's responses to unfavorable news articles or social media.

- *Positive* or *Negative Content* (whether the content of the tweet was primarily positive or negative in tone). This section analyzed whether the content of the tweet, whatever category it may have reflected, was positive or negative in tone or sentiment. For the purposes of this study, the definition of *positive* content was that the content of the tweet was *favorable* to the subject of the tweet (president, university, student, etc.), and that nouns and adjectives used tended to be positive and complimentary. *Positive* content could include the president's or school's participation in beneficial events or programs, service to school or community; recognitions and awards for university/ campus community; progress towards a goal or milestone; encouragements and

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reminders to participate in civic activities such as blood drives or voter registration;

expression of sympathy or support for an external event, such as a natural disaster

(even if the event itself was negative); athletic accomplishments; faculty profiles,

research and new hires; student/alumni profiles; a president's participation in external

events, such as conferences; remembrances or reflections on past events (even if the

event itself was negative, such as 9/11).

As described in Chapter 7 of *Press and its social responsibility in northeast India: A content analysis*, positive content could also include reports of actions intended to fight, correct, address or ameliorate events that are themselves negative news and have already been reported in the news (Plathottam, 2008, p. 370). Actions or events intended to counteract negative issues such as social injustice, inequality, racism, discrimination, etc., also constituted positive content. This could be consistent and aligned with the tenets of agenda-setting theory in that the presentation of positive responses to negative events could influence audiences to regard the institutions more positively, even in the midst of negative situations.

In this study, the definition of *negative* content was that the content of the tweet was *unfavorable* to the subject of the tweet (president, university, student, etc.). Such negative content could include bad news or unfavorable information, announcements or reports (unless the news had previously been reported and was now accompanied by an explanation of what the president and/or the university was going to do to help or address it, as described above under "Positive News"). Negative content could also include criticisms or complaints about individuals, policies, or legislation; announcements of personnel actions such as investigations or firings; crimes; demonstrations or complaints about university

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administration or other personnel; negative actions against the university by outside

organizations; funding cuts or budget problems, etc. A major differentiation between positive

and negative content, for the purposes of this coding, was that if any kind of bad news was

being announced by the president for the first time (in other words, the tweet constituted the

announcement of the bad news), then that constituted *negative* content. However, if the

president's tweet referenced a bad news event after it had already been announced (drawing

that context from the tweet itself), and if the tweet expressed sympathy, support, solidarity or

describes what the president or the school is doing to address the issue, the content should be

viewed as *positive.*

- *Manifest* and *Latent Content.*

As the Codebook shows, each coded tweet was assigned to a specific category. At the

end of the data collection, the number of tweets assigned to each category was summed. The

researcher recorded these sums (frequencies) before interpreting the content using qualitative

tools.

The coding sheet contained content analysis questions along with a drop-down menu

of possible answers to facilitate efficient coding. For example, Table 1 shows the eight

choices available for coding the main category–six 2018 *U.S News & World Report*

categories plus the additional categories of *University Sports Programs* (*USP*) and *OTHER*

(*OTH*).

The names of the various categories for which content was analyzed in this study

have been written in title case and italicized. Also, the word "other" has been italicized,

written in all caps and in title case (i.e., "*OTHER*") when referring to the category used to

capture emerging categories. This convention was taken to increase clarity and facilitate

reader understanding.

Table 1
Content Analysis and Other Tweet Features: Coding Sheet Entry Approach.

Tweet Category Coding Entry Instructions	Drop Down Menu (Select Category)
If a link is included with tweet, does content align with one of the seven main coding categories? If so, enter appropriate code. If not, enter *"OTH"*.	*$$*
	AGR
	FR
	GRR
Main (dominant) category (enter by coding symbol).	*SEL*
	UAR
Secondary category, if any (leave blank if not).	*USP*
	OTH

Tweet Coding Feature Entry Instructions	Enter Feature Code (or Leave Blank)
Crisis Management? (*CM* or leave blank)	
Positive or *Negative Sentiment* (*P* or *N*)	
Manifest or *Latent Content*? (*M*, *L*, or leave blank).	

Intercoder Reliability

This "indication of measurement consistency" is used by researchers to define the

"extent to which independent coders evaluate a characteristic of a message or artifact and

reach the same conclusion" (Lombard, 2010, para. 4). When human coders are used,

intercoder reliability is key to establishing research quality. Neuendorf (2017) noted, "Given

that a goal of content analysis is to identify and record relatively objective (or at least

intersubjective) characteristics of messages, reliability is paramount. Without the

establishment of reliability, content analysis measures are useless" (p. 165). Mouter and

Vonk Noordegraaf (2012) wrote, "Without reliable measures any analysis using these measures becomes meaningless" (p. 1).

In establishing a construct for intercoder reliability, the researcher followed Neuendorf's (2017) process: (a) use a subsample of the full sample message pool for the interrater process; (b) train the intercoder in the use of the codebook; and (c) conduct a pilot reliability assessment, which begins after the second coder is trained in using the codebook, but prior to the beginning of the actual research. In addition, Neuendorf recommended that a final reliability assessment be conducted during the final data collection period (Neuendorf, 2017, pp. 40-41). However, this researcher determined that this step was neither necessary nor helpful, as two intercoder assessments were conducted prior to the study. The results of the first intercoder assessment strongly indicated a need for further revisions to the Codebook (Appendix A), specifically, more detail and refinement about what constituted *Manifest* and *Latent Content*; what constituted primary versus secondary messaging; and hashtags as a tweet attachment. These changes were subsequently made, and the second intercoder assessment was conducted about 30 days after the first. Because of the small size of the field (677 tweets total), a third intercoder review was not conducted; indeed, the first two intercoder reviews covered 16.4% of the total set of tweets examined for the study (61 tweets for the first intercoder review; 50 for the second).

Neuendorf (2017) also recommended that reliability samples for a set of subsamples be at least 10% of the entire sample size but never smaller than 50 samples (p. 187). In the first intercoder review conducted for this study (described later), a subset of 61 tweets was examined, a number that met Neuendorf's 50-sample guideline. The second intercoder review coded an additional 50 tweets–resulting, as noted above, in a total subsample of

16.4%. Further, the researcher followed Neuendorf's recommendation to report simple, or absolute, agreement–in other words, a consensus estimate–but only when accompanied by chance-corrected coefficients (such as Scott's pi, Cohen's kappa, or Krippendorf's alpha). This recommendation implies the simple-agreement method used alone can fail to account for chance agreement (Neuendorf, 2017, pp. 175-177). In this case, on the advice of the dissertation committee, the researcher applied Cohen's kappa, described in detail later.

Intercoder Review: Minimum Levels of Agreement

The researcher determined that the intercoder review should ideally attain an agreement of at least 80%, or attain about 70% agreement to meet the minimum acceptable level of reliability, based on several published. Neuendorf (2002), noted "Coefficients of .90 or greater are nearly always acceptable, .80 or greater is acceptable in most situations, and .70 may be appropriate in some exploratory studies for some indices" (p. 145); this was mirrored by Lombard, Snyder-Duch, and Campanella Bracken (2002, p. 593). Stemler (2004) added "a typical guideline found in the literature for evaluating the quality of interrater reliability [referred to as 'intercoder reliability' in this study] based upon consensus estimates [the kind of estimate employed here] is that they should be 70% or greater" (p. 2). Riffe, Lacy, and Fico (2008) stated that a coefficient as low as 0.667 "would be appropriate for research that is breaking new ground with concepts that are rich in analytical value" (p. 154). While opinions in the literature varied, the researcher determined that an agreement of 80%– deemed acceptable in much of the literature–would be the appropriate cutoff.

Calculating Reliability Coefficients

Establishing appropriate reliability coefficients was the first step in establishing intercoder reliability for this study. Choosing a method of calculating those coefficients was

the second. Wang (2011) noted, "Approximately 40 different methods can be used to calculate coefficients for reliability of nominal data" (p. 13). However, Stemler (2004) narrowed that field to one ideal method, observing,

> Perhaps the most popular method for computing a consensus estimate of interrater reliability is through the use of the simple percent-agreement figure [obtained by simply] adding up the number of cases that received the same rating by both judges and dividing that number by the total number of cases rated by the two judges." (p. 2)

> The advantages of the method include its strong intuitive appeal, its easy calculation,

and the fact that it is easily explainable (Stemler, 2004, p. 2).

> However, Hayes and Hatch (1999) pointed out disadvantages with this methodology:

> Despite its popularity, however, the percentage of agreement measure has a serious limitation that suggests it be used and reported with considerable caution. This limitation is that the percentage of agreement measure does not take into account the contribution of chance agreement to the total agreement score. (p. 355)

> The percent-agreement method can often be "time consuming and labor intensive to

train judges to the point of exact agreement" (Stemler, 2004, p. 2). Indeed, the researcher

found that four training sessions with the intercoder for this study were required, and two

comprehensive, individual, consecutive intercoder reviews were needed to attain acceptable

consistency in this approach to analyzing content.

Krippendorf (2004) criticized the percent-agreement methodology, explaining that

"%-agreement [is] simply not appropriate for assessing reliability of coding" (p. 250).

Lombard (2010) noted, "If percent agreement is selected (and this is not recommended), use

a second index that accounts for agreement expected by chance. . . . [Also] note that the

selection of index or indices must precede data collection and evaluation of intercoder

reliability" (para. 11). Dewey (1983), however, maintained that in spite of its limitations,

kappa [rather than simple agreement] "is still the measure of choice" (p. 487).

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In summary, the literature on the efficacy of methods for determining intercoder reliability is mixed and somewhat inconclusive, with disagreement among experts in the field, as previously noted. In light of the lack of clear guidance from the literature, and following consultation with the dissertation committee, the researcher selected the simple percent-agreement method as the first computational methodology, based on the advantages of its strong intuitive appeal, easy calculation, and ease of explanation (Stemler, 2004, p. 2).

In light of recommendations by some experts that computation should also account for agreement expected by chance, Cohen's kappa was also applied. Cohen's kappa postulates that there will likely be some random agreements between two raters even when they are not certain of the correct answer (not unlike a student who guesses at test questions and gets some of them correct; McHugh, 2012). Cohen held that reliability measures should take this into account, hence the development of the kappa statistic as a means of accounting for random agreement (McHugh, 2012, p. 279). Cohen's kappa is particularly applicable as a statistical measure when (a) two raters each rate one trial on each sample, and (b) when the raters are deliberately chosen (Deviant, 2014, para. 2). Both of these conditions were met in this study.

Selection of the Intercoder

The researcher enlisted the assistance of a highly recommended graduate student in public relations and communications at The University of Florida to participate in the intercoder review. This student's institution was among those whose presidents' tweets were being examined for this study. The student's selection had nothing to do with this fact; indeed, the primary reason for this student's selection was the strength of the communications and public relations graduate program in which the student was enrolled and the strength of her faculty advisor's recommendation. Nevertheless, the researcher interviewed the student

prior to the commencement of the intercoder review and found that the student had no affiliation with the president of that institution and no previous exposure to his tweets. In fact, the intercoder, who completed her undergraduate degree at a different university, had arrived on campus only a few weeks before this study began. Consequently, the researcher determined that there was no conflict of interest or preexisting bias that would interfere with the intercoder's objective assessment of the data.

Intercoder Review Timeline and Results

In accordance with Neuendorf (2017), the researcher and intercoder conducted an initial intercoder review of 61 of the total field of 677 tweets posted by the presidents from August 1, 2016 through August 31, 2017. The researcher and intercoder held two telephone training sessions to discuss the Codebook questions and coding forms prior to the first intercoder review. The first intercoder review took place in November and December 2018.

Basic, quantitative information about the tweets, such as the number of retweets, posting date/time, and number of likes, were not included in the intercoder review because they were entries that did not involve any judgment or content analysis, only accurate recording. Thus, the factors evaluated as a part of the first intercoder review were:

- Category of attached photos, videos and links.
- Main dominant category.
- Second dominant category, if any.
- Third dominant category, if any.
- Secondary category, if any.
- Positive or Negative Sentiment.
- Manifest or Latent Content.

Following completion of the researcher's analysis of the 61 tweets coded in the first

intercoder review, the results obtained by the two reviewers were compared. The results

appear in Table 2.

Table 2
Intercoder Review #1: Simple Agreement.

Coding Element	N Agree	N Disagree	% Agree	% Disagree
Tweet contains forwarded link, article, photo (y/n)	49	12	80	20
Photo? (y/n)	48	13	79	21
−If photo, subject (enter by coding symbol; if subject doesn't match any categories or is unclear, enter "*OTH*")	40	21	66	34
Video? (y/n)	47	14	77	23
−If video, subject (enter by coding symbol; if subject does not match any categories or is unclear, enter "*OTH*")	59	2	97	3
Link? (y/n)	55	6	90	10
−If link, does content align with one of the coding categories? If so, enter appropriate code. If not, enter "*OTH*."	30	31	49	51
Main (dominant) category (enter by coding symbol)	42	19	69	31
Second dominant category, if any (leave blank if none)	47	14	77	23
Third dominant category, if any (leave blank if none)	60	1	98	2
Secondary category (or N/A)	44	17	72	28
Additional secondary category, if any (or N/A)	59	2	97	3
Positive or negative sentiment (*P* or *N*)	61	0	100	0
Manifest or latent content (*M*, *L*, or leave blank)	23	38	38	62

As shown in Table 2, several of the factors did not show a simple agreement of 80%, the minimum level of agreement desired. After those results were determined, the researcher proceeded as Neuendorf (2017) advised:

> When a variable with poor reliability is identified in a pilot test, remedies include (a) further training and rechecking reliability, (b) rewriting coding instructions to clarify the measurement of the variable, (c) changing the categories of the variable (e.g., collapsing categories), and (d) splitting the variable into two or more simpler or more concrete (more manifest) variables. (pp. 172-173)

The researcher was interested in retaining the original ranking categories employed by *U.S. News & World Report* Best Colleges ranking of top public universities for 2018, if at all possible, so that comparisons with the 2018 *U.S. News & World Report* rankings could be easily made. Consequently, options (a) and (b) referenced in the quote above (further training and rewriting of the coding instructions) were selected over options (c) and (d) (changing or splitting the categories). The researcher revised the coding instructions for greater detail and clarity and then conducted additional training with the intercoder. More information about the revision process is provided later in this chapter.

The researcher subsequently revised the Codebook and made several changes to the coding scheme, primarily to achieve greater clarity and simplicity. After consultation with the intercoder, the researcher removed the categories of "*second dominant category, if any*," and "*third dominant category, if any*" from the analysis. The researcher and the intercoder agreed that a determination of whether a topic was a secondary or tertiary category, versus only a secondary category, was too subjective to achieve consistent results. The researcher and the intercoder also agreed that hashtags would be considered to be attachments, in a similar manner as were photos, videos, and links. This had not been defined prior to the first intercoder review.

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In the first horizontal column of Table 2, a high number of disagreements regarding whether the tweet contained a photo or link (12) was reported. This was due to confusion between the two coders regarding whether or not hashtags should be counted as attachments. This confusion was resolved during the subsequent intercoder review.

The first intercoder review revealed that most of the tweets aligned with only one category. This was not surprising to the researcher, as Twitter is a medium that allowed a maximum of 140 characters for any single message at that time. Consequently, the researcher retained the entry for "*secondary category*" in the second intercoder review but eliminated the secondary and tertiary category entries. The researcher and the intercoder conducted two additional telephone training sessions using the revised Codebook. The second intercoder review was conducted in January 2019 on an additional 50 tweets. Both simple agreement and Cohen's kappa were subsequently calculated for these results (see Table 3).

Table 3
Intercoder Review #2: % Simple Agreement and Cohen's Kappa (N = 50)

Factor	Absolute % Agreement	Adjusted % Agreement
If photo is included, select category photo is aligned with photo (enter by category coding symbol); if subject doesn't match any categories or is unclear, enter *OTH*.	80.0	69.2
If video is included, select category video is aligned with (enter by category coding symbol); if subject doesn't match any categories or is unclear, enter *OTH*.	98.0	0.0
If link or hashtag is included, does content align with one of the categories? If so, enter coding symbol); if not, enter *OTH*.	70.0	57.6
Main (dominant) category (enter by category coding symbol).	82.0	76.2
Crisis Management?	98.0	84.7
Secondary category, if any (leave blank if not).	56.0	N/A
Positive or *Negative Sentiment* (*P* or *N*).	100.0	100.0
Manifest or *Latent Content* (*M*, *L*, or leave blank).	80.0	58.0

As shown in Table 3, for simple agreement, the analysis achieved at least an 80% simple-agreement level in all but two factors. The first of those two exceptions (agreement for the main category of tweets accompanied by links or hashtags) achieved a simple-agreement level of 70%. In a postcoding review with the intercoder, the researcher determined that this outcome could have occurred because many tweets contained multiple links and hashtags, making it more challenging to identify a single category (multiple categories may have been present in the Tweet and its accompanying links or hashtags).

The researcher decided to leave this factor in the final analysis because it could still serve to describe accurately *when*–and w*hich*–tweets included links and hashtags, even if it might have been a less than accurate assessment of the main category for those links and hashtags. The second factor that failed to achieve an 80% agreement rate was "*secondary category*." The issue of primary and secondary categories had created confusion in the first intercoder review (as explained earlier), and that persisted in the second intercoder review. Based on the two failures of this factor to reach an acceptable reliability rating, the researcher subsequently decided to eliminate this factor from the final analysis.

Further, the researcher applied Cohen's kappa as shown in Table 3 in the "Adjusted Agreement" column. Critics have noted some drawbacks to Cohen's kappa, however, such as difficulty in determining what constitutes strong agreement levels. McHugh (2012) asserted that Cohen's kappa values of ≤ 0 indicate no agreement, 0.01-0.20 signal none to slight agreement, 0.21-0.40 show fair agreement, 0.41-0.60 represent moderate agreement, 0.61-0.80 connote substantial agreement, and 0.81-1.00 intimate almost perfect agreement (p. 279). Using McHugh's (2012) agreement level ranges, nearly all the levels of agreement in the second intercoder review, illustrated in Table 3, for the present study indicated strong

agreement. However, in some fields such as healthcare research (as McHugh noted),

adhering to such low values could lead to making decisions based on faulty evidence.

McHugh recommended a simplified rule of thumb in which "any kappa below 0.60 indicates

inadequate agreement among the raters" (p. 279).

Table 3
Intercoder Review #2: % Simple Agreement and Cohen's Kappa (N = 50).

Factor	Absolute % Agreement	Adjusted % Agreement
If photo is included, select category photo is aligned with photo (enter by category coding symbol); if subject doesn't match any categories or is unclear, enter *OTH*.	80.0	69.2
If video is included, select category video is aligned with (enter by category coding symbol); if subject doesn't match any categories or is unclear, enter *OTH*.	98.0	0.0
If link or hashtag is included, does content align with one of the categories? If so, enter coding symbol); if not, enter *OTH*.	70.0	57.6
Main (dominant) category (enter by category coding symbol).	82.0	76.2
Crisis Management?	98.0	84.7
Secondary category, if any (leave blank if not).	56.0	N/A
Positive or *Negative Sentiment* (*P* or *N*).	100.0	100.0
Manifest or *Latent Content* (*M*, *L*, or leave blank).	80.0	58.0

Bakeman, McArthur, Quera, and Robinson (1997) found another limitation of

Cohen's kappa: The fewer the number of codes, the lower the kappa values. Consequently,

Bakeman et al. concluded "no one value of kappa can be regarded as universally acceptable"

(p. 357). In addition, Powers (2013) observed,

> A concept is not well defined (learnable) if you only have positive examples of it–it
> could be anything between the specific set of positive examples and the whole
> universe. The problem [with Cohen's kappa] . . . comes where there are no (or very
> few) examples where the raters agree on "no"! (para. 1-2)

In this study, the challenge described by Powers could have contributed to the low Cohen's kappa score (58%) for the *Manifest* or *Latent Content* analysis. A simple agreement of 80% was calculated using Cohen's kappa for the intercoder review. A majority of analyzed tweets in the intercoder review exhibited *Manifest Content* rather than *Latent Content*, which resulted in a preponderance of responses favoring the former rather than the latter.

After reviewing the opinions of various experts in the literature, the researcher adopted a position on the reliability of the results as computed by Cohen's kappa. First, these computations provided insight and added an important level of discipline to the calculation process. In addition, the Cohen's kappa values for most of the categories in this study were moderate to high. However, the small number of tweets analyzed and, for some categories, the large preponderance of certain responses (such as manifest or latest content) may have affected the values either positively or negatively. Hence, in this case, the Cohen's kappa was not conclusive in either supporting or challenging the accuracy of the simple-agreement calculation. Therefore, the analysis based on the stronger results of the simple percent-agreement calculation was utilized.

Storage of Study Data

Although data collected for this study were in the public domain and had been reported publicly through tweets, the data were nevertheless stored on a secure hard drive in the researcher's home office inside a locked dwelling. Further, the researcher verified that the data recorded and the data observed, including data recorded in charts, graphs, and tables, were accurate.

Relationship between Theory and Research Methodology

In Chapter II, the researcher described in detail the theoretical framework for this study. This section further explains how that theoretical framework informed the decisions made about research methods.

Reader-Response Theory

First, this study was grounded in a critical approach known as reader-response theory. In contrast to other critical methods that focus on the text, or content, of a reading passage, a reader-response critical approach focuses on "finding meaning in the act of reading itself and examining the ways individual readers or communities of readers experience texts" (Delahoyde, n.d., para. 1). The researcher assumed stakeholders experienced presidents' tweets in unique and meaningful ways, that these stakeholders assigned unique meanings to the passages, and that their reactions (or lack of reactions) represented these meanings. In addition, the researcher assumed that content matters. In the data analysis, the researcher sought to demonstrate this assumption about the significance of content and illustrate how and why the content of the tweets is important. Three well-known theories of communication influenced the data collection and analysis process and act as conceptual lenses to shape the researcher's interpretation of the findings.

Agenda-Setting Theory

Agenda-setting theorists have maintained that "media attention to an issue presumably causes a change in a mediating variable in the minds of citizens, which in turn produces a change in importance" (Miller, 2007, p. 690). In other words, the more media attention a particular topic or issue received, the more importance people ascribed to it. As noted in Chapter I, a shared view of the importance of a particular university trait could build

the audience's affinity toward that university, and if this related to one of the 2018 *U.S. News & World Report* categories, which are widely discussed in the media, this could build audience perceptions that the school is strong in that particular area.

Contagion Theory

Contagion theory involves how emotions, viewpoints, or beliefs may spread among groups or networks (Im et al., 2013, p. 3848). Ferrara and Yang (2015) found "positive emotions are more prone to contagion, and that highly-susceptible users are significantly more inclined to adopt positive emotions" (p. 11). The data collection and analysis portions of this study focused on the frequency with which a tweet was retweeted to determine whether posts about some topics were shared or retweeted more than others. Further, any material attached to a president's tweet, such as a link or photo, was analyzed for relevant content related to the 2018 *U.S. News & World Report* rankings in the same way the content of the original tweets was analyzed, as previously described.

Theory of Homophily

Proponents of the theory of homophily have hypothesized that people tended to connect with ideas and people with whom they shared similarities (Currarini et al., 2016). The researcher assumed presidents' tweets contained content that reflected priorities already important to stakeholders (Lewis et al., 2012, p. 70). The 2018 *U.S. News & World Report* rankings represent one set of priorities. One of the research questions in this study articulated a goal to determine whether the values reflected in the Twitter content aligned with the institutional measures used in those rankings. Homophily served as a conceptual guide for the researcher to draw conclusions and interpretations of the findings regarding the potential impact of the tweets on stakeholders.

Instrumentation and Disclaimer

No survey instruments (e.g., surveys, survey directions for survey participants, or participant consent forms) were administered during this research. Instrumentation included specific tools for searching for and collecting Twitter posts. IRB approval was not applied for per the advice of the researcher's dissertation committee, because all data were publicly available and no interpersonal communication or interviews took place with the subjects of the study or their audiences and stakeholders.

Background information and historical facts of each subject and the subject's respective institution are included in this research. The researcher has included the source for each fact. The researcher, however, does not make any representation regarding the accuracy of any background or historical fact of the subjects or the institutions examined in this study. This dissertation also contains the researcher's personal views and opinions, which do not necessarily reflect or represent the views and opinions of the subjects studied herein.

The dissertation proposal was presented and defended in September 2018. Following approval of the proposal, the Codebook was refined. The intercoder was selected and trained, and the first intercoder review was conducted and analyzed. A second intercoder review was conducted in January 2019. Data analysis and creation of the findings chapter (Chapter IV) occurred from February to March 2019. A complete draft of the dissertation manuscript was submitted in April 2019. Final defense of the dissertation took place in the summer of 2019.

Summary

The research described in this chapter was completed according to the prescribed methodology. The findings provided an understanding of whether the presidents of three high ranking institutions, who personally used Twitter, employed common messages, themes, and

subjects in the content of their tweets that aligned with the selection criteria used in 2018 for the *U.S. News & World Report* rankings. Additionally, in the researcher's opinion, the findings from the three case studies, one for each of the selected presidents (and their institutions), provided further context about the schools and their presidents. Underlying potential root causes were also revealed that may have influenced the presidents' decisions to emphasize these messages and subjects. Finally, the findings showed the potential impact of frequent Twitter use by these leaders.

In Chapter IV, the researcher presented the data derived from the content analysis of the three college presidents' tweets and discussed that content in terms of its relationship to the 2018 *U.S. News & World Report* rankings. Chapter IV also examined that content in the context of its source (both the university and the president) as illustrated via the case studies.

CHAPTER IV

FINDINGS

Introduction

The problem stated in this study is that universities–and their presidents–must find ways to connect with stakeholders and build positive institutional images of their schools, thereby encouraging students to explore institutional offerings and ultimately submit applications. At some institutions, presidents have been taking a prominent role in reaching out to stakeholders by using Twitter to engage directly with them. The researcher explored the extent to which this strategy is related to building institutional image through addressing two research questions: 1) what is the content of the Twitter posts of top public college and university presidents who use Twitter? and, 2) how does that content relate to categories that reinforce institutional image, such as the 2018 *U.S. News & World Report* rankings?

The study findings have been contextualized as case studies of the top three presidents (who personally use Twitter) of the public institutions in the 2018 *U.S. News & World Report* Best Colleges rankings. The case studies are presented first; the case studies provided important background for better understanding the actions of the presidents and are followed by presentation and analysis of the coding data from the field of tweets examined.

University Case Studies

This chapter begins with the background and characteristics of each institution's case study, as a precursor to the discussion of decision issues, decision makers, and alternatives. The settings and contexts for the case studies were important. Each case study was organized

according to of Stage and Hubbard's (2012) case study analysis process, previously

described in the methodology chapter. The six steps of that process followed in this study are:

1. Define the decision issues in the case.

2. Determine the facts essential for understanding and dealing with the issues.

3. Identify additional information that must be collected.

4. Determine the principal decision makers and assess the roles they played.

5. Identify any theories that might be relevant to the decision issues.

6. Determine alternatives available to principal decision makers.

The steps of Stage and Hubbard's case study process were followed throughout this study. Step 5 (discussing the findings through the lens of related theories) and Step 6 (drawing implications and recommendations for organizational and presidential practice) are addressed in Chapter V, building on the discussion of the theoretical foundations that began in Chapter III. Also included in Chapter III was the information found in Step 4 of the case study analysis process–the possible intended audiences in the Twitter communication of these presidents. The current chapter (Chapter IV) now presents the context of each case.

Case 1: The University of Florida and President W. Kent Fuchs

The University of Florida (UF) is located in Gainesville, Florida. The first institution of higher learning supported by the Florida legislature, the East Florida Seminary opened in 1853. In 1905, the Florida Agricultural College (established in 1884) was combined with this institution; the Gainesville campus opened in 1906 (Van Ness & McCarthy, 2003, p. 2).

Women were first admitted in 1894 (Van Ness & McCarthy, 2003, p. 7); the first African American students were admitted to the law school in 1958 (p. 65). In fall 2017, UF served 36,436 undergraduate students, 12,160 graduate students, 4,137 professional students,

and 2,920 nondegree-seeking undergraduate students (UF-News, 2018, para. 3). The enrolled

students represented 49 U.S. states as well as Puerto Rico and the District of Columbia, all 67

Florida counties, and 43 other countries (UF-Planning/Research, 2018a, interactive map).

In fall 2017, UF's male-female ratio was 46% male, 54% female; 7.3% of the student

body was Black or African American; 7.3% was Asian, 14 % was Hispanic/Latino, 59% was

White, 0.34% was American Indian or Alaska Native, and 3% was two or more races (UF-

News, 2018, para. 4). UF attracted primarily in-state students (79%); 21% of students came

from out of state (UF-News, 2018, para. 5). In 2018, UF had an alumni network of over

415,000 living members residing in every U.S.state and in the District of Columbia, as well

as in more than 150 other countries (UF-Alumni, 2018, para. 1).

The fall/winter admission rate in 2017 was just over 36%; 14,866 students out of

40,849 applicants were admitted (UF-Alumni, 2018, para. 7). Freshmen confirmed to begin

school in fall 2017 had an average GPA of 4.42, average SAT score of 1350, and an average

ACT score of 30 (UF-News, 2018, para. 11). UF's first-to-second-year student retention rate

was 96% (UF-Planning/Research, 2018b, p. 6). UF was the only Florida university that

belonged to the Association of American Universities (AAU) in 2017. AAU's membership

included the top 62 research institutions in North America (AAU, 2018, para. 1). In FY 2017,

UF's research expenditures totaled $801.4 million (UF-News, 2018, para. 15).

UF maintains top rankings in various higher education ranking systems. In addition to

being one of three schools tied for ninth among public universities in the 2018 *U.S. News &*

World Report rankings (Kelly, 2017, p. 78), UF placed first in *The Wall Street Journal/Times*

Higher Education 2016 rankings for graduate employability (UF, 2017, p. 8). In 2017, UF

ranked seventh in Kiplinger's "Best Values in Public Colleges" (Pitsker, 2017, para. 22). UF also ranked fourth on the 2017 *Forbes* list of "Best Value Colleges" (Howard, 2017, para. 6). Dr. W. Kent Fuchs became the 12th president of The University of Florida's in January 2015. This was Fuchs's first time leading a college institution as president. Fuchs came to UF after a 6-year tenure as provost at Cornell University (UF-President, n.d.b, paras. 1-2). Fuchs served as the Dean of the Cornell University College of Engineering from 2002 through 2008, and as head of the School of Electrical and Computer Engineering at Purdue University, as well as Michael J. and Katherine R. Birck Distinguished Professor, from 1996 to 2002. Prior to his time at Cornell, Fuchs also served as a professor in the Department of Electrical and Computer Engineering and the Coordinated Science Laboratory at the University of Illinois between1985 and 1996 (UF-President, n.d.b, para. 2).

President Fuchs joined Twitter in October 2014. As of this writing, President Fuchs had broadcast 1,704 tweets, and his Twitter home page had accumulated 9,560 likes (Fuchs, 2019b, para. 1). He was following 88 other Twitter accounts, had over 26,000 followers, and had posted 339 photos and videos (Fuchs, 2019b, para. 1). In addition, Fuchs maintained a Facebook page, "Office of the President at University of Florida" (Fuchs, 2019a, para. 1). As of this writing, UF operated the following social media accounts:

- Facebook (https://www.facebook.com/uflorida/).

- Twitter (https://twitter.com/UF; @UF).

- YouTube (https://www.youtube.com/user/universityofflorida/).

Fuchs assumed the presidency following Bernie Machen, who served as UF's 11th president from 2004 to 2014. Fuchs inherited from Machen the legacy of an expanded research footprint (annual university research funding grew from $470 million in 2003-2004

to $702 million in FY 2014), and increased access for economically diverse students. In fact, the Machen Florida Opportunity Scholars Program has enabled more than 3,200 low-income students to become the first members of their families to attend college. Machen also increased the university's endowment (UF-President, n.d.a, paras. 5-8). Completed during Machen's tenure, UF's $1.7 billion capital campaign was at the time the sixth-largest public university campaign in U.S. history (UF-President, n.d.a, para. 7).

Fuchs arrived in Gainesville after The University of Florida's *Preeminence Plan* had begun. Designed to help improve UF's stature and reputation among the nation's top public universities, the plan called for hiring "75 to 100" accomplished scientists and scholars in 2014 and 2015 (some already well established and some exhibiting promise; Machen, 2013, p. 706). Machen (as cited in UF-News, 2014) said, "We worked deliberatively and collaboratively to identify the areas where bringing in a high level of talent would lay the groundwork for the breakthrough science and scholarship we want to achieve under the Preeminence Plan" (para. 3).

As UF president, Fuchs appeared to give careful attention to the communications style and communications processes he employed. In late 2014, shortly before he began his tenure at UF, Fuchs (as cited in Fisher, 2014) said, "As president, one of the most important roles is serving as the spokesman and being the public representative of the university" (p. 1). Fuchs also said (as cited in Fisher, 2014) that he hoped to "become an active presence on social media and be physically present at events around campus and in the community" (p. 3).

It is the researcher's opinion that Fuchs thought it would be beneficial to establish and use a personal (rather than only an institutional) social media presence with key audiences

(Twitter). He was named president on October 15, 2014, and according to his Twitter home page, opened his Twitter account that same month (Fuchs, 2019, para. 1).

Machen made enhancing UF's reputation among other institutions a strategic priority (as cited in UF-News, 2014). The UF *Preeminence Plan* was designed to enhance UF's faculty resources and academic reputation, as well as measurements for selecting students and student graduation rate, aligning closely with four of the selection criteria for the 2018 *U.S. News & World Report* top public university rankings (Machen, 2013, pp. 702-706). As one reporter noted, "Machen has long stated a goal of moving UF into the top 10 public universities in the nation" (Crabbe, 2009, para. 13).

Machen attracted national attention when it was discovered through an open records request that in his personal assessment for the 2009 *U.S. News & World Report* rankings, he gave UF the highest possible ranking, *distinguished* (Crabbe, 2009, para. 1). Machen reportedly also rated Harvard University, Princeton University, and Yale University as "distinguished" but did not rank any other Florida universities in that category or in the next highest category (Crabbe, 2009, para. 2). Assessments by university presidents, provosts, and admissions officers earned the greatest weight in this section of the 2018 *U.S. News & World Report* rankings, making up 25% of an institution's overall score (Crabbe, 2009, para. 3).

Nor was Machen the only UF President who explicitly addressed the goal of becoming a top ranked university. Indeed, this intent had been expressed for years. In his 1948 inaugural address, then-president J. Hillis Miller declared

> To build and maintain a great university that can take its place among the ten or twelve great state universities of the country is a monumental task and a grave responsibility. Anything less than that status for the University of Florida would place the State herself in an inconspicuous place among the great states of the Union. (Miller, 1948, p. 35)

In his 1975 inaugural address, President Robert Q. Marston reiterated the top 10 goal;

A state that has catapulted to a position among the top ten in population in the nation in the last ten years, if it is to reach its full potential in realms other than size, warrants a university among the top ten in the nation. (Marston, as cited in UF-Fora, 2017, p. 12)

Descriptions of Fuchs's priorities at his previous institution, Cornell University, seemed to support the idea that many of the priorities of his UF predecessor would become his priorities as well. Of Fuchs's time at Cornell, an article in the *Cornell Chronicle* said:

Fuchs led these efforts to recruit diverse, outstanding faculty and students and renew its focus on high-priority academic areas at a time when Cornell's peers were less engaged in doing so, helping Cornell to increase its competitiveness and influence in the U.S. and internationally. (Doolittle, 2014, para. 11)

Then-UF Student Body President Cory Yeffet was more direct about Fuchs's aspiration in this regard. After a conversation with Fuchs a few weeks before Fuchs officially began at UF, Yeffet (as cited in Fisher, 2014) wrote to a journalist that "[President Fuchs] wants to work together with the student body to achieve the goal of becoming a top 10 public institution" (p. 3). Further, in the same article, Fuchs himself noted

Students want to be a part of a university that has great aspirations for the future, so they can be even more proud of it after they graduate than they are now, and it's important they know it's one of the best in the world. (Fisher, 2014, p. 3)

Fuchs appeared to indicate that improved college rankings had been a purposeful endeavor for both himself and for others before him. In his 2015 inaugural address, he said "We will be among the nation's top-five public research universities. And, we will be the nation's number one public university for comprehensive excellence" (Fuchs, 2015, p. 24).

In a public comment following UF's first-time entry into the 2017 *U.S. News & World Report* top 10 public university rankings, Fuchs (as cited in Travis, 2017) said, "This

is a significant milestone that we can all be proud of, and it happened as the result of many years of focused work and a keen sense of purpose" (para. 14).

And, finally, UF's own published strategy document, *The Decade Ahead and a Strategy for Enhancing UF Rankings* (2017) gave strong credence to that priority. The document reviewed and explained college rankings and laid out specific University of Florida strategies for each rankings indicator (UF-Fora, p. 19). It was reasonable to hypothesize that, given Fuchs's past commitment to improving institutional academic status, and given his statement of purpose for UF, he would consider social media a potential tool in this effort.

Even before completion of the analysis of the tweets reviewed in this study, an analysis of public comments about or by Fuchs provided some insight into an informed prediction about what content he might have decided to emphasize in his tweets. One, as already mentioned, was UF's academic reputation. Another likely priority for social media content was diversity and inclusion. Again, public reports indicated Fuchs's past commitment to diversity, including during his time at Cornell:

> Both as dean and later as provost, Fuchs spearheaded efforts to increase diversity within the Cornell community. He recruited faculty of color and women faculty and increased student diversity at the College of Engineering and supported the establishment of institutional diversity goals and accountability with the Toward New Destinations initiative. (Doolittle, 2014, para. 10)

Cory Yeffet (as cited in Fisher, 2014), former UF Student Body President, spoke with Fuchs shortly before he began his presidency and reported that "Dr. Fuchs appreciates the diversity and uniqueness of our student body and I am looking forward to him getting the chance to meet and learn about our students" (p. 3). Fuchs himself corroborated this commitment in an open letter to all students the year after he came to campus, noting that embracing and respecting diversity was one of his three aspirations for all UF students:

First, that we denounce all forms of hate. I hope even shy and introverted individuals like me will speak up and replace hate with active love. Many members of our wonderfully diverse UF community are afraid. It is my hope that each of us, in our words and actions, demonstrates our support for those who feel threatened and defends the rights of all. At a minimum, I urge our community to report messages and incidents of concern to our U Matter, We Care program. (Fuchs, 2016c, p. 6)

Diversity and inclusion may have been "top of mind" in social media content during the study period, during which UF issued 25 different statements, described by the University as "statements by University of Florida leadership addressing matters of importance to the University community" (UF-Statements, 2019, para. 1). Fourteen of these statements were issued under Fuchs's name; the remaining statements were issued by the heads of respective functions (i.e., Student Affairs, University Policies, or Information Technology) or were issued generally by UF. Examining these statements, whether directly attributed to Fuchs or not, was important for understanding the issues UF viewed as high priority for communication broadly to the campus community and beyond. A number of these statements expressed the need to respect diversity and inclusion and denounced disrespectful acts, including:

- A racist message reportedly found on the door of a campus building (Parrott, 2016a).

- The reported finding of a noose on the lectern of a professor (Fuchs, 2017a).

- The reported vandalization of a fraternity house with a swastika and offensive messages (Fuchs, 2016d1, 2016e; Parrott, 2016b).

- The reported wearing of a swastika by a man on campus (Fuchs, 2017b; UF-Statements, 2017a).

- Maintaining a welcoming and inclusive campus and community and support of international students, faculty, and staff (Fuchs, 2016a, 2017c).

- Denouncing racial epithets reportedly scrawled on the whiteboard of a campus building (UF-Statements, 2017b).

- The reported uprooting of a building sign at the campus facility housing the departments of African American Studies and the Center for Jewish Studies (Fuchs, 2017e; UF-Statements, 2017c).

- The disruption of the African American Studies Program office by an individual not enrolled or employed at UF (UF-Statements, 2017d).

- Denial by UF of a request by the National Policy Institute to rent space for an event featuring a White nationalist speaker (Fuchs, 2017i1). (This event eventually took place after the timeframe of this study and was not sponsored by or affiliated in any way with UF.)

Given these issues and events, the researcher hypothesized that a significant portion of Fuchs's tweets might mirror and support other communications denouncing disrespectful words and actions and reinforcing the importance of diversity and inclusion.

Fuchs's (2016) third stated aspiration was "I ask that each of us work to improve the lives of all people. We can do this individually in how we live our lives and as a university overall, through our scholarship, teaching and engagement with society" (p. 6). Given this aspiration stated by the president, the researcher expected to be able to locate a body of content in Fuchs's tweets regarding The University of Florida's service mission and UF's positive impact on the communities it serves, and perhaps society at large.

UF's *Preeminence Plan* had already begun when Fuchs assumed office. The institution's commitment to building a strong faculty and becoming a top research institution continued into the 2016-2017 period, during which Fuch's tweets were analyzed as a part of

this study. On June 23, 2016, shortly before the study period began, it was reported that for the 2016-2017 fiscal year, UF would receive $96.9 million in performance funds from the State of Florida, an award that, according to UF's news outlet, would "help the university recruit and retain top-flight faculty in its quest to become one of the best public research universities in the nation" (Sikes, 2016, para. 1). In addition,

> This latest award for excellence, which includes $17.1 million in new money, demonstrates UF's ability to achieve high marks on a series of performance metrics put forward in 2014 by the Board of Governors, which oversees the public university system in Florida. (Sikes, 2016, para. 2)

In consideration of this high level of research support, the researcher also anticipated that an additional component of Fuchs's Twitter content would be a demonstration of the strength and capability of the faculty and the success and positive impact of research programs.

Case 2: University of North Carolina and Chancellor Carol Folt

The University of North Carolina-Chapel Hill (UNC) was America's first public university to graduate students (McKay, 2017, para. 6). Women were first admitted as full-time students in 1897 (Dean, 1987, p. 2); the first African American students were admitted to the law school, in 1951 (Fowler, 1991, p. D19). UNC was the only North Carolina-based university that belonged to the Association of American Universities, whose membership included the top 62 research institutions in North America (AAU, 2018, para. 1).

In the fall of 2018, UNC had a student population of over 29,000, with 18,862 undergraduates and 11,049 graduate and professional students (*U.S. News & World Report,* 2019, paras. 1-2). The enrolled students represented 44 U.S. states as well as Puerto Rico and the District of Columbia, 98 North Carolina counties, and 39 other countries (UNC-Admissions, 2018, paras. 6, 9).

In the fall of 2018, 62% of UNC students were female; 38% were male (UNC-Admissions, 2018, para. 5). Represented ethnicities included Asian/Asian American, 18%; Black/African American, 11%; Caucasian/White, 66%; Hispanic/Latino/Latina, 9%; Native American, 3%; and Pacific Islander, 0.3% (UNC-Admissions, 2018, para. 12). Admitted students in the entering class of 2018 had an average ACT Composite of 29-33 (when ACT was the highest or only score reported), an average SAT total of 1280-1470 (when SAT was the highest or only score reported), and an SAT total of 1320-1500 (highest reported for all students with the ACT score converted to SAT scale; UNC-Admissions, 2018, para. 4). The school had a 21.9% admission rate (UNC-Admissions, 2018, para. 2). The school's average first year retention rate was 96.5% (UNC-Research/Assessment, 2018, p. 5). UNC also had an alumni network of over 329,000 living members residing in every U.S. state and in the District of Columbia, as well as in 160 other countries (UNC-News, 2018, para. 3).

UNC has held top rankings in various higher education ranking systems. In addition to occupying the fifth spot on *U.S. News & World Report's* 2018 list of top public universities (Kelly, 2017, p. 78); in 2017, Kiplinger's ranked UNC first among the best affordable U.S. public colleges and universities (Pitsker, 2017, para. 4); UNC was ranked as the second best value university in the 2018 *The Wall Street Journal/Times Higher Education* rankings (Belkin & Korn, 2017, para. 9); ninth-ranked public university on the 2016 *Forbes* list of "Best Value Colleges" (Howard, 2016, para. 2); and ninth on Reuters's 2018 "Worlds' Most Innovative Universities" (Ewalt, 2018, para. 10).

Dr. Carol Folt became president of UNC in 2013, following a 30-year career at Dartmouth College. An environmental scientist, Folt began as a faculty member, eventually holding such positions as Dean of Faculty of Arts and Sciences, Dean of Graduate Studies,

and Provost (Dartmouth, 2012, paras. 1-2). At the time of her hiring at UNC, she had served for a year as Dartmouth's interim president (Courtright, 2013, p. i).

Folt joined Twitter in February 2014, about seven months after she became UNC president. At the time Folt discontinued her use of the @Chancellor Folt Twitter account on January 31, 2019, the day she stepped down from UNC, she had broadcast 1,810 tweets (Folt, 2019, para. 1). Her Twitter home page had accumulated 693 likes (Folt, 2019, para. 1). She was following 209 other Twitter accounts, had more than 13,700 followers, and had posted 844 photos and videos (Folt, 2019, para. 1). In addition, Folt had a personal Facebook page (Folt, 2017i, para. 1). UNC maintained a blog ("On the Record"; UNC-Blog, 2019) and several separate official university social media accounts:

- Facebook (https://www.facebook.com/uncchapelhill/).

- Twitter (https://twitter.com/unc; @UNC).

- YouTube (https://www.youtube.com/user/UNCChapelHill).

- Instagram (https://wwww.instagram.com/uncchapelhill/).

- Pinterest (https://www.pinterest.com/uncchapelhill).

Folt arrived at UNC in 2013 during a time of considerable upheaval. As reported in an account in *The Wall Street Journal*, an NCAA investigation into academic irregularities for some student athletes had been launched in 2011, leading to a ban on postseason football play and vacating 16 victories in 2008 and 2009 (Waller, 2014, para. 3). In 2014, the NCAA reopened an investigation into student athlete enrollment in no-show courses (Waller, 2014, para. 2). The article's author noted, "Whatever the result [of the investigation], it will be up to Chancellor Carol Folt to rebuild trust and carry forward changes" (Waller, 2014, para. 4).

Folt also inherited an ongoing investigation by the U.S. Office for Civil Rights (OCR) concerning UNC's past handling of sexual assault and sexual violence cases (Kingkade, 2013, para. 4). In January 2013, six months before Folt's arrival, it was reported that a group of UNC students had filed a formal complaint with the OCR, charging that

> UNC violated assault survivors' rights under the Campus Sexual Assault Victims' Bill of Rights, the Clery Act, and the Family Educational Rights and Privacy Act (FERPA), and equal opportunity mandates under Title IX of the Education Amendments of 1972, Titles VI and VII of the Civil Rights Act of 1964 and Title II of the Americans with Disabilities Act. (Kingkade, 2013, para. 4)

In 2018, the complaint was eventually settled when the OCR, after reportedly "reviewing 387 reports of sexual harassment and sexual violence at the university from 2011 to 2016, concluded that the university was indeed out of compliance with Title IX" (Bauer-Wolf, 2018, para. 4). In the researcher's view, the new president faced challenges in addressing these significant issues.

Similar to the findings related to Fuchs, Folt also gave careful attention to her communication style and processes as Chancellor. In a news interview conducted the day she was named Chancellor, she pledged to build transparency as a part of her administration (WRAL, 2013a, para. 10). The article's author wrote, "Moving to a public university, she said, only intensifies the need for transparency" (WRAL, 2013a, para. 10). Folt also noted the importance of an open, transparent, and engaging communications style (WRAL, 2013b, (at time stamp 2:01).

In a 2017 interview with *Fortune Magazine*, Folt (as cited in Gharib, 2017) observed that the way to drive a vision of the future is to be "out and about, and talking about it" (at time stamp 2:55). A Twitter presence, through its ability to reach broad audiences and elicit feedback, could have helped accomplish the objectives of creating open and engaging

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communication. This may have been a factor in Folt's selection of Twitter as a communication platform.

Folt's close colleague, UNC Vice Chancellor Winston Crisp, noted Folt's personal style with students and provided insight into Folt's potential social media approach. Noting students' enthusiasm for interacting with Folt, Crisp (as cited in Lacy, 2016) said, "Students initiate conversations with her. They want to tell her about their day and their experiences. Students like to take selfies with her. She has amassed quite a collection" (para. 5). Given this observation, the researcher hypothesized that Folt's Twitter posts would have included content focused on student interactions.

Over the time period of the study, the researcher was unable to identify, in the researcher's opinion, evidence of a purposeful intent to improve rankings overall similar to that noted in the analysis of Fuchs's early comments (most likely because of the high position UNC already held in the rankings). In the researcher's opinion, Folt seemed to have focused publicly on the importance of the school's rankings primarily in terms of the school's affordability. In her installation (inauguration) speech, Folt (2013) noted,

> We have been ranked the number one academic value for years, and our student debt is among the lowest in the nation. We soon may be the only public university in America covering full financial need. I am proud of all that. (para. 49)

Also, Folt's biographical information (in a 2015 UNC memo announcing that she would deliver the University Day keynote address) included the comment that "under Folt's leadership, the University was recently named first among public universities in *U.S. News & World Report's* 'Great Schools, Great Prices' category" (an affordability category in the 2018 *U.S. News & World Report* rankings;Vassiliadis, 2015, para. 3).

At the same time, Folt had been both public and effusive in her praise of college rankings when they were awarded to the school. When UNC's Eshelman School of Pharmacy was ranked number one by *U.S. News & World Report* in the 2017 list of America's Best Graduate Schools, Folt noted (as cited in Echison, 2016)

> You don't get the U.S. News number one ranking just for research, it is pulling together all aspects of this amazing school. . . . We look at the collegiality of how the UNC Eshelman School of Pharmacy works together, and it serves as a model for the University as a whole. (para. 10)

The sentiment that high rankings result from a synthesis of all the institution's strengths working together, rather than from just one particular category, recurred in Folt's 2017 response to the news of UNC's 17th consecutive year occupying a top spot in the 2018 *U.S. News & World Report* public university rankings. Folt (as cited in Moss, 2017) said, "Carolina's placement among the top five public universities for the 17th consecutive year is a testament to an enduring commitment made by our students, faculty, and staff to excellence and creating solutions to tackle the world's most complex problems" (p. 3).

Given Folt's apparent emphasis on rankings as a coordinated campus effort, as well as on the importance of affordability, the researcher hypothesized that the field of tweets analyzed could have included a prevalence of tweets containing content in support of campus collaboration and affordability, rather than to tweets dealing with college rankings generally.

According to a story that appeared in the local news shortly after her arrival at UNC, Folt solicited feedback from students, faculty, and staff concerning things they loved about the campus and things they felt needed improvement (WRAL-TV, 2013c, para. 3). The responses she received could have indicated what stakeholders viewed as important and what Folt might have viewed as important to communicate. According to published reports, those recommended priorities from stakeholders included:

- Concerns about "legal and academic fallout" from the NCAA investigation of the school's football program (expressed in nearly one third of the e-mails; Schoonmaker, 2013, para. 2).

- Both positive comments about faculty and concerns about faculty pay and retention (WRAL, 2013b, para. 8-9).

- Concerns about a controversy over sexual assault victims (WRAL, 2013b, para. 12).

- UNC's reputation and a desire for increased transparency (WRAL, 2013b, para. 11).

- Affordability, both as "a point of pride and an area that needs improvement" (WRAL, 2013b, para. 10).

- A love of the Chapel Hill community and the campus (WRAL, 2013b, para. 13).

In determining which of these priorities (or others) might eventually become part of Folt's public communication, the researcher also reviewed official UNC statements. During the period analyzed for this study (August 1, 2016 through August 31, 2017), UNC issued 69 such statements (UNC-Carol Folt Messages, 2019), referred to as "messages" (some authored directly by Folt; some written by others). These messages included:

- Success of a fundraising campaign (UNC-Carol Folt Messages, 2016).

- Death of a distinguished faculty member (Folt, 2017a).

- Sympathy in the wake of the Charlottesville, VA tragedy; encouragement to keep campus safe and welcoming (Folt, 2016d).

- Expression of support/offer of assistance to persons affected by the Executive Order limiting U.S. entry by immigrant and nonimmigrant visa holders from seven countries (Folt, 2017b).

- Update on the sexual assault/sexual violence process (Folt, 2016c).

- Update on race, diversity, and inclusion efforts (Folt, 2016e).

- University position on/response to questions about undocumented students (Vassiliadis, 2016).

- Update on potential rally calling for removal of Confederate monument (Folt, Crisp, & McCracken, 2017).

- Expression of sympathy regarding recent events; denouncement of hateful speech and actions (Folt, 2017e).

- Renaming a UNC building formerly named for a Civil War figure (Folt, 2016g).

- Message expressing the importance of inclusivity, welcoming, and looking forward following national election (Folt, 2016f).

- Decision from NCAA's Committee on Infractions concerning past academic irregularities investigation (Folt, 2017h).

It is important to note that another of Folt's decisions outlined during her installment speech was to "move forward quickly to develop a comprehensive fundraising campaign" (Folt, 2013, para. 53). At the time Folt left UNC, that campaign, "For All Kind: The Campaign for Carolina," was "more than halfway to reaching the goal of $4.25 billion by the end of 2022" (Hudson, 2019, p. 6). From the researcher's view, this showed that Folt's decision to launch the campaign had been executed, and the researcher assumed that communication with or about alumni and other donors to launch the campaign had taken place and may have been an important element of Folt's ongoing communication.

Based on a review of UNC's messages, speeches, interviews, and other accounts described in this case study, including the perspectives of Folt and the opinions of colleagues

and other stakeholders, the researcher concluded that the content of communications from Folt would likely have included the following priorities:

- Diversity and inclusion.

- Positive news about the university's sports programs.

- Student interactivity.

- Fundraising and alumni relationships.

- Research and academic excellence.

The last two of these priorities related directly to the 2018 *U.S. News and World Report* rankings.

Case 3: University of Michigan and President Mark Schlissel

The University of Michigan (U-M) was founded in 1817 as the Catholepistemiad, or University of Michigania (Shaw, 1941, vol. 1, p. 3). U-M was renamed the University of Michigan in 1821 (Shaw, 1941, vol. 1, p. 3). U-M was originally located in Detroit but was relocated to Ann Arbor in 1837 (Shaw, 1941, vol. 1, p. 18). The first classes in Ann Arbor were taught in 1841, with a class of two faculty members and seven students (Shaw, 1941, vol. 1, p. 35). The first graduating class in 1845 consisted of 11 men (Shaw, 1941, vol. 1, p. 361); the first woman was admitted in 1870 (McGuigan, 1970, p. 1). In 2018, U-M was one of two universities located in Michigan that belonged to the Association of American Universities, a group whose membership included the top 62 research institutions in North America (AAU, 2018, para. 2).

In September 2018, U-M's Ann Arbor campus had 29,821 enrolled undergraduate students, 13,415 graduate students, and 2,766 professional students (Katterman, 2018, p. 6). U-M students came from 82 of 83 Michigan counties, every U. S. state, and 92 countries

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(Katterman, 2018, p. 9). U-M had a freshman retention rate of 97.1% (U-MBudget/Planning, 2017, p. 3). The average ACT scores of the entering class of 2018 were 31-34 (range), average SAT scores (old scale) were 1910-2240, and average SAT scores (new scale) were 1380-1540 (Katterman, 2018, p. 12).

In addition to its 2018 ranking by *U.S. News & World Report* as the fourth public university among national universities (Kelly, 2017, p. 78), U-M ranked high in a number of other areas. The National Science Foundation ranked U-M as the top U.S. public research university (Katterman, 2018, p. 122). In addition, Katterman (2018), referring to the 2018 *U.S. News & World Report* rankings, reported that U-M had 102 top 10 graduate programs (p. 155), and for LGBTQ students, it was ranked among College Choice's Top 10 Best Colleges (College Choice, 2017, pp. 26-28). U-M was ranked sixth by The Institute of International Education for students studying abroad during academic year 2016 (Katterman, 2018, p. 105); U-M was also ranked sixth by recruiters for new hires *The Wall Street Journal* (Evans, 2010, p. B1). U-M had a network of more than 583,000 alumni worldwide (U-M, 2018, para. 32). U-M's mission was "to serve the people of Michigan and the world through preeminence in creating, communicating, preserving and applying knowledge, art, and academic values, and in developing leaders and citizens who will challenge the present and enrich the future" (U-MPresident, 2019c, para. 1).

Dr. Mark Schlissel, named U-M's 14th president in 2014, was the first physician-scientist to lead U-M (U-MPresident, 2019a, paras. 1-2). A board-certified medical internist, Schlissel graduated from Princeton University and earned both his M.D. and Ph.D. degrees at Johns Hopkins University School of Medicine (U-MPresident, 2019a, para. 3). He began his career as a faculty member at Johns Hopkins University School of Medicine and subsequently

served as a faculty member at the University of California Berkeley (U-MPresident, 2019a, paras. 4-5). Schlissel came to the U-M from Brown University, where he had served as provost (U-MPresident, 2019a, para. 4).

Schlissel joined Twitter in January 2014, the same month he was named president of U-M. As of this writing, he had broadcast 431 tweets, his Twitter home page had accumulated 11 like, he was following 131 other Twitter accounts, had more than 16,200 followers, and had posted 175 photos and videos (Schlissel, 2019, para. 1). In addition, Schlissel maintained a personal Facebook page (Schlissel, 2014b, para. 1). Also, U-M maintained several separate official university social media accounts:

- Facebook (https://www.facebook.com/UniversityOfMichigan/).

- Twitter (https://twitter.com/umich).

- YouTube (https://www.youtube.com/user/um).

- Instagram (https://www.instagram.com/uofmichigan/).

- LinkedIn (https://www.linkedin.com/school/university-of-michigan/).

In addition, U-M's "Office of the President" webpage featured a variety of presidential communications such as speeches, letters to the campus community, news articles, and official statements (U-MPresident, 2019d).

Schlissel came to U-M following the departure of president Mary Sue Coleman, who, in April 2013, announced that she would retire in 2014 (Woodhouse, 2013, para. 1). Coleman's presidency, which lasted over 11 years (the fourth-longest presidential tenure in U-M history; Woodhouse, 2013, para. 5), was marked by establishing strong relationships with the City of Ann Arbor, launching the university's Office of Technology Transfer, taking enrollment to record levels, and raising $3.2 billion through the "Michigan Difference"

capital campaign. Coleman was credited with "laying the groundwork to raise billions more slated to begin in the fall" (Woodhouse, 2013, paras. 9-17). In addition, Schlissel inherited the elimination of $116 million from U-M's legislative funding over previous 10 years, along with rising tuition rates (Wells, 2013, paras. 10-11).

In the researcher's opinion, Schlissel's colleagues at Brown University provided some insight into his communication style. One colleague noted "Ask someone at Brown University to describe Mark Schlissel, and it's nearly a guarantee that you'll get this response: he's a straight shooter" (Woodhouse, 2014, para. 14). Moreover, Schlissel (as cited in Woodhouse, 2014) commented that he might have to modify his communication style at U-M to ensure that all voices were heard, noting in a media interview prior to beginning his tenure:

> I'll lay out what I think the right thing is and then work with people to argue and tell me I'm wrong. One of the things I've been counseled to be sensitive to is making sure the people I have these discussions with feel free and comfortable to tell me when I'm wrong. (para. 25)

And, the researcher anticipated that a proportion of Schlissel's tweets could have been designed to facilitate or raise awareness of such discussions. This would be particularly important because, the researcher believed, the opportunities and challenges awaiting the new U-M president were significant. Woodhouse (2014) noted

> The issues facing U-M are vast: the declining research funding, the difficulty in creating a diverse student body, the conversation surrounding sexual assault on campus and the rising cost of tuition, just to name a few. As president, Schlissel will be tasked with finding solutions to these problems, and also maintaining–and widening–the scope of U-M's academic enterprise and standing. He'll also be the face of a $4 billion fundraising campaign and of a nearly 200-year-old institution that is one of the biggest economic drivers in the state. (para. 54).

Early on, Schlissel appeared to have made some broad-based decisions regarding his communication style with students. In his inaugural speech, he offered several insights:

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One of the great joys of devoting one's life to the academy is to be surrounded by the optimism and energy of students. It's palpable and it's perennial.

Whenever I have a bad day–those days when you wonder if you'll ever push the boulder to the top of the hill–I take a break and stroll the campus.

The enthusiasm of students, their resilience and sense of immortality, their passion and energy–it's electrifying. Then I return to my office and feel like I can do anything. (Schlissel, 2014c, paras. 119-121)

Although the researcher did not identify any specific comments from Schlissel concerning his plans for Twitter use, the researcher inferred from the quoted comments that he intended to participate in ongoing communications activities that engaged students. An accompanying piece of supporting evidence for this inference was a decision Schlissel made early in his presidency to keep open office hours for students. In a March 2015 article in *Michigan Journal*, the institution's student newspaper, the journalist noted

In his first few months of office, he [President Schlissel] has made several changes to the university. One of the changes he is most proud of is his office hours. The hours are open to students from any of the three campuses, and he hopes to eventually hold some hours at each of the University's locations. Students can request an appointment by visiting the President's Office Hours for Students web page on the president.umd.umich site. (Morrison, 2015, p. 1)

In addition, it bears repeating that Schlissel joined Twitter the same month he was named to his post, possibly indicating a purposeful effort to broaden his communications channels. Other comments by Schlissel also appear to indicate that he considered whether the voices of stakeholders were being adequately and fully heard, as well as how to facilitate that endeavor. As he stressed to students in his 2016 New Student Convocation speech,

Spirited debate of important issues is healthy for our democracy and essential for learning. . . . This is especially true of those with differing ideologies. . . . Michigan is an ideal environment to engage and learn across difference. In fact, that is one of the key skills we expect you to develop while you're here. (Schlissel, 2016c, paras. 13-15)

Schlissel also said, "Regardless of your political affiliation or ideology, you each have the right and the opportunity to make your voice heard" (Schlissel, 2016c, para. 42).

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In an interview with *The Wall Street Journal* in September 2017, just one month after the researcher's analysis time frame closed, Schlissel commented on the news that U-M was the second-highest ranked state school (at number 27) in *The Wall Street Journal/Times Higher Education* 2018 College Rankings (Belkin & Korn, 2017, para. 9). In the researcher's opinion, his comments appeared to focus on higher education access as a standard by which U-M's success should be measured. U-M was "quite early and quite consistent in disinvesting in public higher education" (Schlissel, as cited in Korn, 2017, para. 18). In fact, U-M received roughly the same number of total dollars, not adjusted for inflation, as it did in 1997–and its student population had grown 20% in that time (Korn, 2017, para. 18). As a result, Schlissel estimated more than three fourths of academic spending came from tuition funds and tuition had increased at a rate higher than inflation in many years (Korn, 2017, para. 18). As tuition increased, however, U-M also invested in financial aid: "We don't want our success to come at the cost of access to higher education" (Schlissel, as cited in Korn, 2017, para. 19).

Supporting that assertion was the U-M "Go Blue Guarantee," launched by Schlissel in 2016. Beginning in 2018, this initiative provided free tuition for four years to students whose families had an annual income of $65,000 or less while continuing its other student financial support (Friedman, 2017, para. 6). Additionally, although Schlissel was not directly quoted, a writer for the March 2016 newsletter for U-M faculty, staff, and retirees announcing the 2017 U.*S. News & World Report* graduate program rankings stated,

> U-M officials note that rankings are just one measure of a university. What matters most in choosing a school is the match between the particular interests, abilities and ambitions of each student with the specific programs, approaches and opportunities offered by a particular school. (Broekhuizen, 2016, para. 10)

In the researcher's view, when he did speak of rankings, Schlissel seemed to focus on the underlying strengths that contributed to such rankings. In his response to *The Wall Street*

Journal/Times Higher Education rankings, Schlissel (as cited in Korn, 2017) credited "economies of scale and breadth of research opportunities at the institution, as well as a strong alumni network that helps students secure internships and jobs" for the high rankings (para. 20).

Based on the examination of publicly available comments from Schlissel and U-M, it was the researcher's opinion that this study would likely not indicate that direct attention to or discussion about rankings was a priority in Schlissel's tweets. Rather, the approach taken regarding college rankings appeared to be an emphasis of other student success factors, such as affordability, research, and alumni networks. Hence, the researcher expected to see frequent mentions of these factors in Schlissel's tweets.

U-M's mission was "to serve the people of Michigan and the world through preeminence in creating, communicating, preserving and applying knowledge, art, and academic values, and in developing leaders and citizens who will challenge the present and enrich the future" (U-MPresident, 2019c, para. 1). Schlissel (2014a) added a three-point declaration of priorities in remarks after his appointment as the president: "I will work to enhance access and affordability, to promote academic excellence, and to support research and teaching of the highest impact and greatest value to society" (para. 11).

Indeed, these priorities tracked well with the previously mentioned presidential priorities of student success, affordability, and research. The researcher anticipated that alumni networks might be an additional priority, given Schlissel's inclusion of alumni networks as a student success factor (Korn, 2017, para. 21). After examining these statements, the researcher concluded that these areas would likely have been points of Twitter focus for Schlissel.

Using an approach similar to that used to examine Fuchs and Folt, the researcher examined official U-M statements for communications priorities delivered in other media that might eventually become a part of Schlissel's public communication such as tweets. The researcher examined archived messages on the Office of the President website posted during the 13-month time frame for this study (August 1, 2016 through August 31, 2017). In addition, the researcher reviewed messages posted a few months prior to the opening of the study period (based on the assumption that such statements might have influenced Twitter discussions for some time after publication).

These communications included: (a) official university "Statements," some authored by Schlissel, others unattributed (U-MPresident, 2019d); and (b) "Letters to the Community," which in a few cases were not directed at a specific audience but were most often addressed to one or more particular audiences, such as students, colleagues, faculty, and staff, or "all members of the campus community" (U-MPresident, 2019b).

After reviewing these items, and consistent with Schlissel's previous comments about the importance of people's right to have their voices heard, the researcher added *Diversity & Inclusion* to the list of emergent categories within *OTHER* for Schlissel's Twitter postings. This subject appeared to be a topic of general discussion in campus media. Related messages posted on the University's Office of the President website during the period included:

- Statement on naming of the new multicultural center (Schlissel, 2016a).
- Commentary about racist graffiti reportedly found at a U-M biological station (Schlissel, 2017g).
- Statement in support of the Deferred Action for Childhood Arrivals (DACA) program and U-M's undocumented immigrant students (Schlissel, 2016g).

- Letter from Schlissel and 47 other university presidents in which President Donald L. Trump was asked to "rectify or rescind" an order on immigration (Barchi et al. to D. L. Trump, February 2, 2017; Schlissel, 2017a).

- Message from U-M administrators and faculty and student leaders speaking out against "hateful attacks" (Schlissel, 2016f).

- Message expressing support for the community following the reported placement of "hateful flyers" on campus (Schlissel, 2016d).

- Message regarding the "Expect Respect" campaign and the importance of diverse perspectives (Schlissel, 2016b).

- Message from Schlissel and Charlton regarding a report of anti-Islam messages on campus (Schlissel & Charlton, 2016).

Data Analysis

The selected tweets were obtained using Twitter Advanced Search, and the entire text of each tweet, including links or attachments, was then coded. Information obtained in this manner was entered on coding forms using Microsoft Excel spreadsheets and then placed on a single Excel worksheet so formulas could be written to carry out the needed calculations and so the data could be analyzed and interpreted. Data were entered into tables and graphic formats focused on total counts, averages, and percent of total calculations. This data analysis section also draws heavily on various Twitter metrics.

Main Categories and Other Twitter Information

The information collected from the tweets analyzed as a part of this study was hand-coded into a Microsoft Excel-based coding sheet developed by the researcher from verbatim copies of the tweets, which were accessed through Twitter Advanced Search. The parameters

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used on the coding sheet are described in the Codebook the researcher developed (Appendix

A). These parameters included:

- Name of selected president who authored the tweet.

- Date of tweet.

- Is this tweet a retweet? Y or N?

  (Regardless of answer, analyze tweet the same way)

  o # of likes.

  o # of retweets.

  o # of comments.

  o Does the tweet include one or more photos? Y or N?

    ▪ If yes, enter coding symbol for category tweet is aligned with (if subject

      doesn't match any of the categories or is unclear, enter *OTH*)

  o Does the tweet include one or more videos? Y or N?

    ▪ If yes, enter coding symbol for category video is aligned with (if subject

      doesn't match any of the categories or is unclear, enter *OTH*)

  o Does the tweet include a link and/or hashtag? Y or N?

    ▪ If yes, enter coding symbol for category link/hashtag is aligned with (if

      subject doesn't match any of the categories or is unclear, enter *OTH*)

- Main (dominant) category (enter by category's two- or three-letter coding symbol):

  o *$$* (*Financial Resources*).

  o *AGR* (*Alumni Giving Rate*).

  o *FR* (*Faculty Resources*).

  o *GRR* (*Graduation & Retention Rates*).

- o *SEL* (*Student Selectivity*).

- o *UAR* (*Undergraduate Academic Reputation*).

- o *USP* (*University Sports Programs*).

- o *OTHER (OTH)*. Note: *OTHER* includes categories not included in the list above.

  The first six categories listed above are official selection criteria used in the 2018

  U.S. News & World Report Best Colleges rankings for top public universities; the

  final two categories were added to enable efficient capturing of other key content

  found in the tweets, and are not part of the 2018 *U.S. News & World Report*

  ranking metrics. More information on what each of these main categories

  included is found in the "Main categories of the tweets" section of this chapter.

- Additional content factors (enter symbol shown below or leave blank, as instructed):

- o Is there a *Crisis Management* element? (Y or N)

- o *Positive* or *Negative Sentiment*? (*P* or *N*)

- o *Manifest* or *Latent Content*? (*M*, *L*, or leave blank if unsure). (*Manifest/Latent*

  Content is additional to, but not separate from, the main categories listed above.

  Any of those categories–*$$, AGR, FR, GRR, SEL, UAR, USP*, or *OTH*–could also

  be coded as *Manifest or Latent Content*. A more complete definition is found later

  in this chapter and in the Codebook in Appendix A.)

After the coding was completed, the researcher analyzed the tweets coded as *OTHER*
and determined that there were a number of related tweets that could be grouped into one of
five emergent categories:

- *Campus Life,*

- *Diversity & Inclusion,*

- *Sympathy & Support.*

- *New Students.*

- *School Spirit.*

More specific information about what is included in these emergent categories is found in the "*OTHER* category" section of this chapter.

Main Categories

Table 4 shows that *OTHER* was the top-mentioned main category for each president. (*OTHER* is discussed in detail in this chapter's next section.)

The next three most frequently tweeted main categories were the same for each of the presidents: *Undergraduate Academic Reputation* (*UAR*), *Faculty Resources* (*FR*), and *University Sports Programs* (*USP*).

To facilitate a better understanding of the content of tweets falling in these categories, the following examples are provided. The tweets below were published during the timeframe of this study and were coded into the categories mentioned above–*OTH, UAR, FR* and *USP*.

Tweets coded in the *OTHER* (*OTH*) category included:

a "Happy to #BleedMaizeandBlue & save lives. There's still time to donate in the @UMich Blood Battle http://myumi.ch/aKwyy" (Schlissel, 2017c, para. 1).

b "I'm assuming everyone has read all 26 pages of UF parking regulations? Warning video induces sleep. @ufcrocodile made me do it" (Fuchs, 2017f, para. 1).

Tweets coded in the *Undergraduate Academic Reputation* (*UAR*) category included:

c "Congrats to @UNC's 12 @FulbrightPrgrm students doing high impact research around the world! #UNCWithMe" (Folt, 2017c, para. 1).

d   "University research advances life-saving discovery, workforce talent & economic

    prosperity. http://myumi.ch/aX7qp via @BridgeMichigan" (Schlissel, 2017f, para. 1).

    Tweets coded in the *Faculty Resources (FR)* category included:

e   "Professors Pamela Soltis and Douglas Soltis elected to the American Academy of

    Arts and Sciences! @FloridaMuseum https://www.amacad.org/news/

    american-academy-arts-and-sciences-elects-228-national-and-international-

    scholars-artists" (Fuchs, 2017d, para. 1).

f   "Heather Ann Thompson's #PulitzerPrize is yet more evidence of @UMich faculty

    talent, rigor & focus on key issues" (Schlissel, 2017e, para. 1).

    Tweets coded in the *University Sports Program (USP)* category included:

g   "Good to have @GatorsWBK back on campus in their new arena. Congratulations

    @CoachButlerUF and team for opening game 102 pts." (Fuchs, 2016g, para. 1).

h   "ICYMI: @UNC places 5th in Learfield Cup - 25 of 28 sports advanced to NCAA

    championship competition, impressive!" (Folt, 2017d, para. 1).

These categories were aligned identically for Schlissel and Fuchs: *UAR* first, *FR* second and *USP* third. The order of Folt's top three were different: *USP*, first; *UAR*, second; *FR*, third.

The finding that *USP* was a top-three category for tweets was not surprising to the researcher, as all three of the institutions had strong sports programs. As of March 2019, across all sports, UF, UNC, and U-M held 36, 44, and 35 Division I NCAA national championship titles, respectively (NCAA, 2019, p. 2). Further, the speed and ease of tweeting has made Twitter a desirable platform for communicating important, real-time sports information (Burns, 2014, para. 6). Finally, as noted in the UNC case study, previously

reported issues with the sports program may have prompted an intentional effort by Folt to share positive news and build confidence around those programs and UNC's reputation.

Table 4

Tweet Distribution for Main Categories (Percent).

Main Category	n	Folt	Fuchs	Schlissel	Percent
Financial Resources (*$$*)	14	1.8	0.6	5.0	2.1
Alumni Giving Rate (*AGR*)	39	7.8	2.3	4.2	5.8
Faculty Resources (*FR*)	93	11.9	14.5	18.3	13.7
Graduation & Retention Rates (*GRR*)	27	4.4	4.1	2.5	4.0
Student Selectivity (*SEL*)	5	0.8	0.6	0.8	0.8
Undergraduate Academic Rep. (*UAR*)	134	18.2	20.3	24.2	19.8
University Sports Programs (*USP*)	112	20.8	12.2	9.2	16.5
OTHER (OTH)	253	34.3	45.3	35.8	37.4
Total Main Categories (%)		100.0	99.9	100.0	100.1
Main Categories (N)	677	385	172	120	

In addition, the other top two main categories in the tweets, *UAR* and *FR*, were also highly influential selection criteria in the 2018 *U.S. News & World Report* rankings. *U.S. News & World Report* assigned each ranking category a percentage of importance in its ranking calculations, and *UAR* was tied for highest at 22.5% of the total ranking score (the other top category was *GRR*; Morse & Brooks, 2017a, p. 68). *FR* was the next highest-ranked component of the total ranking score at 20% (Morse & Brooks, 2017a, p. 68).

The *U.S. News & World Report UAR* selection criterion uses opinions of education subject-matter experts (Morse & Brooks, 2017a, p. 68). As explained in Morse and Brooks (2017a), this selection criterion includes "assessments [that] allow presidents, provosts and deans of admissions and provosts to account for qualitative attributes of peer institutions, such as faculty dedication to teaching" (p. 68).

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Given that *UAR* is both a highly subjective and important criterion, it is not surprising that tweets regarding programs, activities, and accomplishments that had the potential to influence this category were prolific for all the university presidents studied.

Tweets were coded into the *UAR* category if their primary content, as noted in the Codebook (Appendix A), included the following elements:

- Events, awards, or facts that enhanced the university's undergraduate academic reputation, such as academic excellence.

- Faculty and teaching activities.

- Dedication and commitment.

- Academic rigor.

- Rankings, awards, or recognition of academic programs, departments, or research;

- Student activities such as special events or travel study to other locations.

- Campus anniversaries (centennials, for example).

- Recognition by a governmental body recognizing the campus or congratulating the campus on a significant achievement.

In the 2018 *U.S. News & World Reports* rankings calculations, *FR* accounted for 20% of a school's overall score. The 20% value was made up of several components: (a) forty percent of this measure was class size, with top scores given for institutions with classes that averaged fewer than 20 undergraduate students. Classes with 20 to 29 students scored second highest, 30 to 39 students third highest, and 40 to 49 students fourth highest. No credit was given to institutions whose average class size was 50 students or more; (b) average faculty salary made up 15% of this score; (c) the proportion of professors who held the highest degree in their fields accounted for 15% of the score; and (d) student–faculty ratio along with

the proportion of faculty who were full-time versus adjunct both accounted for 5% (Morse & Brooks, 2017a, p. 68). Thus, 80% of a school's score for the 2018 *FR* selection criterion was based on institutional class size, average faculty salary, number of faculty who held the highest degree in their fields of expertise, student–faculty ratio, and proportion of full-time faculty to adjunct faculty (Morse & Brooks, 2017a, p. 68).

For the publicly available statistics listed here (additional details may be purchased), the three institutions examined in this study showed similar results. For example, 82.2% of U-M's classes had 49 or fewer students; the student-faculty ratio was 15:1 (U-MBudget/ Planning, 2017, p. 21). 82.2% of U-M's instructors were employed full-time (U-MBudget/ Planning, 2017, p. 20). 84.4% of UF's classes had 49 or fewer students (UF-Planning/ Research, 2018b, p. 31); the student-faculty ratio was 19:1. 84.2% of UF's instructors were employed full-time (UF-Planning/Research, 2018b, p. 30). At the UNC-Chapel Hill, 87.3% of classes had 49 or fewer students (UNC-Research/Assessment, 2018, p. 23); the student-faculty ratio was 13:1. 72.3% of UNC's instructors were employed full-time (UNC-Research/Assessment, 2018, p. 22).

Although a number of the metrics used for *FR* were clearly-defined (student-faculty ratio, for example), the researcher nevertheless concluded that consistent mention of faculty resources on Twitter potentially represented an effective tool for presidents in influencing aspects of the rankings that were subjective, for enhancing top-of-mind in the peer evaluation metrics, and for recruiting faculty members. Tweets were coded as *FR* if a tweet's content contained information showing or supporting any of the following faculty-related elements:

- Strong faculty resources, such as mentoring, faculty salaries, and raises.
- Number of full-time faculty.

- Number of faculty with a Ph.D. or terminal degree.

- Faculty expertise and competency.

- Recognition of faculty accomplishments.

Further, as shown in the Codebook (Appendix A), content could have included references to faculty benefits such as training and development, sabbaticals, and grants. Other content could have included feature stories about faculty members; faculty and senior administration recognition and awards; promotions; and announcements of subsequent hiring of university faculty by other prestigious institutions.

Regarding main categories, it should be noted that the other most influential 2018 *U.S. News & World Report* selection criterion, *Graduation & Retention Rates* (*GRR*), was not a category that contained a high number of tweets for of any of the presidents studied. For example, for Folt the frequency of *GRR* was sixth out of eight categories; for Fuchs the frequency of *GRR* was fifth out of eight; for Schlissel it was seventh out of eight.

A full examination of the reasons why *GRR* had a low frequency as a Twitter category was outside the scope of this study. However, in the researcher's opinion, these presidents may not have seen *GRR* as an agenda-setting priority because all three of these institutions already enjoyed very high levels of graduation and retention rates. In the fall of 2017, UF had a first-to-second year retention rate of 96% (case study) and a four-year graduation rate for the 2011 cohort of 67.9% (UF-Planning/Research, 2018b, line D, p. 5), significantly higher than the 40% national average for public institutions (Snyder, de Brey, & Dillow, 2019, Table 326.10, p. 560). UNC-Chapel Hill had a first-to-second-year retention rate of 96.5% (case study) and a four-year graduation rate for the 2011 cohort of 84.1% (UNC-Research/ Assessment, 2018, line D, p. 4) and U-M had a first-to-second year retention rate of 97.1%

(case study) and a four-year graduation rate for the 2011 cohort of 77.1% (U-MBudget/Planning, 2017, p. 3).

Key conclusions for main categories. Of the tweets examined, two of the top three main categories, in terms of percentage of tweets coded in those categories, *USP* and *FR*, for all three presidents were consistent with two of the top three 2018 *U.S. News & World Report* selection criteria. Folt had a higher number of tweets in the *USP* category than did Fuchs and Schlissel. This finding may have been partly a response to publicly stated expectations that Folt would rebuild confidence in UNC's sports programs, which had been the subject of a long-running investigation into academic fraud (Waller, 2014, para. 4).

OTHER Category

As explained in the "Main categories and other Twitter information" section of this chapter, *OTHER* was created for tweets in a category not aligned with one of the 2018 *U.S. News & World Report* selection criteria or *USP*. The *OTHER* category existed to capture emerging categories that the a priori categories did not capture. After completing the coding, the researcher examined all the tweets coded as *OTHER* and found that they yielded some emergent, additional distinctive categories. Descriptions of each, along with example tweets, are included below.

- *Campus Life*. Included tweets covering campus announcements, day-to-day activities, event reminders, general welcomes, thanks and greetings from the president.

  Examples of tweets in this emergent category:

  a "Tnx @UFPublicSafety for the pecan pie at today's holiday lunch! Tnx also for keeping our campus safe 24x365, even during winter break" (Fuchs, 2016f, para. 1).

b   "#UNCFallFest was a blast tonight! Huge TY to the many students & staff from @CarolinaUnion & across campus for the long hours of prep work!" (Folt, 2017f, para. 1).

- *Diversity & Inclusion*. Included information about diversity and inclusion resources, efforts, groups, and events; messages about the importance of establishing an inclusive and welcoming campus; reports of campus-based situations that displayed intolerance or hateful speech and actions; and how the campus was addressing those situations.

  Examples of sample tweets in this emergent category:

  c   "Early accomplishments on the road to a more just and equitable U-M: @UmichDiversity update details work since fall http://myumi.ch/L4YOj" (Schlissel, 2017b, para. 1).

  d   "Saddened to learn Delta Tau Delta house was vandalized w/offensive messages. I denounce all statements and symbols that hurt or disparage" (Fuchs, 2016d2, para. 1).

- *Sympathy & Support*. Included expressions of sympathy and support for events occurring off-campus. This could have included natural disasters, acts of violence, and national holidays or remembrances such as Veterans Day or Fourth of July.

  Examples of sample tweets in this emergent category:

  e   "The Florida Gators wish all members of the @UHouston community safety and protection as hurricane Harvey hits Texas" (Fuchs, 2017j, para. 1).

  f   "Thanks to first responders across our campus, community, state & nation for efforts during #Matthew. Thinking of all hurting in its wake" (Folt, 2016b, para. 1).

- *New Students.* Included welcome or instructional messages specifically directed to new students.

  Examples of sample tweets in this emergent category:

  g   "Move-in wknd brings new Tar Heels from 96 NC counties, 41 states & DC & 18 countries to campus. Welcome Heels #UNC20" (Folt, 2016a, para. 1).

  h   "Admitted students and families ready to hear all the reasons they should decide to Go Blue! #victors2021" (Schlissel, 2017d, para. 1).

- *School Spirit.* Included tweets that primarily captured (often with a photo or video) a school's mascot or school colors, or expressed school spirit or loyalty, either on campus or at another location.

  Examples of sample tweets in this emergent category:

  i   "Yes, in the 13th century there were Gators" (Fuchs, 2017g, para. 1).

  [Featured a photograph of President Fuchs in blue and orange (school colors) face paint alongside a still shot of Mel Gibson from the film "Braveheart," wearing similarly colored face paint.]

  j   "Red, white, and blue would be asking too much for this independence day [sic]. I'll settle for orange and blue" (Fuchs, 2017h, para. 1).

  [Accompanied by a photograph of Queen Elizabeth II in a blue and orange suit.]

As noted in the "Main categories" section of this chapter, the tweets of all three presidents were coded into the *OTHER* category with the highest frequency. 34.3% of Folt's tweets were coded into that category; 45.3% of Fuchs's tweets were included in *OTHER*; and 35.8% of Schlissel's tweets were coded as *OTHER*. As shown in Table 5, three of the emergent *OTHER* categories–*Campus Life*, *Diversity & Inclusion*, and *Sympathy & Support*–

contained the highest number of tweets the for all three presidents studied; again, however, these three categories were in a different order (relative to the percentage of tweets they contained) for each of the three presidents. For Folt, *Campus Life* represented 56.1% of the total number of tweets coded in the *OTHER* category; *Sympathy & Support* was second at 21.2% and *Diversity & Inclusion* was third at 17.4%. Fuchs's top three *OTHER* emergent categories appeared in the same order: *Campus Life* was 52.6%; *Sympathy & Support* was 20.5%; and *Diversity & Inclusion* was 16.7%. For Schlissel, *Campus Life* was highest at 44.2%, *Diversity & Inclusion* was second at 41.9%, and *Sympathy & Support* trailed at 14.3%.

The relatively high or low mention of a particular category, such as *Sympathy & Support*, is not an indicator that a particular president supported (or did not support) that subject versus others. Instead, the number of mentions may have simply reflected a particular event's domination of the time period of the study and so appeared more frequently in that president's tweets. For example, Folt and Fuchs each had a higher proportion of tweets in *Sympathy & Support* than did Schlissel. Both Folt and Fuchs tweeted messages of concern and support about hurricanes and storms in the southeast United States, weather events that did not impact Schlissel's U-M campus to the same extent.

Conversely, Schlissel, who had the largest proportion of tweets coded as *Diversity & Inclusion*, may have been mirroring through his Twitter posts other university communications on this subject. As noted in the case study, U-M's Office of the President issued at least eight statements generally connected to diversity and inclusion issues during the study period.

Table 5
Tweet Distribution for OTHER Emergent Categories (Percent).

OTHER Emergent Categories	n	Folt	Fuchs	Schlissel	Total
Campus Life	134	56.1	52.6	44.2	53.0
Diversity & Inclusion	54	17.4	16.7	41.9	21.3
Sympathy & Support	50	21.2	20.5	14.0	19.8
New Students	9	5.3	2.6	0.0	3.6
School Spirit	6	0.0	7.7	0.0	2.4
Total *OTHER* Emergent Categories (%)		100.0	100.1	100.1	100.1
OTHER Emergent Categories (N)	253	132	78	43	

Consistent with agenda-setting theory, issuing a number of tweets in the same category may be evidence of the importance and significance of that category. Like many other campuses, UF and UNC had at times dealt with diversity and inclusion issues, and their presidents had communicated openly about them, as noted in the case studies. However, for Folt and Fuchs, two events dominated media generally during their respective presidencies: a speech given by white nationalist Richard Spencer at the UF campus (Levenson, 2017), and the tearing down of a Confederate statue on the UNC campus (Katz, 2018). As both of those events occurred after the timeframe of this study, they simply may not have received the same focus on Twitter as did events that took place during the study period.

Key conclusions for *OTHER* and its emergent categories. The number of tweets coded as *OTHER* supports a premise that a primary reason all three presidents used Twitter was to manage and communicate about daily campus operations. *OTHER* had the highest percentage of tweets of any category (Table 5): Folt, 34.3%; Fuchs, 45.3%; and Schlissel, 35.8%. Of all the emergent *OTHER* categories, *Campus Life* had the highest percentage of

tweets for each president. *Campus Life* included routine campus announcements, tweets about daily activities, reminders of events, general welcomes, and greetings from the president.

However, although both the *Campus Life* and *Diversity & Inclusion* emergent categories contained high respective proportions of tweets, those proportions did not exceed the proportion of tweets coded as *UAR* or *FR* for any of the three presidents. Thus, for the tweets reviewed in this study, the 2018 *U.S. News & World Report* selection criteria *UAR* and *FR* remained among the top three categories into which each of the presidents' tweets were coded.

Tweets vs. Retweets

Of the 677 tweets coded as a part of this study, 597 (88%) were newly created and 80 (12%) were retweets. Of those retweets, the majority fell under *USP*, followed by *Campus Life* (emergent category in *OTHER*), and *UAR*.

Key conclusions for distribution of tweets. The presidents were far more likely to use original content in their tweets than they were to retweet the content of others. When retweeting, they were most likely to retweet about *USP*, *Campus Life* (emergent category in *OTHER*), and *UAR*.

Twitter Engagement Levels: Audience-Generated Likes, Comments, and Retweets

A key part of this study's coding process was to examine how readers and followers of the presidents' tweets engaged with the presidents on Twitter. Twitter included several indicators of audience and follower engagement. Social media measurement experts such as HubNami (Nadeau, 2015), the Content Marketing Institute (Raso, 2016), and Sprout Social (Carter, 2018), all reference likes, retweets, and mentions as key engagement indicators. In

this study, the researcher examined those three factors to determine whether they could

provide insight into whether and how audiences engaged with and reacted the coded tweets.

Likes

For all of the presidents, the tweets liked most often were those coded as *UAR*, *USP*,

and *OTHER*, as illustrated in Table 6.

Table 6
Likes by Main Categories and OTHER Emergent Categories.

Main Categories and *OTHER* Emergent Categories	n	Folt	Fuchs	Schlissel	Avg. (%)
Financial Resources ($$)	1394	1.0	0.1	5.6	1.8
Alumni Giving Rate (AGR)	4218	9.0	2.7	3.8	5.5
Faculty Resources (FR)	4894	5.6	5.9	8.2	6.3
Graduation & Retention Rates (GRR)	3716	5.5	3.9	5.1	4.8
Student Selectivity (SEL)	467	1.0	0.4	0.3	0.6
Undergrad. Academic Reputation (UAR)	12213	9.9	19.7	19.7	15.8
University Sports Programs (USP)	22348	40.9	13.2	32.7	28.9
OTHER (OTH)	28021	27.1	54.1	24.5	36.3
Total Main Category (%)		100.0	100.0	99.9	100.0
Main Category (N)	77271	30657	27966	18648	
Campus Life	12963	15.8	23.4	8.4	16.8
Diversity & Inclusion	5684	4.1	8.7	10.7	7.4
Sympathy & Support	5131	5.6	8.6	5.3	6.6
New Students	1102	1.6	2.1	0.0	1.4
School Spirit	3141	0.0	11.2	0.0	4.1
Total *OTHER* Emergent Category (%)		27.1	54.0	24.4	36.3
OTHER Emergent Category (N)	28021	8323	15134	4564	

These three categories were prioritized differently for each president. In declining

order, the greatest proportion of "liked" tweets for Folt were coded in the categories of *USP*,

OTHER, and *UAR*; for Fuchs, the order was *OTHER*, *USP*, and *UAR*; for Schlissel, the categories with the greatest proportion of tweets with likes were *USP*, *OTHER*, and *UAR*.

Likes: OTHER Emergent Categories

Within *OTHER*, as Table 6 shows, the emergent categories of tweets with the greatest number of likes for Folt's tweets were *Campus Life* (15.8% of *OTHER* tweets), *Sympathy & Support* (5.6% of *OTHER* tweets), and *Diversity & Inclusion* (4.1% of *OTHER* tweets). For Fuchs, likes were most prolific in *Campus Life* (23.4%), *School Spirit* (11.2%), and *Diversity & Inclusion* (8.7%). Schlissel's most-liked tweets were coded as *Diversity & Inclusion* (10.7%), *Campus Life* (8.4%), and *Sympathy & Support* (5.3%).

Key conclusions for likes. The analysis revealed similarities among all three presidents in terms of the categories that received the most likes. For all of the presidents, the tweets liked most often were those coded as *UAR*, *USP*, and *OTHER*. Within the OTHER emergent category, *Campus Life* and *Diversity & Inclusion* were among the top three for all presidents.

A content area singular to Fuchs's tweets was the *OTHER* emergent category *School Spirit*. These tweets mainly consisted of posts about UF's mascot or school colors (often with a photo or video) or an expression of school spirit or loyalty, either on- or off-campus. It seems evident from the relatively high proportion of "likes" for this category that audiences reacted favorably to such content.

Comments

Table 7 shows that the categories with the most tweets with Comments converged somewhat for each president. For Folt, the top Comment-getting categories of tweets were *OTHER* (34.9%), *USP* (25.3%), and *UAR* (12.5%). For Fuchs, top categories were *OTHER*,

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(42.4%), *GRR* (25.2%), and *UAR* (21.7%). Schlissel's top category for comments was

OTHER (59.6%), followed by *UAR* (17.5%), and *USP* (7.8%).

Table 7
Comments by Main Categories and OTHER Emergent Categories.

Main Categories and *OTHER* Emergent Categories	n	Folt	Fuchs	Schlissel	Avg. (%)
Financial Resources ($$)	49	3.5	0.0	6.5	3.3
Alumni Giving Rate (AGR)	49	10.4	1.3	0.5	3.3
Faculty Resources (FR)	79	6.9	3.9	5.8	5.4
Graduation & Retention Rates (GRR)	171	6.1	25.2	2.0	11.6
Student Selectivity (SEL)	6	0.3	0.6	0.4	0.4
Undergrad. Academic Reputation (UAR)	262	12.5	21.7	17.5	17.8
University Sports Programs (USP)	165	25.3	5.0	7.8	11.2
OTHER (OTH)	691	34.9	42.4	59.6	46.9
Total Main Category (%)		99.9	100.1	100.1	99.9
Main Category (N)	1472	375	543	554	
Campus Life	173	19.5	11.4	6.9	11.8
Diversity & Inclusion	376	4.3	18.2	47.1	25.5
Sympathy & Support	91	8.8	5.0	5.6	6.2
New Students	17	2.4	1.5	0.0	1.2
School Spirit	34	0.0	6.3	0.0	2.3
Total *OTHER* Emergent Category (%)		35.0	42.4	59.6	47.0
OTHER Emergent Category (N)	691	131	230	330	

Comments: OTHER Emergent Categories

For all three presidents, tweets with comments in the *OTHER* category, the emergent

categories of *Campus Life* and *Diversity & Inclusion*, had the most comments. Of all the

emergent *OTHER* categories, *Diversity & Inclusion* was the top category for both Fuchs and

Schlissel. A key observation from the comment analysis was the high proportion of comments

Schlissel received on tweets coded into *Diversity & Inclusion*. The percentage of comments on his *Diversity & Inclusion* tweets (47.1%) was nearly three times higher than *UAR* (the next highest category), and was more than twice as large as the percentage of comments for the other two presidents in any of the *OTHER* emergent categories.

The results shown in Table 5 may be illustrative of agenda-setting theory At least eight statements related to *Diversity & Inclusion* generally were issued by U-M's Office of the President during the study timeframe. And, of the three presidents, Schlissel issued the largest proportion of tweets devoted to *Diversity & Inclusion*; he may have been reflecting and redirecting these other communications via Twitter. Consistent with agenda-setting theory, these tweets may be evidence of the importance and significance of this topic; the high level of audience engagement could also be a reflection of that importance and significance.

The high engagement level could also be linked to contagion theory, which shows how beliefs, viewpoints, or emotions spread among groups or networks; contagion occurs when "individuals are influenced by others in the same network and develop similar thoughts, attitudes, and behaviors" (Im et al., 2013, p. 3848).

Consistent with agenda-setting theory, the categories' importance and significance may have been reinforced by sending some of those tweets, thus evoking many responses–in other words, the more a topic was tweeted about, the more responses the president received.

Retweets

As with likes and comments, the retweet pattern was relatively consistent. Folt's top three retweet categories (Table 8) were *USP*, *OTHER*, and *UAR*. Fuchs's were the same, but reordered: *OTHER*, *UAR*, and *USP*. Schlissel's were *OTHER*, *UAR*, and *GRR*. Of the tweets coded into the *OTHER* emergent categories, all three presidents received the highest proportion of retweets in *Campus Life*, *Diversity & Inclusion*, and *Sympathy & Support*.

Table 8

Retweets by Main Categories and OTHER Emergent Categories.

Main Categories and *OTHER* Emergent Categories	n	Folt	Fuchs	Schlissel	Avg. (%)
Financial Resources ($$)	761	1.6	0.2	8.7	3.6
Alumni Giving Rate (AGR)	954	9.9	2.3	2.0	4.6
Faculty Resources (FR)	1397	7.1	6.3	6.6	6.7
Graduation & Retention Rates (GRR)	1636	3.7	3.0	15.9	7.8
Student Selectivity (SEL)	121	0.6	0.8	0.3	0.6
Undergrad. Academic Reputation (UAR)	4833	12.2	29.8	26.3	23.1
University Sports Programs (USP)	4317	36.9	10.8	15.4	20.6
OTHER (OTH)	6945	27.9	46.9	24.8	33.1
Total Main Category (%)		99.9	100.1	100.0	100.1
Main Category (N)	20964	6562	6970	7432	
Campus Life	2494	13.3	17.3	5.6	11.9
Diversity & Inclusion	2176	5.6	9.9	15.1	10.4
Sympathy & Support	1385	6.7	9.1	4.2	6.6
New Students	271	2.3	1.8	0.0	1.3
School Spirit	619	0.0	8.9	0.0	3.0
Total *OTHER* Emergent Category (%)		27.9	47.0	24.9	33.2
OTHER Emergent Category (N)	6945	1833	3267	1845	

Key conclusion for comments and retweets. It has already been noted that the high level of engagement for Schlissel's *Diversity & Inclusion*-related tweets may have reinforced the importance and significance of these topics, and that the level of audience engagement with him could reflect that importance and significance. The results shown in Tables 6 and 7 supported two other conclusions about engagement with the tweets from all three presidents.

First, followers who read the presidents' tweets evaluated for this study frequently liked, commented on, and retweeted tweets with categories of *USP*, *UAR*, and *OTHER*; top categories within *OTHER* were *Campus Life*, *Diversity & Inclusion*, and *Sympathy & Support*. This finding reflects a high level of interest in and engagement with the tweets regarding the *UAR* category that were sent by the three presidents during the study period.

An additional outlier in the engagement analysis involved Fuchs and the *OTHER* emergent category of *School Spirit*. As previously discussed regarding the *OTHER* category, although Folt and Schlissel often tweeted messages of support, affection, and recognition for their universities, only Fuchs's tweets (six in all) met the definition for tweets coded as *School Spirit*. This definition included tweets having content that primarily captured (often with a photo or video) the school's mascot or school colors, or expressed school spirit or loyalty, either on campus or at another location. The researcher theorized that the *School Spirit* category may have contained more tweets from Fuchs because of Florida's unique and distinctive school color combination (blue and orange) and the fact that its mascot was a well-known, easily recognizable reptile often seen, literally or iconically, in that geographic area.

Use of Photos, Videos, and Links

The percentages of tweets to which the presidents added supplemental content (photos, videos, or links) were similar (Table 9).

Table 9
Use of Photos, Videos, and Links by University President.

Media Used	n	Folt	Fuchs	Schlissel	Avg. (%)
Photos	438	63.1	73.8	56.7	64.7
Videos	60	11.2	7.6	3.3	8.9
Links	621	95.1	82.6	94.2	91.7
Total Media (N)	1119				

It should be noted that there were more total attached media (1119) than there were tweets because, on average, multiple attached media were included with the 677 tweets evaluated. The presidents added photos, videos, or links to their tweets at frequencies that were relatively similar. Each of them added links to a large majority of their tweets and used

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photos in well over 50% of their tweets. Video links were used at a much lower rate; for Folt, the video utilization rate was just over 10%; for Fuchs and Schlissel it was well under 10%.

Photos: Alignment with specific categories and emergent categories. Photos were in the presidents' tweets a combined average of 64.7% of the time (Table 9). Tweets accompanied by photos were most often coded as *OTHER* (Table 10). *UAR* contained the second highest proportion of tweets that included photos; however, the final top-three category diverged among the presidents. Schlissel and Fuchs rounded out their top-three categories with *FR*; in contrast, Folt's third-highest category was *USP*.

Table 4
Photo Use: Main Category Alignment.

Main Category	n	Folt	Fuchs	Schlissel	Avg. (%)
Financial Resources ($$)	6	1.7	0.0	2.9	1.4
Alumni Giving Rate (AGR)	25	7.4	3.2	4.4	5.7
Faculty Resources (FR)	60	10.3	15.8	22.1	13.7
Graduation & Retention Rates (GRR)	19	5.8	2.4	2.9	4.3
Student Selectivity (SEL)	3	0.8	0.8	0.0	0.7
Undergrad. Academic Reputation (UAR)	90	21.0	18.1	23.5	20.6
University Sports Programs (USP)	61	17.3	12.6	4.4	13.9
OTHER (OTH)	174	35.8	47.2	39.7	39.7
Total Main Category (%)		100.1	100.1	99.9	100.0
Main Category (N) 438	243	127	68		

The *OTHER* emergent categories of the three presidents' tweets were also mostly consistent regarding inclusion of photos (Table 11). Within the emergent *OTHER* categories, each of the presidents attached photos to their tweets most often in posts coded in the *Campus Life* category, followed by *Diversity & Inclusion*. Folt's and Schlissel's third-ranked emergent category, in terms of photo inclusion, was *Sympathy & Support*; Fuchs's was *School Spirit*.

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It should be noted that in tables 11, 12 and 13 below, n only includes tweets in that portion of the total field of 677 tweets that contained photos, videos, or links, respectively.

Table 5
Photo Use: OTHER Emergent Category Alignment.

OTHER Emergent Category	n	Folt	Fuchs	Schlissel	Avg. (%)
Campus Life	95	59.5	60.7	53.8	59.5
Diversity & Inclusion	34	20.3	16.1	34.6	20.9
Sympathy & Support	21	16.5	8.9	11.5	12.9
New Students	5	3.8	3.6	0.0	3.1
School Spirit	6	0.0	10.7	0.0	3.7
Total *OTHER* Emergent Category (%)		100.1	100.0	99.9	100.1
OTHER Emergent Category (N)	161	81	56	26	

This study showed that the presidents attached videos to their tweets less than 10% of the time (Table 9). For Folt and Fuchs, the category containing the most tweets with videos was *OTHER* (Table 12). For Schlissel, 50% of the tweets with video were coded as *UAR*, with *OTHER* and *$$* were at 25%. Folt's second- and third-highest proportion of tweets including video were coded as *USP* and *FR*; Fuchs's were *USP* and *GRR*, in that order.

Table 6
Video Use: Main Category Alignment.

Main Category	n	Folt	Fuchs	Schlissel	Avg. (%)
Financial Resources ($$)	1	0.0	0.0	25.0	1.7
Alumni Giving Rate (AGR)	1	2.3	0.0	0.0	1.7
Faculty Resources (FR)	4	9.3	0.0	0.0	6.7
Graduation & Retention Rates (GRR)	2	2.3	7.7	0.0	3.3
Student Selectivity (SEL)	0	0.0	0.0	0.0	0.0
Undergrad. Academic Reputation (UAR)	5	4.7	7.7	50.0	8.3
University Sports Programs (USP)	19	37.2	23.1	0.0	31.7
OTHER (OTH)	28	44.2	61.5	25.0	46.7
Total Main Category (%)		100.0	100.0	100.0	100.1
Main Category (N)	60	43	13	4	

Within the *OTHER* category, the largest proportion of Folt's tweets having attached videos were in *Campus Life*; for Fuchs, tweets with videos had a similar result. However, all of Schlissel's tweets with videos in the *OTHER* emergent category were coded as *Sympathy & Support* (Table 13).

Table 7
Video Use: OTHER Emergent Category Alignment.

OTHER Emergent Category	n	Folt	Fuchs	Schlissel	Avg. (%)
Campus Life	19	68.4	75.0	0.0	67.9
Diversity & Inclusion	3	10.5	12.5	0.0	10.7
Sympathy & Support	4	10.5	12.5	100.0	14.3
New Students	2	10.5	0.0	0.0	7.1
School Spirit	0	0.0	0.0	0.0	0.0
Total *OTHER* Emergent Category (%)		99.9	100.0	100.0	100.0
OTHER Emergent Category (N)	28	19	8	1	

Links: **Alignment with specific categories.** Each of the three presidents included links in their tweets an average of over 91% of the time (Table 9). Unlike tweets having videos attached to the tweets, but similar to tweets having photos attached to the tweets, tweets having attached links were coded into fairly consistent categories for all three presidents.

As shown in Table 14, the content of the presidents' tweets containing links were created and sent by each of the three presidents was coded most often as *OTHER*; *UAR* was also a top-three category for each of the presidents. *UAR* was the second highest category containing links for Fuchs and Schlissel and the third highest for Folt. For Folt, *USP* was second highest category with links, and for Fuchs and Schlissel *FR* was the third highest link-containing category.

Table 8
Link Use: Main Category Alignment.

Main Category	n	Folt	Fuchs	Schlissel	Avg. (%)
Financial Resources ($$)	12	1.4	0.7	5.3	1.9
Alumni Giving Rate (AGR)	29	6.3	2.1	2.6	4.7
Faculty Resources (FR)	84	11.5	16.9	15.9	13.5
Graduation & Retention Rates (GRR)	26	5.2	3.5	1.8	4.2
Student Selectivity (SEL)	5	0.8	0.7	0.9	0.8
Undergrad. Academic Reputation (UAR)	122	18.6	17.6	25.7	19.7
University Sports Programs (USP)	108	21.3	13.4	9.7	17.4
OTHER (OTH)	235	35.0	45.1	38.1	37.8
Total Main Category (%)		100.1	100.0	100.0	100.0
Main Category (N)	621	366	142	113	621

As shown in Table 15, of the tweets within the *OTHER* category, the highest proportion for all three presidents were coded as *Campus Life*, *Diversity & Inclusion*, and *Sympathy & Support*. The order of those three categories were slightly different for the three presidents.

Table 9
Link Use: OTHER Emergent Category Alignment.

OTHER Emergent Category	n	Folt	Fuchs	Schlissel	Avg. (%)
Campus Life	107	52.5	50.0	45.9	50.7
Diversity & Inclusion	50	19.5	19.6	43.2	23.7
Sympathy & Support	46	22.9	26.8	10.8	21.8
New Students	7	5.1	1.8	0.0	3.3
School Spirit	1	0.0	1.8	0.0	0.5
Total *OTHER* Emergent Category (%)		100.0	100.0	99.9	100.1
OTHER Emergent Category (N)	211	118	56	37	

Twenty-two tweets that included links and which were coded as *OTHER* were not relevant to any of the five *OTHER* emergent categories. Thus, N = 235 in Table 14 and N = 213 in Table 15.

Key conclusions for photo, video, and link use. The categories containing the highest proportion of tweets with photos and tweets with links paralleled the top overall categories into which tweets were coded, as discussed earlier. In other words, the presidents appeared to go to the effort of attaching photos, videos and links to the topics they tweeted about the most. Nearly 70% of the tweets coded in this study contained photos, and over 90% included links. Link and photo use was an important element of determining a tweet's category. In the researcher's opinion, the presidents appeared to believe that the use of links and photos with tweets helped to shape the viewers' perception of the tweet's overall content.

Although attaching video to tweets may have also shaped perceptions about Twitter content, tweets with attached videos represented less than 10% of the tweets evaluated as a part of this study. The further complexity and time involved in capturing and adding video to a tweet may explain why videos were included less often with the tweets in this study than were attached photos and links. Also, the subjects of some tweets simply may not have facilitated the addition of video. For instance, *Student Selectivity* was only infrequently identified as a category in the tweets analyzed in this study; this could be because the institutions would have established the admission requirements they used to select students for admission well before the accepted students arrived on campus; thus, there likely would not have been much need for video or photographic representation of *Student Selectivity* by the presidents.

Links, photos, and videos: Relationship to audience engagement. Evaluating tweets with attached links, photos, and videos raised the question of whether the use of these

added features resulted in higher levels of viewer engagement with the tweets, as measured by a higher proportion of likes, comments, and retweets. These metrics were important to consider, particularly the number of retweets, which are "Twitter's most powerful method of reward" (Lorenz, 2018, para. 5). Twitter's like and comment features demonstrate passive engagement by the viewer of the tweet and also indicate the viewer's approval, agreement, or opinion. Unlike tweeting, retweeting involves more active engagement and action (sending the retweet) by viewers (Zhang, Han, Yang, & Zhang, 2017, Figure 4, p. 8). Retweets are a means of amplifying and spreading content to potentially large groups of Twitter users, representing a potential expression of contagion theory.

General findings about Twitter use support the hypothesis that enhancing tweets by attaching photos and videos amplifies the frequency of retweets. According to Twitter's own analysis of over two million tweets, tweets that included photos averaged 35% more retweets than did tweets that did not contain photos. Tweets with added videos received 28% more retweets (Frogers, 2014, para. 12). However, the findings from an analysis of the 677 tweets examined in this study were somewhat inconclusive as to whether including photos and videos increased an audience's engagement with a tweet.

Tweets with attached links and photos received a relatively high average number of likes, comments, and retweets; however, this average did not exceed the average number of likes, comments, and retweets for tweets with nothing attached (Table 16). Moreover, tweets having a link and photo OR video elements did not have a higher level of engagement as measured by the average number of likes, comments, and retweets.

Key conclusions for links, photos, and videos: Audience engagement relationship. As shown on lines 3 and 4 of Table 16, including attached photos and videos with tweets

resulted in higher levels of engagement than did tweets that only included a link (Table 16, line 2). However, as presented on lines 1, 3 and 4 of Table 16, including supplemental photos and videos did not receive, on a proportionate basis, more likes, comments or retweets than did tweets that had no attachments–including links–at all. However, this finding was based on examination of a very small number of tweets, and a variation of only one or two tweets could have changed the results.

Table 10
Likes, Comments, & Retweets, Based on Attachments (Average #/ Tweet).

Type of Attachment	N	Likes	Comments	Retweets
Nothing attached	10	271.0	19.1	86.5
Link only	173	102.7	2.5	28.9
Photo only	41	249.0	2.7	47.2
Video only	5	243.4	2.0	58.8
Video and link	393	108.0	1.6	29.3
Photo and link	51	100.7	1.6	28.8
Photo and video and link	4	69.1	0.3	12.8
All Tweets	677			

Crisis Management

Crisis Management was not considered in the metrics used in the 2018 *U.S. News & World Report* rankings. Even so, the researcher theorized that there was a potential for the presidents to send crisis-related tweets. For example, such posts may have aligned with certain categories related to the 2018 rankings, or the occurrence of a crisis may help explain why a president's tweets were focused on a topic other than college ranking categories.

As explained in the Codebook (see Appendix A) tweets coded as *Crisis Management* included:

- Apologies or explanations involving unfavorable events concerning sports teams, administrators, students, etc., as well as the efforts to address such events.

- Complaints, unfavorable reviews, or sanctions from governance organizations such as accrediting bodies or the NCAA.

- Crimes on campus.

- Responses to unfavorable news articles or social media about the institution.

Crisis Management was an a priori category in this analysis. During the coding process, each tweet was coded, according to its content, as a 2018 *U.S. News & World Report* category, or *USP*, or *OTHER*. After the entry for each tweet was coded into one of those a priori categories, the tweet's content was also subsequently analyzed for potential coding as a *Crisis Management* tweet.

The content of two tweets published by the selected presidents during the timeframe of this study have been transcribed and have been included here as examples to facilitate a fuller understanding of how the content of tweets evaluated during this study was coded as *Crisis Management*.

The tweets below were coded as *Crisis Management* tweets:

a   This tweet had no text; instead, it consisted only of the attached image of a letter. The text of the letter was as follows:

> Over the weekend, racially charged flyers were distributed on campus. As the president of one of the nation's largest public research universities fully committed to inclusion, I find the flyers' message offensive. With politics and differing points of view leading to heightened frustrations and concerns across the nation and in Gainesville, I reaffirm that our university is a caring and diverse community that celebrates and embraces students, faculty and staff of all backgrounds, experiences and perspectives, and we are firmly committed to supporting al members of our community. I denounce any statements and symbols that hurt or disparage others. [Signed] W. Kent Fuchs. (Fuchs, 2016b, para. 1)

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b   "Confront hateful speech with speech that is more reflective of our values. Sunday

   1pm in the Michigan Union Ballroom http://myumi.ch/abW4Y" (Schlissel, 2016e,

   para. 1).

   As shown in Table 17, the majority of the *Crisis Management* tweets were coded in

OTHER, and more specifically, in the *Diversity & Inclusion* emergent category. In fact, 13 of

the total 15 *Crisis Management*-coded tweets (for all three presidents combined) fell into this

category. It should be remembered that a *Crisis Management*-coded tweet could have

involved circumstances other than communication about a crisis itself; rather, the tweet could

have been an apology for or explanation of corrective action about a particular incident.

Table 11
Crisis Management by Main Category and OTHER Emergent Category (N)

Main Categories and *OTHER* Emergent Categories	Folt	Fuchs	Schlissel	N
Financial Resources ($$)	0	0	0	0
Alumni Giving Rate (AGR)	1	0	0	1
Faculty Resources (FR)	0	0	0	0
Graduation & Retention Rates (GRR)	0	0	0	0
Student Selectivity (SEL)	0	0	0	0
Undergrad. Academic Reputation (UAR)	1	0	0	1
University Sports Programs (USP)	0	0	0	0
OTHER (OTH)	0	3	10	13
Main Category (n)	2	3	10	15
Campus Life	0	0	0	0
Diversity & Inclusion	0	3	10	13
Sympathy & Support	0	0	0	0
New Students	0	0	0	0
School Spirit	0	0	0	0
OTHER Emergent Category (n)	0	3	10	13

Key conclusion for *Crisis Management.* Only 15 of the total of 677 tweets evaluated as part of this study were coded as *Crisis Management* (Table 17). However, among those 15 tweets, the large majority (13 of 15) were in the *Diversity & Inclusion* emergent category of *OTHER*. It should not be inferred from the data in Table 17 that any of the three campuses included in this study experienced more crises than did another. If the president of one campus issued more crisis management tweets did another president, it may simply be that the other presidents choose to communicate about crises through channels other than Twitter.

Positive and Negative Sentiment

Coding for positive and negative sentiment provided an additional dimension of analysis for the tweets in this study. Following the coding of content to identify the category that best fit the text and any attachments (links, photos or videos) associated with each tweet, sentiment coding was then introduced to determine whether that content was favorable to the tweet's subject (president, university, accrediting body, current event, political figure, etc.). As noted in the Codebook (Appendix A), several factors were considered in determining positive or negative sentiment.

The sentiment was coded as positive if nouns and adjectives used in the tweet tended to be complimentary and positive. Positive content could include participation in beneficial programs or events, service to school or community, recognitions and awards for the campus community or university, progress toward a goal or milestone, and encouragements and reminders to participate in civic activities such as blood drives or voter registration. Other positive content could include expressions of sympathy or support for an external event, such as a natural disaster (even if the event itself was negative), athletic success, faculty profiles, faculty research, faculty new hires, and student/alumni profiles. A president's participation in

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external events, such as conferences, remembrances, or reflections on past events (even if the event itself was negative, such as 9/11) was also considered positive.

As noted in Plathottam (2008), positive sentiment could include "reports of alternative acts intended to fight against or ameliorate events reported under negative news" (p. 370). Further, actions or events intended to "counteract negative acts or trends," such as social injustice, inequality, racism, and discrimination also constituted positive sentiment (Plathottam, 2008, p. 370). Thus, the sentiment of a tweet in this study was considered positive if a president explained how they were addressing previously reported "negative acts or trends" (Plathottam, 2008, p. 370).

Negative sentiment could include bad news or negative information, crimes, announcements, or reports (Plathottam, 2008, pp. 318-319). Further, negative content could include criticisms or complaints about individuals, policies, or legislation; personnel announcements or investigations; demonstrations or complaints about university administration or other personnel; negative actions against the university by outside organizations; and funding cuts or budget problems.

A major difference between positive and negative sentiment, for the purposes of this study, was that if a president communicated any kind of bad news for the first time (in other words, if the tweet constituted an announcement of the bad news), then the tweet was coded as having *Negative Sentiment*. However, if the president's tweet referred to a bad news event after it had already been announced (drawing that context from the tweet itself), and if the tweet expressed sympathy, support, or solidarity or described what the president or the school was doing to address the issue, the sentiment was coded as having *Positive Sentiment*.

The proportions of positive and negative sentiment in the studied tweets are provided in Table 18. Consistent with the researcher's hypothesis that a majority of tweets would be positive, and in keeping with the presidents' stated communications goals (and contagion theory's principle that positive emotions spread more effectively), the vast majority of tweets were indeed positive. Across all three presidents, only four tweets (of 677) were coded as negative. The *Negative Sentiment* tweets were coded in the *$$* and *UAR* categories.

Table 12
Tweets Coded with Negative Sentiment (Number)

Main Categories and *OTHER* Emergent Categories	Folt	Fuchs	Schlissel	N
Financial Resources ($$)	0	1	2	3
Alumni Giving Rate (AGR)	0	0	0	0
Faculty Resources (FR)	0	0	0	0
Graduation & Retention Rates (GRR)	0	0	0	0
Student Selectivity (SEL)	0	0	0	0
Undergrad. Academic Reputation (UAR)	0	0	0	0
University Sports Programs (USP)	0	0	0	0
OTHER (OTH)	0	1	0	1
Main Category (n)	0	1	2	4
Campus Life	0	0	0	0
Diversity & Inclusion	0	1	0	1
Sympathy & Support	0	0	0	0
New Students	0	0	0	0
School Spirit	0	0	0	0
OTHER Emergent Category (n)	0	1	0	1

For example, in one tweet sent during the timeframe of this study, Fuchs commented on a newspaper editorial (UF should let Spencer speak, 2017, p. 6A) that was critical of UF; this tweet was coded as having *Negative Sentiment*. The tweet's text was "Strongly disagree

that we could have prevented the violence and death as threatened at UF and demonstrated at UVA" (Fuchs, 2017i2, para. 1).

Key conclusions for *Positive* and *Negative Sentiment*. An overwhelming majority of the tweets evaluated as a part of this study were coded with *Positive Sentiment*. Four of 677 tweets had *Negative Sentiment*. One such tweet took exception to a newspaper editorial The other three tweets coded with *Negative Sentiment* were coded as *$$* and discussed financial access, research funding, or rising costs. This finding was consistent with the presidents' stated priorities of research and financial access.

Manifest and Latent Content

Manifest content refers to the literal meaning of the words and content used in a specific communication. In other words, manifest content is what is actually communicated in the text (Bengtsson, 2016, p. 10). Manifest content follows the content of a communication closely and often uses "the words themselves and describes the visible and obvious in the text" (Bengtsson, 2016, p. 10). Latent content, on the other hand, "is less obvious. Latent content refers to the underlying meaning of the surface content we observe" (Blackstone, 2012, p. 301).

During the coding process used in this study, the researcher made a fundamental assumption regarding manifest content that tweets that were readily identified as aligning with one of the 2018 *U.S. News & World Report* main categories or *USP* would, in general, contain manifest content. Based on this assumption, the distribution of tweets coded as having manifest content closely matched the distribution of the main categories of the tweets examined.

Tweets coded with manifest content included tweets that liberally used the words and or terms described for the six 2018 *U.S. News & World Report* categories used in the rankings, as well as those used for *USP*. Unless there was an obvious exception to this, by definition if a tweet's content aligned with one of these seven categories, then it explicitly contained the references, definitions, and terms related to that category and was coded as having *Manifest Content*.

However, the remaining two a priori categories, *Crisis Management* and *OTHER,* may have included tweets that could also have contained *latent* content relating to *Crisis Management* and *OTHER*. Such tweets were examined for potential manifest and latent content, as shown in Tables 19 and 20. Four hundred thirty-two tweets (63.4%) of the total field of 677 tweets were coded with manifest content. Two hundred forty-one (35.6%) of the total field were coded with latent content.

For example, the text of the tweet provided below was posted during the timeframe of this study by Chancellor Folt, was coded as having *Latent Content* and was coded into the *OTHER* emergent category of *Diversity & Inclusion*. The rationale behind the coding of this tweet was that, even though the tweet's content did not explicitly mention either diversity or inclusion specifically, tweeting about a campus event sponsored by and for a diverse group was a latent indicator of a campus environment that was both inclusive and diverse. The tweet stated "Great to visit with new & returning Tar Heels at @UNC_AIC's Welcome Extravaganza for the Carolina American Indian Community!" (Folt, 2017g, para. 1).

As shown in Table 19, the *U.S. News & World Report UAR* and *FR* categories (Table 4) of had the highest frequency of tweets with manifest content (31.0% overall for *UAR*, 21.5% overall for *FR*). The other highest-ranking category for manifest content was *USP*

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(25.5%). Table 20 shows that latent content was coded far more frequently in *OTHER*, again

falling into the same emergent categories that also contained the highest frequencies (Table

5) of tweets overall within the *OTHER* category: *Campus Life*, *Diversity & Inclusion*, and

Sympathy & Support.

Table 19
Tweets Coded with Manifest Content

Main Categories and *OTHER* Emergent Categories	n	Folt	Fuchs	Schlissel	Avg. (%)
Financial Resources ($$)	12	1.9	1.1	7.5	2.8
Alumni Giving Rate (AGR)	38	11.3	4.2	6.3	8.8
Faculty Resources (FR)	93	17.9	26.3	27.5	21.5
Graduation & Retention Rates (GRR)	27	6.6	7.4	3.8	6.3
Student Selectivity (SEL)	4	0.8	1.1	1.3	0.9
Undergrad. Academic Reputation (UAR)	134	27.2	36.8	36.3	31.0
University Sports Programs (USP)	110	31.1	21.1	12.5	25.5
OTHER (OTH)	14	3.1	2.1	5.0	3.2
Total Main Category (%)		99.9	100.1	100.2	100.0
Main Category (N)	432	257	95	80	
Campus Life	11	2.7	2.1	2.5	2.5
Diversity & Inclusion	3	0.4	0.0	2.5	0.7
Sympathy & Support	0	0.0	0.0	0.0	0.0
New Students	0	0.0	0.0	0.0	0.0
School Spirit	0	0.0	0.0	0.0	0.0
Total Emergent Category (%)		3.1	2.1	5.0	3.2
Emergent Category (N)	14	8	2	4	

Key conclusion for *Manifest* and *Latent Content*. The tweets coded in this study

exhibited manifest content over latent content by a ratio of nearly 2:1. This ratio was

consistent within both the ratio of the main categories into which tweets were coded (*USP*

and the six consistent *U.S. News & World Report*-related categories) and the emergent

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OTHER category. One reason for the strong relationship between the main categories and

Manifest Content may be that the protocol for coding such tweets prescribed many manifest

content factors–thus, the researcher noted and considered those factors when coding. *OTHER*

had fewer specific coding protocols. In fact, as mentioned earlier, the *OTHER* emergent

categories (*Campus Life*, *Diversity & Inclusion*, *New Students*, *Sympathy & Support*, and

School Spirit) were not developed until after the coding had been completed At that time, the

researcher developed these emergent categories to more fully describe tweets that did not fall

within the seven main categories.

Table 13
Tweets Coded with Latent Content

Main Categories and *OTHER* Emergent Categories	n	Folt	Fuchs	Schlissel	Avg. (%)
Financial Resources ($$)	2	1.6	0.0	0.0	0.8
Alumni Giving Rate (AGR)	1	0.8	0.0	0.0	0.4
Faculty Resources (FR)	0	0.0	0.0	0.0	0.0
Graduation & Retention Rates (GRR)	0	0.0	0.0	0.0	0.0
Student Selectivity (SEL)	1	0.8	0.0	0.0	0.4
Undergrad. Academic Reputation (UAR)	0	0.0	0.0	0.0	0.0
University Sports Programs (USP)	0	0.0	0.0	0.0	0.0
OTHER (OTH)	237	96.9	100.0	100.0	98.3
Total Main Category (%)		100.1	100.0	100.0	99.9
Main Category (N)	241	127	76	38	
Campus Life	123	54.5	51.3	44.7	51.9
Diversity & Inclusion	49	17.1	17.1	39.5	20.7
Sympathy & Support	50	22.8	21.1	15.8	21.1
New Students	9	5.7	2.6	0.0	3.8
School Spirit	6	0.0	7.9	0.0	2.5
Total Emergent Category (%)		100.1	100.0	100.0	100.0
Emergent Category (N)	237	123	76	38	

Alignment of some of the tweets coded with *Latent Content* with the *OTHER* emergent categories may have occurred because of the nature of latent content interpretation. Topics that have latent content may simply be more subjective, emotional, or open to personal interpretation. Giesler and Beadlecomb (2015) related "bias, oversimplification, or misrepresentation" to latent content analysis (p. 150). Stempel (1989) previously noted "The content analyst after all is at this point injecting a subjective interpretation. While he or she may feel that it is an obviously correct interpretation, whether or not others will see the situation in the same terms is another matter" (p. 126).

Interpretation of Findings in the Content of the Case Studies

In this section of the analysis, the researcher revisited the hypotheses presented in the case studies concerning the priorities, goals, and communication styles of the three presidents and explored whether or not the outcomes of the data analysis supported those hypotheses.

Case 1: The University of Florida (UF), President W. Kent Fuchs

In the UF case study, the researcher proposed that Fuchs's past commitment to improving institutional academic status and his statement of purpose for UF might have led him to consider Twitter use as a potential implementation tactic. If so, through Twitter content, he may have emphasized the strength and capability of the faculty and the success and impact of research programs. To test this hypothesis, the researcher examined the coding results of 677 tweets for main categories. Strength and capability of faculty aligned directly with the *FR* selection criterion of the 2018 *U.S. News & World Report* rankings, and as delineated in the Codebook (Appendix A), *UAR* included the impact of research programs.

As with the other two presidents whose tweets were studied, Fuchs's top main Twitter category was *OTHER*. However, *UAR* was the second-place category, and *FR* was third.

Fuchs posted several tweets during the study period that specifically mentioned the work of UF's agricultural extension offices, his visits to those facilities, and his appreciation of the faculty located there. Appreciation for the work of the extension services was, as noted earlier, a message Fuchs employed early in his presidency.

Appreciation for UF's land-grant origins and continuing mission, including support of UF's Institute of Food and Agricultural Sciences (IFAS), was an expectation of some at the time Fuchs was selected for his role. UF presidential search committee member and IFAS Senior Vice President Jack Payne (2014), upon meeting with Fuchs for the first time, noted:

> He's provost at one of the most venerable of land-grant universities, Cornell. It's the only Ivy League school with a horticultural department, much less a School of Integrative Plant Science like the one Fuchs helped launch. Before Cornell, he was a leader at Purdue, also a land-grant university, and taught and researched at a third, the University of Illinois Urbana-Champaign. (para. 5)

Payne (2014) said, "It'll take a commitment from the top to secure the resources needed to realize IFAS's potential. That commitment starts with an appreciation of the land-grant mission. Fuchs has looked me in the eye and shown me he has it" (para. 16).

In the researcher's view, Fuchs's expressions of appreciation for and evidence of interaction with the university's extension offices and faculty, as articulated in some of his tweets, helped to fulfill that expectation. These expressions supported *FR*, one of the selection criteria of the 2018 *U.S. News & World Report* rankings and one of the main categories of this study.

During this study, UF issued several campus statements regarding negative diversity and inclusion-related incidents that were reported to have occurred (UF-Statements, 2019). Given the time proximity and prevalence of these events, the researcher hypothesized that a

significant number of Fuchs's tweets might mirror and support other communications that denounced disrespectful words and actions and reinforced the value of diversity and inclusion.

Diversity & Inclusion was the third most-tweeted about emergent category for Fuchs, after *Campus Life*, and *Sympathy & Support*. This order exactly matched that of Folt's tweets. In fact, those two presidents' percentage of tweets coded as *Diversity & Inclusion* differed by only 0.02%. Schlissel was the significant outlier for tweets devoted to *Diversity & Inclusion*; this finding is discussed in detail in the analysis of the U-M case study.

A content area singular to Fuchs's tweets was *School Spirit*. Fuchs was the only president who posted a small number of tweets with this emergent category (Table 5). These tweets mainly consisted of posts about UF's mascot or school colors (often with a photo or video) or an expression of school spirit or loyalty, either on- or off-campus. The researcher surmised that this was perhaps a more frequent occurrence for Fuchs because of UF's distinctive school color combination (blue and orange) and the fact that its mascots, a male and female alligator, were well known, easily recognizable reptiles often seen, literally or iconically, in that geographic region. In the researcher's opinion, a Tarheel (UNC) is a more abstract mascot, and a wolverine (Michigan) is an animal not commonly seen or iconically used in Michigan the way an alligator is used in Florida.

Case 2: University of North Carolina (UNC), Chancellor Carol Folt

The UNC case study provided several indications of what the data analysis might reveal. The first of these involved Folt's communication style with students. As mentioned in the case study, UNC Vice Chancellor Winston Crisp noted students' enthusiasm in interacting with Folt: "Students initiate conversations with her. . . . Students like to take selfies with her. She has amassed quite a collection" (Lacy, 2016, para. 5).

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The researcher hypothesized that Folt's tweets might include content that focused on student interactions. The data analysis revealed that out of all the presidents, Folt's tweets had the highest percentage of photos featuring Folt in the photos and interacting with students. Folt's percentage of student-interaction photos was 25%; in comparison, Fuchs's average was 19%, and Schlissel's average was 13%. These data do not imply that the other two presidents placed less value on student interactions; all three sets of presidential tweets contained many conversations about and pictures of students. However, the higher number of interactive photos and "selfies" with students may be a particular reflection of Folt's personal communications approach that resonated strongly with students.

In the UNC case study, the researcher also anticipated that, based on the available evidence, the primary communications content would likely have included five elements:

- Diversity and inclusion.

- Positive news about the university's sports programs.

- Student interactivity.

- Fundraising and alumni relationships.

- Research and academic excellence.

As already noted, student interactivity was an early priority for Folt, and the high number of Folt's tweets coded in the *Campus Life* category confirmed student interactivity was a priority (*Campus Life* included general student interactions, as noted in Appendix A). Over 57% of her tweets coded as *OTHER* fell in *Campus Life*, the highest of the three presidents (Table 5).

Tweets coded as *USP* all had positive sentiment and were Folt's second-highest category, which supports the researcher's hypothesis that Folt's Twitter content would

strongly support *USP*, especially in light of past negative publicity about some aspects of those programs. *UAR* (which encompassed research and academic excellence) was third. Further, *Diversity & Inclusio*n was a strong emergent category within *OTHER*; Folt's number of tweets coded as *Diversity & Inclusion* was the second highest among the three presidents.

The final area of focus, fundraising and alumni relationships, was a minor subject for all the presidents, a finding unanticipated by the researcher. The researcher addresses this topic as it relates to all three presidents in the "Implications for the Practice" section of Chapter V. For the most part, however, in the researcher's view the content of Folt's tweets appeared to support the priorities Folt identified early in her tenure, and supported some key aspects of the 2018 *U.S. News & World Report* rankings.

Case 3: University of Michigan (U-M), President Mark Schlissel

As discussed in the U-M case study, Schlissel expressed an early interest in fostering and facilitating open discussions and in making certain that all parties felt comfortable speaking up. The researcher anticipated that the content of Schlissel's tweets, rather than dealing directly with student rankings, would focus on other factors important to student success, including affordability. The case study also indicated the researcher expected to see frequent mentions of these topics reflected in Schlissel's tweets.

The researcher added affordability and college financial aid/scholarship funding to the *$$* category description, as explained in the Codebook. Although this category did not contain the largest number of Schlissel's tweets, a larger proportion of his tweets were coded into this category that were those for either Folt or Fuchs (5.0% for Schlissel, 1.8% for Folt, and 0.6% for Fuchs; Table 4). The theory of homophily, then, could apply to both his tweets' content and readers' tendency to share information. For example, homophily may have been

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expressed by Schlissel through tweets that issued or encouraged calls and appeals for like-minded people to support campus respect, diversity, and inclusion, as did many of his tweets.

In this study's analysis of coded tweets, the single largest percentage difference among any of the presidents' tweet categories was in the *OTHER* emergent category *Diversity & Inclusion*. Schlissel's tweets on these topics, while not particularly high in number (there were 18), represented nearly 42% of all his tweets coded as *OTHER*. *Diversity & Inclusion* tweets from Fuchs and Folt occurred less than half as often (16.7% and 16.9%, respectively; Table 5). Most of the presidents' tweet distributions in other categories were much closer on a percentage basis.

Compared to the other two presidents, the high proportion of Schlissel's *Diversity & Inclusion*-related tweets, while only a single data point, reinforces the assumption made by the researcher in the U-M case study. First, the researcher observed that *Diversity & Inclusion* topics appeared to be important to all the presidents. Indeed, Fuchs communicated frequently and specifically about *Diversity & Inclusion*-related issues, and UF posted exactly as many President's Office memos on *Diversity & Inclusion*-related campus incidents during the study period as did Schlissel.

Schlissel, however, is on record as attaching a particular importance and preference for approaching challenging issues through an open dialogue. In his 2016 New Student Convocation speech, he set the tone for open dialogue, particularly on topics on which there may have been differing viewpoints. He stated "Michigan is an ideal environment to engage and learn across difference. In fact, that is one of the key skills we expect you to develop while you're here" (Schlissel, 2016c, paras. 13-15). Later in his speech, he added, "You each have the right and the opportunity to make your voice heard" (Schlissel, 2016c, para. 42).

Schlissel's public commitment to such ongoing open dialogue may have informed the

content and frequency of his related tweets; in many cases, those tweets described, invited, or

encouraged open dialogue on the issue of strengthening diversity and inclusion.

Summary

This chapter presented and analyzed the data from the tweet coding, contextualized at

the chapter's beginning with the three institutional case studies. Chapter V will interpret

those findings, review the limitations and delimitations of the study, the implications for

theory, and make recommendations for further research.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This study began with the researcher's exploration of the need for college presidents to develop new ways to connect with stakeholders in order to improve on and build positive institutional image and reputation. At the present time, however, little research has been conducted concerning how college presidents use social media generally, and Twitter specifically, to connect and engage with audiences on subjects that directly affect the image and reputation of their institutions. This study specifically explored the use of Twitter by college presidents in connection with college ranking approaches such as those provided in the 2018 *U.S. News & World Report* Best Colleges rankings.

The researcher addressed two questions in this study: (a) what is the content of the Twitter posts of top public college and university presidents who use Twitter? and (b) how does that content relate to criteria that reinforce institutional image, such as the 2018 *U.S. News & World Report* Best Colleges rankings? These questions were contextualized as case studies of the presidents of the top three public institutions included in the 2018 *U.S. News & World Report* Best Colleges rankings for top public universities. The presidents selected for this study presidents personally used Twitter and additional selection criteria developed by the researcher, as detailed in Chapter III.

It is important to note again that this study examined the engagement of university presidents from the broad standpoint of university reputation, or what Thelin (2011) refers to

as *prestige*–fueling "a competitive rush by institutions to meet the operational criteria that would qualify them to be placed in another allegedly more prestigious category" (p. 320). This study defines and considers *reputation* as an institution's aspirational desire to be counted among prestigious peers, and considers college rankings as one means of attaining and exemplifying such prestige or reputation.

Summary of Findings

The major findings of this study of the content of tweets that originated with three selected college presidents are as follows:

- While a desire for rankings or enhanced reputation may drive some tweeting behavior, it is not the only driver. The content of the Twitter posts of three top public university presidents tended to be multidimensional. In a sense, the content diversity of these presidents' tweets was a microcosm of the diversity and complexity of their jobs.

- The largest proportion of the presidents' Twitter content appeared to primarily involve managing and communicating daily campus operations and events. This finding was supported by the preponderance of tweets coded as *OTHER*, which included operational campus communications.

- However, a significant proportion of the tweets examined for all three presidents aligned with two 2018 *U.S. News & World Report* selection criteria, namely, *Undergraduate Academic Reputation (UAR)* and *Faculty Resources (FR)*. Other 2018 *U.S. News & World Report* criteria ranked lower.

- Each of the presidents appeared to join Twitter intentionally and in direct association with their new positions as presidents and to purposefully employ Twitter to fulfill

communications priorities or commitments early in their presidencies, both inside and outside the parameters of the 2018 *U.S. News & World Report* rankings.

- The highest levels of audience engagement identified in this study aligned with the categories the presidents tweeted most about (indicating a shared interest).

- The 2018 *U.S. News & World Report Undergraduate Academic Reputation* (*UAR*) category was one of the categories with the most reader engagement (most frequently liked, commented on, and retweeted). However, tweets coded as *Faculty Resources* (*FR*), the other most frequently tweeted 2018 *U.S. News & World Report* category, showed lower levels of viewer engagement.

- Research conducted by Twitter showed that the use of attached photos and videos in tweets generally produced significantly more engagement (Frogers, 2014, para. 12). However, that was not the case for the field of tweets analyzed in this study. The main driver of engagement appeared to be the subject and content of the tweets themselves.

- Each of the three presidents selected for this study was far more likely to tweet original content than to retweet the content of others.

- The presidents in this study were far more likely to use Twitter to convey positive, rather than negative, comments and sentiments.

Interpretation of Findings

The study outcomes are described in comparison to current knowledge in the field and also in relation to the findings of the peer-reviewed literature as discussed in Chapter II.

The Importance of Source

Fu and Shen (2014) found that the source (generator) of the content was important to users, as was users' experience level (p. 1613). It is noteworthy that each of these presidents

opened personal Twitter accounts within a few months of the start of their presidential

tenures. Fuchs (2019b) joined Twitter in October 2014, the same month he was named

president and three months before he assumed the office (para. 1). Folt (2019) joined Twitter

in February 2014, seven months after she because chancellor (para. 1). Schlissel (2019)

joined Twitter in January 2014, the same month he became president (para. 1).

However, it was not essential that the presidents join Twitter to communicate to

stakeholders through this channel. In all three case studies, the presidents' universities also

maintained Twitter accounts; thus, a channel for sending tweets already existed. Indeed, in the

approach used to identify presidents to include in this study, the researcher found that some

presidents of schools in the top 10 public universities did not have personal Twitter accounts.

From the researcher's view, creating and using personal Twitter accounts was a

decision these presidents made because they thought their personal involvement in such

communication was important to viewers. This conclusion aligns with Fu and Shen's (2014)

findings as well as findings from the literature review generally that the sources and

experience of the tweeter matter to users.

The Role of Social Media in Achieving Institutional Goals

A related finding from the researcher's literature review was that, in the opinion of

the researcher, leaders believed their institutions' use of social media had the ability to play

an important role in achieving institutional goals (Fitzgerald et al., 2013, p. 4). Again, the

intentionality of these three presidents in establishing and using Twitter appears to confirm

this finding. Each of the three presidents utilized certain categories in the content of their

tweets that supported specific goals and priorities laid out early in their presidencies.

For example, Fuchs called attention to the importance of The University of Florida's

(UF's) mission as a land-grant institution and the capabilities of UF's Institute of Food and

Agricultural Sciences (Payne, 2014, paras. 5-7). Folt often used Twitter to build support for the University of North Carolina-Chapel Hill (UNC) sports programs at a time when positive news about those programs was needed and welcomed. Schlissel used Twitter to discuss accessibility and raise awareness of financial aid options for students who wanted to attend the University of Michigan (U-M).

The Role of Positive Emotion

Another finding of the researcher's literature review was that emotion, particularly positive emotion, was a powerful persuasive device in social media content (Botha & Reyneke, 2013, p. 168; Chin et al., 2015, p. 579; Ferrara & Yang, 2015, p. 11). One of the most effective factors in the success of social media appears to be the positivity of the content (Ferrara & Yang, 2015, p. 11). Confirming this view, the three presidents studied focused on positive content. Content analysis revealed that an overwhelming majority of the tweets posted by the three presidents during the study period (673 out of 677) contained Positive Sentiment.

However, this finding does not mean the presidents' tweets never dealt with bad news or difficult subjects. The Codebook (Appendix A) explains that positive content could have included expressions of sympathy or support for an external event, such as a natural disaster (even if the event itself was negative). In addition, as noted in Plathottam (2008), "Reports of alternative acts intended to fight against or ameliorate events reported under negative news" (p. 370). For this study, then, tweets with descriptions of actions or events intended to "counteract negative acts or trends" Plathottam (2008), such as social injustice, inequality, racism, and discrimination, constituted positive sentiment (p. 370).

The handful of tweets coded as negative showed concern about legislation or policy topics that could have affected university budgets and research funding, as well as one news

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media editorial opinion. Each president refrained from criticizing prominent (or even less prominent) individuals in their tweets. In fact, in their tweets, all maintained a professional, measured, thoughtful tone, even in posts that dealt with difficult or controversial subjects. In short, in the researcher's opinion the presidents strove to maintain a tone of positivity and did not seem to view Twitter as a forum for promoting controversy or criticizing specific people (although they did at times comment on controversial issues already raised). Some negative events occurring at the schools during the study were not commented on at all on Twitter.

The Significance of Interactivity

Research has shown that interactivity is a catalyst for greater stakeholder engagement with social media. The measures of interactivity discussed in this study–likes, comments, and retweets–were highest for tweets coded as *OTHER*. Even so, *UAR*, one of the 2018 *U.S. News & World Report* selection criteria, was for all three presidents one of the top three most liked, commented on, and retweeted categories into which the studied tweets were coded.

Clearly, tweets that promoted and shared information about events that enhanced the universities' reputations were important to audiences. However, questions remained regarding whether this sharing happened organically (e.g., a president simply tweeted what was top-of-mind and let the engagement "chips" fall where they may) or whether the presidents had observed what kinds of tweets garnered the most engagement and deliberately structured subsequent tweets to increase engagement levels.

An examination of the role of timing in tweeting was outside the scope of this study; however, further research could include an examination of the timing of high-engagement tweets, including how often they occurred. In addition, future researchers could assess whether the conversation thread of high-engagement tweets had a longer lifespan. In other

words, if a particular topic elicited a lot of audience engagement, did the presidents continue to talk about it for a longer period of time?

Alumni Giving

One 2018 *U. S. News and World Repor*t selection criterion for which the researcher expected to find a high corresponding number of tweets was *Alumni Giving Rate (AGR)*. The *AGR* category could have included tweets where content supported or illustrated alumni giving or the benefits of alumni giving to the university (Appendix A).

Content could also have included information about specific donors, alumni giving rates donor gifts, capital campaigns, endowed chairs and scholarships, alumni association events, activities, awards, and so forth. However, the percentage of tweets coded as *AGR* was small for all three presidents; *AGR* had the fifth highest percentage for Folt and for both Fuchs and Schlissel, the sixth highest percentage. These data disconfirm the researcher's assumption that alumni giving would be a topic that was included in the presidents' tweets frequently.

It was clear from an analysis of the tweets that were coded in the *AGR* category that all three presidents were involved with and appreciative of their alumni and alumni associations. Consequently, in exploring possible reasons for the relatively low level of Twitter content about alumni during the study period, the researcher hypothesized that there may have been other avenues by which the universities might have connected with their alumni bases and displayed alumni support for the schools. For example, all three universities had large, active alumni bases and alumni organizations that maintained independent Twitter accounts as well as other social media accounts.

Perhaps the presidents viewed those existing channels as a satisfactory approach to alumni communication when occasionally supplemented by comments about alumni from the presidents' tweets. However, in the literature, researchers have suggested that strong channels

of alumni engagement established through direct presidential communication may be valuable to institutions (Fisher, 1985; Satterwhite, 2004; Saxton and Wang, 2004). The "Implications and Recommendations for Practice" section of this chapter addresses this suggestion in detail.

Limitations of the Study

The study proposal identified several limitations; they were borne out in the study's execution. These limitations included the time frame, the number of characters within the tweets, the number of universities studied, and the number of factors that influenced student and parental perceptions of institutional reputation.

Time Frame

All three of the presidents whose tweets were evaluated herein opened their personal Twitter accounts in 2014. This meant that the researcher had a relatively narrow time span (about three years) from which to select an examination field. The researcher ultimately focused on the period of August 1, 2016 to August 31, 2017. Regardless, the study could not have begun more than two years earlier than August 2016 because the presidents were not yet in office nor did they have Twitter accounts.

Number of Characters Within the Tweets

In late 2017, shortly after the study period closed, Twitter announced it was expanding the number of allowable characters per tweet from 140 to 280 for most languages (Rosen & Ihara, 2017, para. 3). It is possible that, had the analysis and coding been conducted on longer tweets, different or additive categories and compound messages may have emerged.

Number of Universities Studied

The researcher examined the top three public universities on the 2018 *U.S. News & World Report* Best Colleges rankings whose presidents personally used Twitter, as defined

by the criteria presented in Chapter III. Analyzing different or additional universities and presidents with different goals and priorities may have produced different findings.

Other Factors Influencing Student and Parental Perceptions of Institutional Reputation

In this study, the researcher examined only college and university presidents' use of Twitter as a factor potentially influencing the 2018 *U.S. News & World Report* rankings and perceptions of reputation. Other factors that may have influenced students' enrollment decisions–for example, cost, persuasive marketing campaigns, and legacy of family member attendance at the institution–were outside of the scope of this study.

<div align="center">

Delimitations of the Study

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Two main delimitations affected this study. First, the study covered only public four-year colleges and universities. The author selected this group of institutions because of professional familiarity with it; in addition, the commonalities among public universities helped reduce or eliminate some of the other potential variables that could have affected applications, such as wider swings in tuition costs at non-public institutions, religious affiliation, and so forth.

An additional delimitation was that the study covered only communication using Twitter. The researcher did not explore other communication media, styles, and content or seek to discern how other communications approaches may have influenced stakeholders and sought to reinforce institutional rankings.

<div align="center">

Implications and Recommendations for Theory and Research

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This study was constructed and executed based on a multifaceted theoretical framework. The results revealed several implications for that framework, which included reader-response theory, agenda-setting theory, contagion theory, and the theory of

homophily. The following section of this chapter served to review the study's theoretical

framework and how these theories were applied to the case studies and coded data.

Reader-Response Theory

This study was grounded in a critical approach known as reader-response theory.

Reader-response focuses on "finding meaning in the act of reading itself and examining the

ways individual readers or communities of readers experience texts" (Delahoyde, n.d.,

para. 1). The researcher assumed stakeholders experienced presidents' tweets in unique and

meaningful ways, that these stakeholders assigned unique meanings to the tweets, and that

the reactions (or lack of reactions) of these stakeholders represented these meanings. In

addition, the researcher assumed that content matters.

The application of reader-response theory was somewhat limited because the purpose

of this study was not to study reader responses closely but rather to focus on the author's

intent when forming the messages. However, applying reader-response theory does carry

implications for certain aspects of audience engagement, particularly for alumni.

Koay (2017) noted "[Reader-response] theory rejects the structuralist view that

meaning resides solely in the text. Words in a text evoke images in readers' minds and

readers bring their experiences to this encounter" (para. 3). Based on the findings of this

study, the researcher agreed with Koay's view, and further surmised that images and

experiences evoked by passages, including tweets from university presidents, could drive

alumni to engage more fully with tweets because such passages and images could evoke

memories and positive feelings about their own experiences at the school.

In fact, the findings of this study support the conclusion that more alumni engagement

could have occurred with the tweets posted by the three presidents. Specifically, in the

emergent categories included with the *OTHER* category, the highest-ranking percentage of

tweets with reader engagement (likes, comments, and retweets) were coded as *Campus Life*. In the main categories, the highest-ranking percentage of tweets with reader engagement were coded as *University Sports Programs (USP) and UAR*–a category that included accomplishments and events that enhanced institutional pride and reputation.

The scope of this study did not include an analysis of Twitter audiences to determine how many respondents were alumni, although the results imply that alumni could have experienced a reader-response reaction to such tweets. Future research could attempt to link high-engagement responses to alumni.

Additionally, it should be noted that the *OTHER* category, as previously described, was very specific (both context-bound and context-specific) to real-time and immediate campus events, developments and news. The researcher concluded that, based on the high level of audience engagement (likes, comments, retweets) with this category, Twitter content that had an immediate meaning to–or implication for–the experiences of the audience may also have had a higher reader-response. Consequently, attenuation to the campus context– what is happening around campus and its importance to audiences may have become an important part of the strategic tweeting of the university presidents.

Reader-response theory also related to agenda-setting theory, which suggests that agenda-setting tweets can be strategies for mitigating negative reader-response. This further suggests that proactive response by presidents in the face of crises or other significant events on campus can help to shape audience views of and responses to those events. A fuller description of agenda-setting theory follows.

Agenda-Setting Theory

Agenda-setting theorists have noted, "Media attention to an issue presumably causes a change in a mediating variable in the minds of citizens, which in turn produces a change in

importance" (Miller, 2007, p. 690). In other words, the more media attention a particular topic or issue received, the more importance people ascribed to it.

As noted in Chapter I, a shared view of the importance of a particular university's characteristic could build the audience's affinity toward that institution, and if this affinity related to one of the 2018 *U.S. News & World Report* selection criteria (which are widely discussed in the media), this affinity could build audience perception that the school is strong in that particular area. Similar to reader-response theory, agenda-setting theory in this study was primarily related to the tweeters' intentions, rather than to how the audience responded.

The presidents' tweets on certain subjects may have been reflective of agenda-setting theory, either through emphasizing things that they desired the audience to view as important, or by amplifying, explaining, or sharing news the media had already framed.

The categories the presidents tweeted most about, namely, *UAR, USP*, and *OTHER* were the same categories liked, commented on, and retweeted most often. (An exception was *FR*, which is discussed in detail later in this chapter.) *Diversity & Inclusion and Campus Life* were liked, commented on, and retweeted most often within the emergent *OTHER* category.

Overall, the parallel between main categories and engagement measures supported the idea that the repetition of main categories may have influenced viewers to engage with and respond to those categories more often, thus supporting agenda-setting theory. What remains unknown is whether the inverse occurred–whether the presidents noted higher engagement levels for certain subjects in their Twitter and adjusted subsequent tweets to reflect those subjects to continue eliciting high engagement. In either case, the act of engaging is a decision the viewer makes, and when a viewer is motivated to like, comment on, or retweet, the implication is that the content was important to the viewer because they became engaged.

As a result of the study findings, the researcher revised the theoretical model that was the original basis for inquiry. In the originally-conceived model (Figure 1 previously and Figure 4 below), the researcher hypothesized that that within the reader-response framework, the repetition of main categories may have influenced viewers to engage with and respond to those categories more often, thus supporting agenda-setting theory, as illustrated in the yellow and salmon-colored bands of Figure 4 (which is identical to Figure 1):
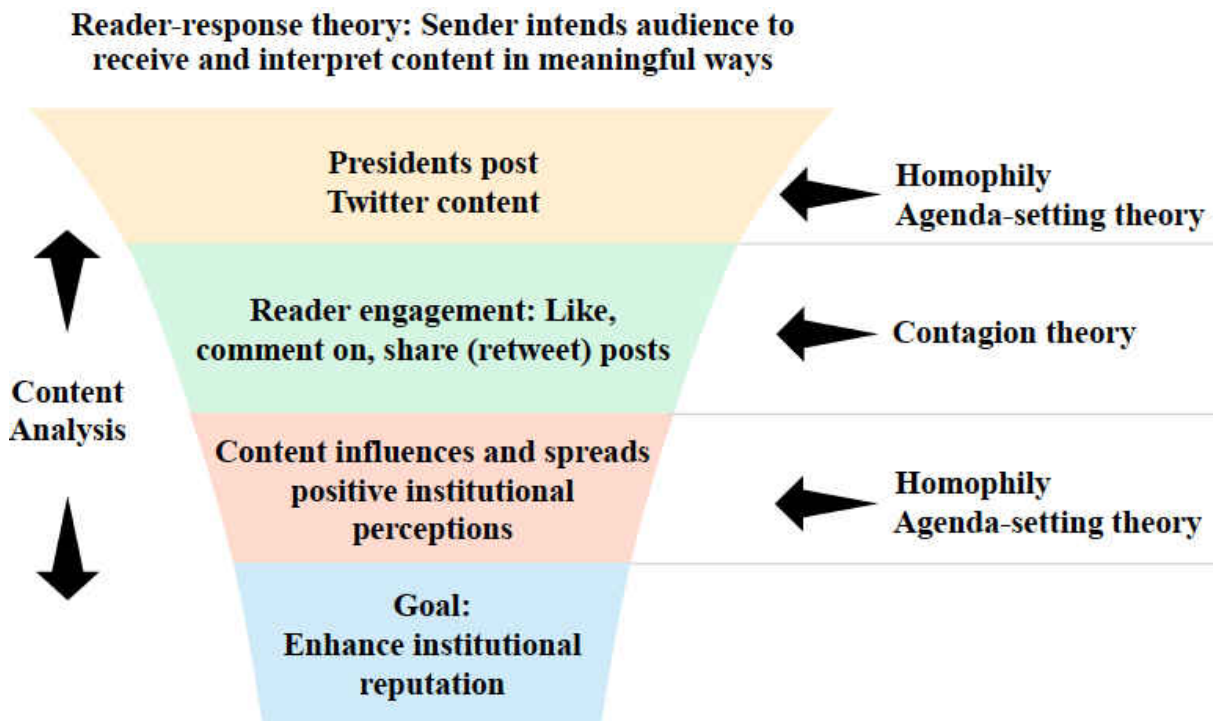

Figure 4.
The Framework of the Research Proposal.

However, it is possible that the finding of most-tweeted subjects aligning with most-liked subjects occurred in the reverse order–that the presidents noted higher engagement levels for certain subjects in their Twitter and adjusted the content of subsequent tweets to reflect those subjects, thereby continuing to stimulate interest and elicit high engagement. It is also possible that both occurred simultaneously. While that determination is outside the scope

of this study, a concrete study finding was that audiences engaged at the highest levels

identified in this study with the categories the presidents tweeted most about (indicating a

shared interest) Also, the study findings showed that Twitter content was most often driven

by day-to-day operational and campus issues, as opposed to always being driven by a desire

to enhance reputation or institutional ranking. This led the researcher to conclude that a more

accurate model of this communications process is circular, not linear. This circularity is

illustrated in Figure 5. Authorial intent can both influence and be influenced by levels of

audience engagement. Further, other influences–such as operational issues and events,

indicated by the lavender arrow to the left–can enter this cycle at any time and influence
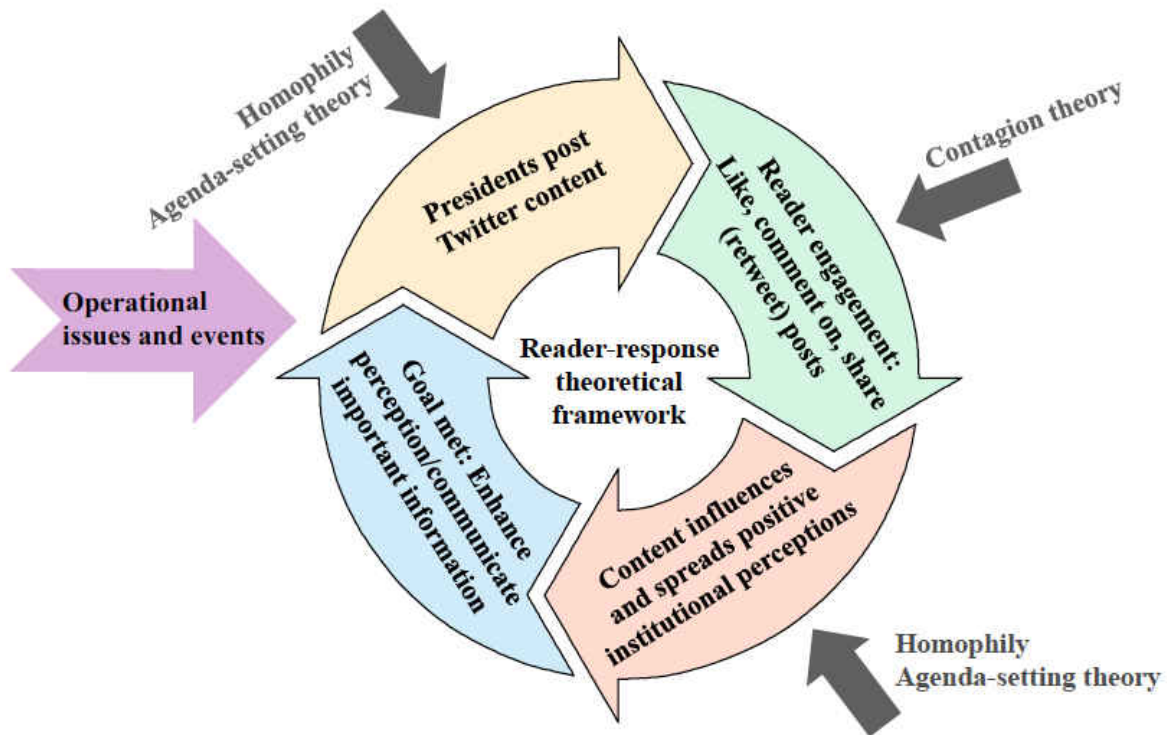
content and messages.

Figure 5.
The Revised Framework of the Research Findings.

Contagion Theory

Contagion theory involves how emotions, viewpoints, or beliefs may spread among groups or networks (Im et al., 2013, p. 3848). Ferrara and Yang (2015) found "positive emotions are more prone to contagion, and that highly-susceptible [sic] users are significantly more inclined to adopt positive emotions" (p. 11). Hatfield, Cacioppo, and Rapson (1994) similarly proposed that "emotional contagion" occurs when people encounter negative emotions. In such cases, they can develop a "complementary" emotional reaction that causes them to shrink from or avoid the negative emotions of the sender (pp. 10-11). The researcher postulated that if this theory were supported in the research, then many tweets would appeal to common views or emotions among audiences and that most of the tweets would be positive in tone rather than negative.

As Chapter IV's data analysis section noted, the overwhelming majority of the tweets studied (673 of 677) were indeed coded as having *Positive Sentiment*. Of the tweets coded with negative sentiment (4 of 677), three were coded as *Financial Resources* (*$$*) and indicated the need for financial access, rising costs, or research funding. This finding relative to *Negative Sentiment* was consistent with the presidents' stated priorities of research and financial access. The finding further indicates an alignment with–if not a deliberate invocation of–contagion theory.

All three presidents did not appear to intentionally create tweets that provoked deep negative emotions or broad negative feedback. Even the handful of tweets coded with *Negative Sentiment* did not direct that negativity at individuals; rather, these tweets discussed issues that affected university reputation, capabilities, and student financial access. A future direction for research might be to track the network effect of specific tweets from these

presidents–both *Positive* and *Negative Sentimen*t–to determine how the tweets spread through networks. Researchers could attempt to discern whether a positive or negative contagion effect is developed, maintained, and transmitted.

Theory of Homophily

Proponents of the theory of homophily have hypothesized that people tend to connect with ideas and people with whom they share similarities (Currarini et al., 2016). The researcher assumed presidents' Twitter communications contained content that reflected priorities already important to stakeholders (Lewis et al., 2012, p. 70). The 2018 *U.S. News & World Report* Best Colleges rankings and the selection criteria they employ represent one set of priorities. In this study, one of the researcher's goals was to determine whether the categories reflected in the Twitter content aligned with the selection criteria used in those rankings. This theory served as a conceptual guide for the researcher to draw conclusions and interpretations of the findings regarding the potential impact of the tweets on stakeholders.

The researcher concluded that two of the 2018 *U.S. News & World Report* categories, *UAR* and *FR*, resonated with audiences more than did the other 2018 *U.S. News & World Report* categories; *UAR* was the strongest. Therefore, in the researcher's view, it seems clear the presidents assumed followers of their tweets would consider tweets containing these categories to be interesting.

Turning to the viewer engagement levels for the tweets (likes, comments, and retweets), followers who read the presidents' tweets during the study period most frequently liked, commented on, and retweeted tweets coded as *USP, UAR*, and *OTHER*; top *OTHER* emergent categories were *Campus Life*, *Diversity & Inclusion*, and *Sympathy & Support*.

This finding suggests a high level of interest and engagement in the 2018 *U.S. News & World Report's UAR* selection criteria.

In addition, at the beginning of their presidencies, the presidents had identified (or been mandated to address) several of the categories listed above; it stands to reason that they likely believed that audiences would share the presidents' interest in topics such as sports programs, daily campus happenings, diversity and inclusion, and sympathy and support in times of national tragedies or natural disasters. The audiences' engagement level with these topics supports that assumption, in keeping with the basic tenets of the theory of homophily.

Additional Recommendations for Further Research

This study's findings suggest a number of additional research avenues researchers could pursue, in addition to those already mentioned. One avenue of inquiry could be to examine the effect of emphasizing 2018 *U.S. News & World Repo*rt selection criteria in presidents' tweets or in the tweets of other public university presidents whose schools appear lower in the rankings. Over time, researchers could assess whether those schools' rankings improved or remained the same. Another research avenue could be to conduct an analysis similar to this study with other types of institutions, such as private universities, to determine whether the same category correlations exist. Further, this research methodology and line of inquiry could be expanded to explore whether and how presidential tweets relate to other rankings systems, such as the Carnegie Classifications. Moreover, as universities display the growing tendency to adopt responsible management models, the role of college deans becomes increasingly upward-oriented (similar to a set of the responsibilities of university presidents but on a smaller scale). This means that deans are tasked to be engaged in both cost management and revenue-generating activities (including fundraising) and are

increasingly concerned with enrollment of quality students and rankings of their programs (Kosten, 2016, p. 4). Thus, this research methodology and line of inquiry can be applied to the cases of deans' tweeting in relation to the ranking criteria. Finally, research could also explore the impact on Twitter content and audience engagement metrics of changes made by *U.S. News & World Report* over time to its selection criteria and measurement metrics (discussed briefly in Chapter III).

Implications and Recommendations for Practice

This study's conclusions and findings have beneficial application for several areas of higher education practice. One such finding is the observation that the largest proportion of the presidents' tweets primarily involved the management of and communicating about daily campus operations and events (versus discussing 2018 *U.S. News & World Report* ranking categories). The category into which the greatest proportion of tweets were coded, *OTHER*, and specifically the *Campus Life* emergent category, focused on the specifics of campus operations such as implementing cultural events, blood drive signups, voting reminders, student orientation, volunteerism opportunities, holiday greetings, and safety notices.

In addition, before the study period began, all three of the presidents demonstrated an interest in connecting personally with students, as evidenced by their decisions to establish personal Twitter accounts. A challenge for those presidents, then, or for other presidents in similar situations, was how to tweet in ways that engaged and resonated with individuals, even though those tweets also of necessity reflected and rebroadcast topics and events emanating broadly from many sources. Adding an aspect of personalization to a general communication could help presidents connect with audiences, such as Schlissel's tweet

promoting a campus blood drive by showing him donating blood at the donation center (Schlissel, 2017c, para. 1).

The study's data demonstrated that operationally-related tweets dominated the Twitter landscape of these presidents. This phenomenon suggests that, when possible, leaders should regard their tweets as opportunities to personalize and individualize their messages with their own visible presence and participation, either through using personalized photos or videos or through personal messages. Although personalization occurred to some extent in the tweets studied, the researcher recommends the presidents continue to explore ways to further personalize tweets.

Another significant finding of the study was that tweets coded as *FR* (one of the presidents' most frequently tweeted 2018 *U.S. News & World Report* categories), had markedly lower engagement levels (likes, comments, retweets) than did the other categories into which the largest numbers of tweets were coded. This finding raises a question of why tweets about faculty contributions, accomplishments, awards and publications garnered lower viewer engagement and response. A possible explanation is that the most appreciative viewer audiences for tweets about faculty might not have been the same viewer audiences that responded to and engaged most enthusiastically with tweets about institutional achievements.

Regardless, presidents and their social media/communications teams should ensure that all key audiences are identified and reached by at least some of these channels in the entire constellation of social media channels they employ. Further, presidents and university communications teams should continue to focus on storytelling when describing faculty accomplishments by providing direct, compelling stories about faculty work. Storytelling should be in language that viewers understand and should highlight contributions that

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viewers believe are important (in concert with the theory of homophily). This could help to increase engagement with faculty news and achievements.

Finally, a discussion of implications would be incomplete without addressing the most surprising finding in this study: the low occurrence of alumni giving (a 2018 *U.S. News & World Report* selection criterion, *AGR*) as a category into which presidential tweets were coded. It should not be inferred from this finding that the presidents were unaware or unappreciative of alumni contributions–many tweets from each president focused on alumni accomplishments, alumni visits to campus, and gratitude for alumni efforts. However, *AGR* specifically deals with the rates at which alumni contribute to their alma mater; according to the 2018 *U.S. News & World Report*, this measure "reflects the average percentage of living alumni with bachelor's degrees who gave to their school" during the measurement period (Morse & Brooks, 2017a, p. 69).

This lack of explicit focus in the tweets on alumni giving may have had several causes. First, the *AGR* category was the least influential (from a percentage-of-score standpoint) in the 2018 *U.S. News & World Report* rankings scale (alumni giving counted for only 5% of a school's ranking score; Morse & Brooks, 2017a, p. 68). Consequently, the presidents may have chosen to use the very limited content space in their tweets to emphasize other, higher-impact categories.

Second, many schools have active alumni or development organizations whose staff encourage and secure alumni donations. As noted, all three of the presidents whose tweets were examined in this study led institutions that had very active alumni associations with their own Twitter accounts. Fundraising and cultivation of donors may have been seen as primarily the responsibilities of these organizations or of their development counterparts.

Nevertheless, some compelling reasons show why all university presidents should consider heightened involvement with university donor efforts on social media. In a study of fundraising efforts by nonprofit organizations, Saxton and Wang (2014) found "a strong relationship between the size of the organization's social network and the receipt of charitable contributions" (p. 862). Saxton and Wang further found that an organization's "fans" tended to reach out to friends within their own social networks, thereby increasing overall charitable contributions. "By implication, organizations interested in social media fundraising should develop strategies that both increase the size of their online constituencies and encourage those supporters to take action to promote the cause" (Saxton & Wang, 2014, p. 863). Extrapolating these conclusions to higher education implies that a president's efforts to grow a social media audience and encourage donations could be helpful.

Another reason for presidents to include donor development efforts in a social media strategy stems from the nature of the president's role. In an analysis of the role of public university presidents in fundraising, Fisher (1985) asserted, "Because of the key visioning and priority-setting roles the president plays, the ultimate responsibility for fundraising cannot be delegated to the staff, the [governing] board, or the foundation board" (p. 61). Fisher further observed, "It always comes back to the president. The president is the person with the vision, who inspires donor confidence, who creates the climate in which the fundraising activities take place" (p. 51).

Hodson (2010) explained that as the primary spokesperson for the school, presidents have many responsibilities related to fundraising: (a) creating a compelling vision; (b) setting priorities and leading the institutional discussion about fundraising goals; (c) articulating the case for support; (d) assessing institutional readiness; (e) investing in external relationships;

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(f) empowering constituents; (g) cultivating and selecting gifts; (h) encouraging participation of faculty and staff; and (i) recognizing and thanking donors (pp. 40-42).

In another study on university presidents and fundraising, Satterwhite (2004) noted that the president's involvement

> Is not limited to a minimal number of appearances, speeches, or hosted functions. The president must maintain a level of availability to prospective donors. Donors have a stronger sense of dedication to a campaign if they see a heavy presidential involvement and have significant access to the president. (p. 51)

Many of these recommendations for presidential involvement could be accomplished through Twitter. A president's tweets could complement and support the communication of the alumni and development offices by setting the vision, articulating the case, strengthening relationships, and recognizing and thanking donors. In addition, if viewers engage with the tweets, and if the president responds to that engagement, viewers may perceive a higher level of access to the president. Thus, although all three presidents strove to focus their tweets on meaningful and important subjects, and although all were clearly involved in other ways in alumni activities, they may have missed an opportunity to promote alumni giving via Twitter.

Conclusions

At the beginning of this study, the researcher asked two questions: (a) what is the content of the Twitter posts of top public college and university presidents who use Twitter? and (b) how does that content relate to criteria that reinforce institutional image, such as the 2018 *U.S. News & World Report* rankings?

The answers to those questions, at least for the three college presidents studied herein, are clear. The content of the Twitter posts of the three university presidents examined in this study was multidimensional. Additionally, although the content strongly related to at least one 2018 *U.S. News & World Report* category (*Undergraduate Academic Reputation*) and to

a lesser extent to *Faculty Resources*, the content related to many other priorities, needs, and daily developments as well. In a sense, the content diversity of these presidents' tweets was a microcosm of the diversity and complexity of their jobs.

The author of a paper published in *The Chronicle of Higher Education* quoted the departing chancellor of a public university system as saying the job of college president was "the toughest job in the nation" (William H. McRaven, quoted in Thomason, 2018, para. 1). Some factors contributing to this perception were revealed in a recent study of college presidents by the American Council on Education (Thomason, 2018, p. A3). These factors included college professors' ever-shortening tenure (discussed in Chapter I of this study), concerns about financial resources (and specifically for public university presidents, disinvestment in higher education by state legislatures), inheritance of problems from previous administrations at their universities, frustration with the perception that college presidents are endlessly accessible, and concerns about campus violence stemming from the tension between free speech and inclusion (Thomason, 2018, p. A3).

The three case studies featured in this study indicated that the presidents studied faced at least some of these issues and tensions at the onset of their tenures or soon thereafter. Indeed, the tenure of one of these presidents ended unexpectedly before the study analysis was complete, reportedly due in part to ongoing concerns over a preexisting issue. As the *Chronicle* author pointed out, the job is in many ways a tough one (Thomason, 2018, p. A3).

As this study concludes, the findings are summarized below:

- A relationship existed between some Twitter content and some 2018 *U.S. News & World Report* categories and selection criteria. Within the *OTHER* category, which was included in this study but was not an a priori category, the dominant emergent category was *Campus Life*.

- Audiences engaged at the highest levels identified in this study with the categories the presidents tweeted most about (indicating a shared interest).

- These presidents tended to be plainspoken but also almost unfailingly positive when they tweeted.

- Twitter use presents an opportunity to elevate and broaden the story of faculty contributions and increase engagement with such stories.

- Twitter represents an opportunity for presidents to connect more closely with alumni and donors.

Underlying these observations about what was done and what could have been done better is the researcher's tremendous respect for these three remarkable leaders and their exemplary institutions. In the midst of the demands of what is possibly "the toughest job in the nation" (William H. McRaven, quoted in Thomson, 2018, para. 1), these presidents willingly launched themselves into the social media space, with all its risks and unknowns. They took this action in order to be better, more effective leaders and communicators. Multiple times a week for the past five years, they took time to pull out their cell phones and highlight students, cheer on sports teams, recognize faculty and alumni, mourn the nation's tragedies, celebrate the campus's victories, and in 140 characters or less, remind anyone who was listening about the things that made their institutions great. Although there is no 2018 *U.S. News & World Report* selection criterion for "extra presidential effort," perhaps this kind of commitment by a university president is indeed one of the intangibles that builds and magnifies an institution's academic reputation and perception.

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APPENDIX A

CODEBOOK

Coding Instructions–Content Analysis of Presidents' Tweets

The following information will be gathered and entered on the coding sheet:

Coding Preparation.

Collect the following general information about the tweet and the Twitter profile of the sender once, at the beginning of the analysis for each president (the following only needs to be recorded once for each of the three presidents):

  i.   Name of president whose tweets are being analyzed on the coding sheet.

  ii. The president's Twitter handle.

  iii. How many followers the president's Twitter account has.

  iv. How many times overall the president has tweeted (This is the "Number of Tweets" header on the Twitter profile).

  v.   How many other Twitter accounts the president is following.

  vi. Retweets by the presidents will be examined in the same manner as their tweets, but should be designated on the coding sheet as a retweet (Line 2, below).

Coding of Descriptive Information: Coding Sheet, Lines 1-5 (Excel Spreadsheet).

For each individual tweet analyzed, the following specific descriptive information should be recorded:

  i.   (Line 1) Posting date of the tweet (to be placed at the top of the vertical analysis column for each tweet).

ii. (Line 2) Is this a retweet? (Y or N).

iii. (Line 3) How many "likes" does the tweet have?

iv. (Line 4) How often was the tweet retweeted?

v. (Line 5) How many comments did the tweet receive?

Coding Attachments to the Tweets: Coding Sheet, Lines 6-8 (Excel Spreadsheet).

i. (Line 6) If the tweet includes an attached photo, does the subject align with one of

the first 7 categories described under the "Coding Dominant Category" section,

below? If so, indicate the symbol code for the category it matches. If it does not,

enter "*OTH*" [*OTHER* category]. If there is no photo, answer "N."

Remember that the tweet must contain a photo on the main Twitter page (placed

there by the president) to count as having a photo in this category. Photos in links

are not considered here. They will be considered at the "links" analysis line, Line

7, below. Again, if there is no photo on the main tweet, answer "N" for Line 6.

ii. (Line 7) If the tweet contains an attached video, does the subject of the video align

with one of the first 7 categories described under "Coding Dominant Category"

section? If so, indicate the symbol code for the category it matches. If it does not

match any of the categories, enter "*OTH*." If the tweet contains no video, enter "N."

iii. (Line 8) If the tweet includes a link to another tweet or article, or a hashtag, is the

linked material relevant to one of the first 7 categories mentioned in "Coding

Dominant Category" section, below? If so, enter the subject according to the

category code symbol. If not, or if it is meaningless or indecipherable, enter

"*OTH*." If the tweet does not include a link or a hashtag, enter "N."

Coding Dominant Category:[1] Coding Sheet, Line 9 (Excel Spreadsheet).

Explanation: Each tweet will now be analyzed to determine whether the main subject of its content aligns with one of the following categories. The first six categories listed below are also 2018 U.S. News & World Report rankings selection criteria:

i. *Graduation & Retention Rates* **Category:**

ENTER CODE SYMBOL = *GRR*

The subject matter of the tweet deals with the university's graduation and retention rates or percentages. This could include:

- Information such as the percentages or size of the body of returning students, the four- and six-year graduation rates, the number of degrees awarded generally or as part of a specific commencement exercise, etc.;

- An illustration of ways that the school's programs or actions have contributed to that graduation rate;

- Comparisons to national graduation rate averages and references to increased numbers of students graduating from the school; or

- General graduation photos, well wishes, congratulations and announcements about graduation and commencement ceremonies/events will also fall under this category.

ii. *Undergraduate Academic Reputation* **Category:**

ENTER CODE SYMBOL = *UAR*

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[1] The researcher created each coding category primarily based off of metrics used by the 2018 *U.S. News & World Report* Best Colleges rankings. The researcher then used the researcher's judgment to establish criteria within the subject matter of a tweet that the researcher believed would determine the category to which a tweet should be assigned. The researcher's characterization and categorization of a tweet does not necessarily represent or reflect the subject's original intent of such tweet.

Tweets should be coded in this category if their primary content includes the following elements:

- Events, awards, or facts that enhanced the university's undergraduate academic reputation, such as academic excellence;

- Faculty and teaching activities;

- Dedication and commitment;

- Academic rigor;

- Rankings, awards, or recognition of academic programs, departments, or research;

- Student activities such as special events or travel study to other locations; students doing-interesting things related to their coursework or college experience;

- Campus anniversaries (centennials, for example); or

- Recognition by a governmental body recognizing the campus or congratulating the campus on a significant achievement.

iii. *Faculty Resources* **Category**

ENTER CODE SYMBOL = *FR*

Tweets should be coded as *FR* if a tweets' subject matter contains information showing or supporting any of the following faculty-related elements:

- Strong faculty resources, such as mentoring, faculty salaries, and raises;

- Number of full-time faculty;

- Number of faculty with a Ph.D. or terminal degree;

- Number of full-time faculty;

- Faculty expertise and competency;

- Recognition of faculty accomplishments;

- Faculty benefits such as training and development, sabbaticals, and grants; or

- Feature stories about faculty members; faculty and senior administration recognition; and awards, promotions; and announcements of subsequent hiring of university faculty by other prestigious institutions.

iv. *Student Selectivity* **Category**

ENTER CODE SYMBOL = *SEL*

Tweets should be coded in this category if their primary content includes the following elements:

- Facts, events or examples that illustrate the academic quality of students at the university.

- The university's selectivity of/desirability to academically strong students;

- The number of student applicants accepted, ACT scores or SAT scores of applicants or accepted students, entering students with scholarships (National Merit Scholarships, etc.), the university's acceptance rates, references to high school performance or class ranking of incoming students; or

- Content or links about new student orientation hashtag sites for accepted students, students sharing their excitement about being admitted, etc., should be placed under *UAR*, UNLESS they specifically refer to the academic preparation, scholarship, class rankings or ACT/SAT scores of such students. If those things are mentioned in the tweet, the content goes here under *SEL*.

v. *Financial Resources* Category

ENTER CODE SYMBOL = *$$*

Tweets should be coded in this category if their primary content includes the

following elements:

- Strong per-student spending.

- Examples of the breadth of programs and services the university offers.

- Investments in research, mentored and experiential learning, student programs

  and services, student wellness, student grants, new or enhanced student

  buildings, classroom facilities and technology.

- Tweets about general scholarships also go here unless:

  - The MAIN thrust of the story is about alums who gave. Then, the content

    goes under *AGR*. Otherwise, if alumni involvement is noted but the primary

    emphasis is on the scholarship funding, *AGR* would be a secondary category

    and *FR* would be primary.

  OR . . . .

  - A particular student is being honored as a scholarship recipient. In that

    case, the main content category would be *SEL*.

- Tweets about the importance, impact and availability of research funding could

  also go in this category, UNLESS they recognize a specific group of professors

  (they would then go under *FR*) or students (they would then go under *UAR*).

vi. *Alumni Giving Rate* Category

ENTER CODE SYMBOL = *AGR*

Tweets should be coded in this category if their primary content includes the following elements:

- Support or illustration of alumni giving activity or the benefits of alumni giving to the university;

- Information about specific donors, donor gifts, alumni giving rates, capital campaigns, endowed chairs and scholarships, alumni association events, activities and awards, etc.; or

- For tweet(s) that feature(s) an alum of the University: if the presence of the alumnus in the tweet is the main subject of that tweet, it goes under *AGR*, even if it's an alum simply visiting campus or posing for a picture with the president.

vii. *University Sports Programs* **Category**

ENTER CODE SYMBOL = *USP*

Note: While this is not a 2018 U.S. News & World Report category, the researcher theorized a priori that the universities' sports programs would be a common subject of the tweets examined, and should be included in the analysis. Tweets should be coded as USP if their primary content includes the following element:

- References to university sports programs or teams, school sporting events or games, specific student athletes, profiles of coaching staff, etc.

viii. *OTHER* **Category:**

ENTER CODE SYMBOL = *OTH*

If the tweet being analyzed does not contain any of the categories described in the list of seven a priori categories i-xii above, it should be entered in the *OTHER* category. Tweets in this category could include topics such as:

- Greetings from the president;

- Responses to national tragedies or issues (as opposed to campus issues which might fall under *Crisis Management*, below);

- Commentaries or responses to other campus events;

- Reminders to vote or other similar duties;

- Photos or comments on the weather or attractive campus features; or

- Comments on national issues or proposed legislation that relates to higher education to that campus, etc. (*An exception here may be research funding, which would go under FR if it refers specifically to research on campus.*)

  Note: If the tweet does not contain any of the categories described in i-viii, above, it should be entered in the "OTHER" category.

Coding Crisis Management: Coding Sheet, Line 10 (Excel Spreadsheet).

Note: While not considered as part of the 2018 U.S. News & World Report rankings, the researcher theorized a priori that tweets that dealt with a crisis of some sort at the university might be significant. Tweets should be coded as Crisis Management if their primary content includes the following elements:

- Apologies or explanations around unfavorable events concerning students, administrators, sports teams, etc., and what the university is doing to address this;

- Crimes on campus;

- Complaints, unfavorable reviews or sanctions from governance organizations such as accrediting bodies, the NCAA, etc.; or

- University president's responses to unfavorable news articles or social media about the school.

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Note: If the tweet deals directly with one of the 2018 *U.S. News & World Report* categories being examined, it should already have been entered in that category, AND should be entered in the *Crisis Management* category here and designated with "*CM.*" If the tweet does NOT align with one of the first 7 categories (including *USP*), but if it is still primarily a *Crisis Management* response, it should be listed in both the "*OTHER*" category and the *Crisis Management* category described here and designated with "*CM.*" If the tweet does not contain a crisis management response, leave this line blank.

Clarification: Tweets about presidents taking a stand against national, external-to-campus events or issues such as hate speech, discrimination, school shootings, etc. would be *OTHER* in the main category section (Line 9), and would NOT be considered to be *Crisis Management*, so Line 10 would be left blank. It is *Crisis Management* ONLY if it deals with managing an event on the president's own campus. So, tweets about hate speech, crime, bad behavior, etc. that occur on the president's own campus would be marked *OTHER* at Line 9 but would also be marked *CM* at Line 10.

Coding Positive or Negative Content: Coding Sheet, Line 11 (Excel Spreadsheet).

This section analyzes whether the content of the tweet, whatever category it may reflect, is positive or negative in tone or sentiment.

Definition of *positive* content:

- The content of the tweet is *favorable* to the subject of the tweet (president, university, student, etc.).

- Nouns and adjectives used tend to be positive and complimentary.

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- *Positive* content could include the president's or school's participation in beneficial events or programs, service to school or community; recognitions and awards for university/campus community; progress towards a goal or milestone; encouragements and reminders to participate in civic activities such as blood drives or voter registration; expression of sympathy or support for a external event, such as a natural disaster (even if the event itself is negative); athletic accomplishments; faculty profiles, research and new hires; student/alumni profiles; a president's participation in external events, such as conferences; remembrances or reflections on past events (even if the event itself is negative, such as 9/11).

- As described in Chapter 7 of *Press and Its Social Responsibility in Northeast India: A Content Analysis*, positive content can also include reports of actions intended to fight, correct, address or ameliorate events that are themselves negative news and have already been reported (Plathottam, 2008, p. 370). Actions or events intended to counteract negative issues such as social injustice, inequality, racism, discrimination, etc., also constitute positive content.

Definition of *negative* content:

- The content of the tweet is *unfavorable* to the subject of the tweet (president, university, student, etc.).

- Such content could include bad news or negative information, announcements or reports (unless the news has previously been reported and is now accompanied by an explanation of what the president/university will do to help or address it, as described above under "Positive News").

- Negative content could also include criticisms or complaints about individuals, policies, or legislation; announcements of personnel actions such as firings or investigations; crimes; demonstrations or complaints about university administration or other personnel; negative actions against the university by outsides organizations; funding cuts or budget problems, etc.

A major differentiation between positive and negative content, for the purposes of this coding, is that if any kind of bad news is being announced by the president for the first time (in other words, the tweet constitutes the announcement of the bad news), then that constitutes *negative* content. However, if the president's tweet references a bad news event after it has already been announced (drawing that context from the tweet itself), and/or if the tweet expresses sympathy, support, solidarity or describes what the president or the school is doing to address the issue, the content should be viewed as *positive.*

- Indicate on Line 11 of the coding sheet whether the tweet's content is positive ("*P*") or negative ("*N*").

Coding Manifest and Latent Content: Coding Sheet, Line 12 (Excel Spreadsheet)

Manifest content refers to "what is said" in the text, or the literal meaning of the words and content used in the communication.

- Tweets which demonstrate manifest content would include tweets with liberal use of the words or terms described for each of the first seven categories indicated in the "Coding Dominant Categories" section (the six 2018 *U.S. News & World Report* categories and *USP*).

- It can be assumed that if a tweet has been coded as aligning with one of these seven categories, then by definition it explicitly contains the terms, references and

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definition related to the 2018 *U.S. News & World Report* categories or *USP*, as contained in the explanation section for each of those categories (again, found under the "Coding Dominant Categories" section).

- Mark ALL such tweets with an "*M*" for *Manifest Content*.

- However, the final two categories, *Crisis Management* (if not already linked to one of the categories) and *OTHER* could include tweets that, while not containing manifest content relating to the 2018 *U.S. News & World Report* rankings, could contain latent content relating to those categories.

- For tweets falling under these two areas, indicate whether there may be latent, rather than manifest, content related to the 2018 *U.S. News & World Report* categories, using the definitions of latent content below:

Latent Content refers to "what is meant" rather than what is actually said.

- The underlying meaning of the passage rather than the apparent meaning.

- The use of rich, descriptive words and adjectives that, while not specified in the 2018 *U.S. News & World Report* rankings, portray emotions and underlying meanings that represent a category related to those rankings.

- If any of these tweets (again, those not already marked as "*M*") contain latent content related to the 2018 *U.S. News & World Report* categories, mark such tweets with an "*L*."

- If they do not, leave this Line 12 blank.

- Re**member that if the category of a tweet at Line 9 is one of the first 7 categories (including *USP*), it must be marked for *Manifest Content* ("*M*").**

- Tweets marked *OTHER* at Line 9 can only be coded as an "*L*" or a "*blank*" at Line 12.

For the purposes of this study, content is only manifest if it relates directly to the categories. Had content related directly to the U.S. News & World Report categories, it would have been aligned with one of the first 7 categories; it would not have been coded as OTHER. So, Line 12 choices for tweets that were coded as OTHER are L (Latent Content) or BLANK (no Latent Content).

Note: Although Line 13, "If main category of OTHER, subject of tweet," appeared on the coding sheet, it was not a part of the coding process. The researcher added it after the tweets marked OTHER were examined and divided into the five emergent categories. It is included on the coding sheet only to illustrate the full range of information collected.

-END-