ARE UNIVERSITIES "SELLING" ONLINE PROGRAMS

THROUGH AGENDA SETTING?

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A Thesis

presented to

the Faculty of the Graduate School

at the University of Missouri-Columbia

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In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

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by

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MAY 2018

The undersigned, appointed by the dean of the Graduate School, have examined the thesis entitled

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THROUGH AGENDA SETTING?

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and hereby certify that, in their opinion, it is worthy of acceptance.

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DEDICATION

I would like to dedicate this thesis to my brother, Eric Warren Witzig, who, despite battling cancer, mustered the strength to nag me daily until it was finished. I love you, Bro; this one is for you. I also want to thank my ever patient, ever loving husband, Ed Mornston, for his unique ability to provide adult beverages when they were needed most.

# ACKNOWLEDGEMENTS

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# Chapter 1: Introduction

Higher education in America is at a tipping point—the traditional, common college student is no longer that traditional or common. While much of America maintains a preconceived notion of the "traditional" college student—18-22 years old, attending full-time, and living on campus—the numbers show a different picture: Traditional students compose only 14% of undergraduates (Betts, 2017). Meanwhile, online programs are becoming mainstream for universities, as more are offering them and many are expanding majors and levels of degrees (Poulin & Strout, 2016). Something has shifted in the academic marketplace, and universities must react to remain relevant.

With this new academic landscape comes a number of challenges. Overall enrollment rates at universities have slowed considerably in recent years. For example, between 1997 and 2011, undergraduate enrollments increased by 45% and post-baccalaureate degree enrollment rates increased by 45% (Hussar & Bailey, 2014). But between 2011 and 2022, undergraduate enrollment rates are projected to increase by only 13%, while post-baccalaureate degree enrollments are projected to see just a 9% increase (Hussar & Bailey, 2014). More telling is the rate of enrollments for traditional students— those between the ages of 18 and 24—that is projected to decline by 4% through 2022 (Lederman, 2014). Fewer students are taking courses on ground campuses—the decline is approximately 1.2 million over the last four years (House, 2018b)—while online course enrollments continue to grow (House, 0218a). With enrollments of traditional students declining, universities are wrestling with new ways to increase enrollments.

**How Can Universities Respond to This Shifting Academic Market?**

As part of a strategic response to such trends, universities are seeking to expand their online programs and not rely so heavily on their traditional, on-ground programs (Clinefelter & Aslanian, 2016; Jaschik & Lederman, 2017).  Indeed, 82% of Chief Academic Officers surveyed by Inside Higher Ed and Gallup at both public and private non-profit universities indicate that their institutions will be increasing both online courses and online programs for their undergraduate, master's, and PhD programs in the next few years (Jaschik, 2017).  In just the past few years, enrollments of students in online programs at non-profit private universities topped 158,000, and enrollments at public universities for online students topped 151,000 (Poulin & Strout, 2016).  As the competition heats up for online students, universities are taking a more businesslike approach through their marketing and branding efforts to promote their online offerings (Rutter, Roper, & Lettice, 2015).

But the competition does not end there.  Wall Street has responded positively to the election of President Trump and anticipates that Obama-administration regulations on for-profit colleges will ease (Mitchell & Banerji, 2017).  These for-profit institutions were the first to jump into the online market, while private and non-profit universities waited on the sideline (NEA Higher Education Research Center, 2004) and built large student enrollments.  With the revival of the for-profit higher education segment in the near future, the competition for online students will intensify even more.

Like businesses that compete for customers, universities are competing for students and hence, higher education has become a marketplace. Marketing techniques and concepts are as applicable to this market as they are in the commercial space (Lenore-Jenkins & Shasserre, 2016; Nevzat, Amca, Tanova, & Amca, 2016), and universities are branding their college experiences in an effort to differentiate themselves. As part of the marketing and branding efforts, universities are becoming more marketing savvy and using social media to promote both their online programs and traditional on-ground programs. Social media has become an important marketing asset for universities, as prospective students —both young and not so young— are relying on social media for news, information, and opinions (Barnes & Lescault, 2013). From a marketing perspective, how can universities extend their brands to their online programs, where the greatest growth in enrollments is likely to occur? Is name recognition enough, or do universities need to do more to differentiate their online programs? How can universities convey their brands in the virtual world through a virtual medium, like social media?

**Problem Statement**

Because their online programs are newer and not as well known—or perhaps, not as well respected—this study hypothesizes that universities may be drawing on their better-known assets, such as their iconic campuses or sports programs, to set an agenda in their social media posts that target prospective students. Indeed, university use of agenda setting may lead to "priming"— that is, universities are shifting the attention to certain topics and, in doing so, are shaping the audience's perception as to a topic's importance

and discussions around it (Davie & Maher, 2006). In summary, there is a need to better understand how universities are branding their online programs in social media and if they are using their traditional, ground-related assets to engage in agenda setting while marketing their online programs. As such, the following research questions need to be addressed.

- Are universities placing an emphasis on their better-known assets that are associated with their traditional, ground programs to shape their audience's perceptions of their online programs, instead of communicating about the attributes of the online programs themselves?

- Are universities specifically using images associated with their brands and traditional programs in social media posts to set an agenda for their online programs and to skew audience perceptions?

- How can we quantify possible agenda setting within a university's social media posts including images?

**Objectives**

The purpose of this research is to quantify if universities are engaging in agenda setting through the images they choose for their social media posts promoting their online programs. Images and visual communication are an important part of branding (Chapleo, 2010; Sung & Yang, 2008), and the use of images could be particularly significant for potential college students, especially given their preference for image-centered social media, such as Instagram (Perrin & Duggan, 2015). In other words, instead of trying to sell their online programs directly to the prospective students and families, are

universities selling their brand that is largely based on their traditional, ground programs and campuses?  While not a bait-and-switch tactic, per se, if true, this approach would favor universities that have established an effective brand reputation regardless of the size, quality, or performance of the online programs they seek to promote.  Such findings could be very helpful for any university seeking to grow its enrollments through online growth, while also helpful for consumers of higher education, e.g., students and their families.

The objective of this study is to analyze two social media feeds—Twitter and Facebook— for the online programs of six public universities: Ohio State Online, Oregon State University Ecampus, the Pennsylvania State University World Campus, University of Arkansas Global Campus, University of Georgia Online, and University of Nebraska Online.  By analyzing the content of the universities' social media platforms for their online programs, this study will test the theory that universities are using agenda setting to influence what prospective students—and their families or friends—are thinking about when it comes to the online programs.  The results of this research will be valuable to all universities seeking to grow and promote their online programs.  Moreover, it will provide insights into how universities are trying to influence consumer choices through their marketing approaches.

# Chapter 2: Literature Review

**Overview**

Whether universities portray their outreach as public relations or stakeholder engagement, it largely is dependent upon marketing and the application of marketing techniques. Rutter et al. (2015) demonstrate that higher education is now viewed and referred to as a market by both researchers and academicians and, as such, should be treated like a commercial entity. Like businesses that compete for customers, universities are competing with other universities for students, alumni dollars, and state support. Hence, higher education is a marketplace, and marketing techniques and concepts are just as applicable in this market as they are in the commercial space (Lenore-Jenkins & Shasserre, 2016; Nevzat et al., 2016). Universities have invested heavily in their branding—which is largely tied to their traditional, on-ground programs, campuses, and sports programs (Botha, Farshid, & Pitt, 2010; Hosseini & Nahad, 2012; Scott, 2012; Szwacka-Mokrzycka & Abutalibov, 2014; Tokuhama, 2011)—so is it feasible or desirable to move this branding into communications surrounding online programs?

One possible method for doing so would be agenda setting. Additionally, universities are becoming increasingly active on social media, following their students to the social networks where they gather information and opinions (Hubspot, 2016). This literature review explores the intersection of university branding, agenda setting theory, university use of social media, and promotion for their online programs by extending their traditional brands (see Figure 1).

University Branding

Agenda Setting Theory

University Use of
Social Media

Promoting Online
Programs

Focus of the research

Figure 1. Focus of the research—the intersection of university branding, agenda setting theory, use of social media, and promotion of online programs.

**Universities & Branding**

A review of the literature shows that branding and image management are key tools for universities (Chapleo, 2010; Duesterhaus & Duesterhaus, 2014; Gray, Fam, & Llane, 2003; Hussain & Ferdous, 2014; Iqbal, Rasli, & Hassan, 2012). Duesterhaus and Duesterhaus's (2014) analysis starts with the premise that increased competition in higher education among universities and colleges has driven institutions to implement practices associated with brand management. The authors trace the origin of university branding in the United States to the early 1980s and identify a number of elements that influence stakeholder impressions of the brands. For example, the authors show how a student's perception of the university is greatly influenced by the university's communication and messages. Duesterhaus and Duesterhaus also study the role of location, ambience, and

total brand experience in influencing perceptions and demonstrate that these key elements associated with university branding can be used to affect university stakeholders' impressions, particularly prospective students.

Chapleo's (2010) analysis of both qualitative and quantitative aspects provides interesting insights into the types of branding techniques that universities are using. While the specific objectives vary among universities, Chapleo demonstrates that universities are actively engaged in branding and image building with the intent of influencing stakeholders. Chapleo's research indicates that when using branding techniques to create a certain image, universities want to

- communicate a positive image of the performance of the university,

- educate stakeholders regarding types of education,

- share different facets of the university with all stakeholders, and

- create a competitive advantage.

The literature shows that not only do universities use branding; they are becoming more sophisticated in their application of the concept to their brand positions. Duesterhaus (2015) provides a case study that examines Converse College's decision to change its brand position by changing its tuition pricing. His focus on brand position and his analysis of Converse College's brand decisions demonstrate that universities engage in branding and create brand positions to influence current and prospective students. Iqbal et al. (2012) further establish the importance of branding for universities, stating, "University brand, in fact, is the perception and reputation developed in the minds of people about the university or institution" (p. 168). Iqbal et al. (2012) expand this idea

further by pointing to a cause-and-effect relationship: When people see a name or symbol associated with a university, they react in a way that is aligned with the university's branding strategy. The results of their study show that these brand attributes form the university's brand image, and this image, in turn, is a key determinant in a potential student's selection process. This argument is framed through a marketing lens, but could fit the agenda setting theory, too. If university stakeholders are influenced regarding acceptance prestige, and quality, then universities also may be using their branding and image-management techniques to influence what students should be thinking about. Sung and Yang (2008) further reinforce these findings by demonstrating that the three elements of image—personality traits, perceived external prestige, and reputation—affect how students perceive their university; of these three, perceived external prestige accounted for the greatest influence. Sung and Yang further point to the importance of key factors that add to a university's brand image to include university rankings conducted by mass media (e.g., U.S. News and World Report) and ranking associated with athletic organizations like the National Collegiate Athletic Association (NCAA).

Roy, Graeff, and Harmon's (2008) research aligns with that of Iqbal et al. (2012) and Sung and Yang (2008), as all these authors' research focuses on elements that affect attitudes toward and perceptions of universities. In the case of Roy et al., the authors examine an organizational ranking that affects external perception. Roy et al. examined how the move from the NCAA Division I-AA (now the Football Championship Subdivision) to the NCAA Division I-A (now the Football Bowl Subdivision) affects overall views of the university among students, alumni, and the general public. Their

research shows that such a move creates a more positive image of the university and attracts potential students. The research shows that the results are positive from a university image and branding perspective; an analysis of their findings also shows that such a move helps a university to shape the topics that its key stakeholder groups discuss and to engage more effectively with stakeholder groups.

**What Agenda Setting Theory Tells Us**

McCombs and Shaw (1972) performed the original research that created and shaped the theory of agenda setting. In their analysis of the 1968 U.S. presidential election, they determined that the media does not necessarily set voter opinion on the issues, but the media does set the agenda for political campaign issues and further influences attitudes toward the issues. The authors demonstrate that, by shining a spotlight on specific issues, the media makes them important to the voters. Hence, mass media matters. As universities work to attract students—and in some cases, compete for the best students—it might behoove them to focus the students' attention on the university's best attributes, whether those attributes be their campuses, sports programs, research, strong academic programs, or famous alumni.

A review of the literature shows that others have built on the work of McCombs and Shaw over time and have expanded the application of the theory beyond politics. For example, Davie and Maher (2006) provide a succinct retrospective view of agenda setting theory. As the authors point out, prior to McCombs's work, communications theory provided little credence to the idea that media influenced the public. Pushing beyond this, Davie and Maher highlight that McCombs also provided evidence that traditional

media are aligned with each other regarding the issues; that is, radio, television, and newspapers assigned similar amounts of coverage for various issues, further reinforcing the theory.

Ragas and Roberts (2009) argue that because of advances in communication technology, the influence of vertical mass media—e.g., newspaper, television, and radio—has diminished, and audiences are abandoning these more traditional forms of agenda setting mechanisms for horizontal media. Ragas and Roberts describe the emergence of virtual brand communities that are free, accessible to all, and focused on specific interests. The authors specifically identify virtual brand communities that have formed around well-known products and companies such as Apple, Ford, and Chipotle. Whereas the concept of community used to be defined by geographic-related characteristics such as neighborhoods, Ragas and Roberts show a link between company brands and brand communities. The importance of this finding likely applies to university brands.

This perspective of agenda setting becomes important if universities are deploying messaging that shines a spotlight on the geographic attributes of a university—e.g., location or campus imagery—to reframe an audience's perception. Given that 84% of American adults use the Internet and college graduates are heavy users (Perrin, 2015), Ragas and Roberts's (2009) approach may be directly relevant to a university's brand influence on brand-specific communities. For example, because traditional universities are geographically centered—e.g., the University of Missouri is tethered to its main campus in Columbia, Missouri—and many universities also have satellite campuses and online programs, reaching prospective students and alumni likely involves engaging with

these communities through virtual means.  Hence, the ability to create and influence a

virtual brand community around a university brand could strengthen a university's ability

to set the agenda for these stakeholder groups across space and time.  Yet, the importance

of geography should not be discounted, even as it applies to the virtual environment of a

university's online program; an analysis of enrollment statistics shows that the majority

non-traditional students tend to enroll in online programs with universities that are within

a 100-mile radius of home (Poulin & Straut, 2016).

**University Branding, Social Media, and Courting Supporters**

A review of the literature shows that like commercial organizations, universities

communicate through channels that resonate with target segments—in this case,

traditional and non-traditional students who are responsive to social media (Carter, 2016;

Perrin & Duggan, 2015).  Social media, a form of digital marketing, provides a platform

for interacting with universities' students and potential students.  A key concept behind

digital marketing is inbound marketing.  According to Hubspot (2016, p.1), "Instead of

the old outbound marketing methods of buying ads, buying email lists, and praying for

leads, inbound marketing focuses on creating quality content that pulls people toward

your company and product, where they naturally want to be."  For universities, social

media provides the ability to engage in a dialogue with key constituents through channels

that are convenient and relevant, to include phone apps.

Moreover, a university's image and reputation are directly linked to student

loyalty to universities; a college's brand personality, external prestige, and reputation are

all wrapped up in supportive attitudes and expressions of loyalty by its students (Rutter et

al., 2015; Sung & Yang, 2008).  Building those images and reputations through social

media is quickly becoming a core marketing function, as opposed to an ancillary one

(Nevzat et al., 2016).  But the effects go deeper still.  University branding has been

demonstrated to increase a university's ability to attract quality students, while also

creating a sense of community with alumni (Botha et al., 2010; Hosseini & Nahad, 2012;

Scott, 2012; Szwacka-Mokrzycka & Abutalibov, 2014; Tokuhama, 2011).  Moreover, if a

university's overall image is strong, this will carry over to the university's online arm,

which is even more difficult to brand (Bailey & Flegle, 2013; Iqbal et al., 2012;

Tokuhama, 2011).  The literature demonstrates that creating connections online is a

critical part of a university's overall marketing strategy.

Of note, during this literature review, this author noticed a paucity of studies on

university usage of social media.  Indeed, a study of dissertations that focused on the use

of social media in higher education shows that most studies on social media center on

political, social, or business topics (Piotrowski, 2015).  Of the studies that do focus on

social media and education, these primarily examine use of social media in the

classroom, and not university usage of social media for marketing and communications.

**University Application of Social Media—Facebook and Twitter**

There are a few studies that show that university engagement through social

media elicits feelings of trust and loyalty among target segments like students and alumni

(Nevzat et al., 2016), which then leads to positive action on the part of these students and

alumni.  For example, when a university creates an online community through its

Facebook page, students and alumni are more likely to identify with the brand and

deepen their brand loyalty (Nevzat et al., 2016). Universities and colleges also are using Twitter, another popular social media platform, to engage target segments. Most universities have Twitter accounts and use their tweets predominantly for self-promotion (Beverly, 2013). Engagement Labs evaluates various universities' social media activities annually and creates a list of the top 50 (Bethke, 2016). The ranking considers only Facebook and Twitter, and the evaluation criteria include

- engagement, or how well the university is interacting with its target audience (this measures the number of posts or tweets, and then likes and retweets);

- impact, or the reach of the university's social media efforts; and

- responsiveness, or how the university reacts to posts by its target audiences.

The top-50 list reflects a mix of public, private, and for-profit universities, demonstrating that university activity on social media cuts across types and sizes of universities. Hence, it would appear that Facebook and Twitter— two social media platforms that can be used to communicate short messages with images tailored to specific audiences—are used extensively in universities' branding and marketing efforts.

Studies on the commercial usage of social media are numerous and robust, as opposed to the few on university usage (Alves, 2016). Bethke's (2016) criteria align with multiple studies examining social media usage by businesses, whose usage of social media is ahead of the academic community (Alves, 2016). Alves's study highlights the importance of social media usage for organizations to build brand loyalty through engagement, and increase brand awareness and recall. Moreover, Constantinides, Alarcón del Amo, and Romero (2010) demonstrate that consumers are more likely to trust

information about an organization that is shared on social media, as opposed to information that is disseminated directly by a business or organization.

**Use of Images in Social Media**

A review of the literature shows that images and visual communication are an important part of branding, to include university branding (Chapleo, 2010; Sung & Yang, 2008). The use of images could be particularly significant for college students, especially given their preference for image-centered social media, such as Instagram, Twitter, Facebook, and Twitter (Perrin, 2015). Of note, one study applies the agenda setting theory to the media images and their effect on college students (Miller and Roberts, 2010). The results of the study show that proximity to media events is relevant for visual agenda setting; that is, the closer a person—in this case, a student—is to the event, the person will more likely choose personal images, as opposed to media images.

These findings in the literature suggest that a university may benefit from investing in visual agenda setting, as this may directly reach and influence a key stakeholder group. If it is the case that university usage of branding is focused on agenda setting, it also may be the case that there is a relationship between university branding and the related, more narrowly focused theory of priming. For example, if a university would like prospective students and their families to place more emphasis on a rich on-campus experience, the university may direct its communications toward images of the campus at certain times of the year (e.g., a New England campus during the fall foliage) or iconic places or well-known structures on the campus (e.g., a large football stadium lit up at night and packed with passionate students). University communications

emphasizing these aspects could be effective in directing prospective students' and their families' thoughts toward evaluation criteria that skew favorably for the university.

**University Branding of Online Programs**

Universities understand the importance of expanding their online programs to the overall health of the university system (Clinefelter & Aslanian, 2016; Jaschik & Lederman, 2017), so the question now focuses on how to extend the university brand to their online programs.  In other words, do universities engage in agenda setting through their social media engagement with potential and current students and their families? What elements of a brand does a university view as best for raising awareness, deepening brand loyalty, and reinforcing a positive brand image?

The literature shows that schemas help consumers to filter and digest the ever-increasing amounts of information they receive daily (Halkias & Kokkinaki, 2014). Alina and Loan define schemas as "organized structures of knowledge and expectations that consumers develop in order to categorize the incoming information and that they access every time they are experiencing a new situation" (2014, p. 1765).  As brands and images—to include university brands—flood the market, schemas help consumers sort through the options and impart meaning to what they are seeing.  The intersection of university branding and the public's schemas would suggest that certain elements in these schemas are critical to the formulation of an opinion.  Further reviewing the literature, three types of imagery appear most relevant for university branding: campus icons and the physical location of the university, sports, and elements related to the overall university reputation.

**Campus Icons & Physical Location**

The literature demonstrates that images and visual communication are an important part of branding (Chapleo, 2010; Sung & Yang, 2008).  The use of images could be particularly significant for college students, especially given their preference for image-centered social media, such as Twitter or Facebook (Perrin, 2015).  If a university is known for an iconic or historic campus—e.g., the University of Virginia's quad known as The Lawn that was designed by Thomas Jefferson, Harvard Yard, Stanford University's Main Quad, or West Point's The Plain—the university may find it advantageous to extend this brand through visual agenda setting to its online program.  Indeed, Duesterhaus and Duesterhaus show that location is an element that surfaces in multiple studies that assess university brand attributes, to include visuals of recognizable landmarks (2014).  While it may appear counterintuitive to include the notion of a traditional campus in factors that may influence opinions of online programs, it would appear that well-known landmarks and imagery associated with ivy-covered walls do matter.  For example, the six columns at the University of Missouri "stand as a beloved part of MU's campus" ("History of the Columns," 2015).  Duesterhaus and Duesterhaus further demonstrate that location and a desirable campus are attributes that influence the public's perception of a university.  But the literature falls short of examining how universities continue their brands through their online programs; no studies examine if the public's awareness and positive opinion of a university's physical location and iconic landmarks influence their perception of that university's online program or attempts by universities to do so.

**Sports Programs' Contributions to University Image**

If a university has a well-known athletic program—e.g., NCAA Division I-A football teams such as the University of Alabama or Notre Dame—images and communications around these successes likely are used to further the university's brand. Watkins and Lee (2016) show that universities use social media posts on Twitter and Instagram to reinforce a brand image associated with their football programs, while Bouchet, Laird, Troilo, Hutchinson, and Ferris demonstrate that athletic reputation is correlated with increasing endowments (2015). Hutchinson, Havard, Berg, and Ryan (2016) show the negative effects on a university image when a Division I school disbands its football program, despite the compelling budgetary reasons to do so, as students and alumni see the university brand wrapped up in the university's brand image as an extension of the football program. Moreover, Lee, Miloch, Kraft, and Tatum (2008) show that for smaller universities that are not part of a major NCAA conference, it is difficult to build and maintain a favorable university brand image, putting them at a disadvantage. The literature shows that universities leverage prominent athletic programs in their marketing and communications to reinforce the university brand and image. What the literature does not examine, however, is the use of images associated with athletics in social media posts to the universities' strengths through agenda setting.

**Recognition of the Overall University**

The literature points to a third element that influences the public's perception: pre-existing recognition of the university or university reputation. Recognition refers to

different components, to include awareness, acceptance, and prestige (Bailey & Flegle,

2013; Iqbal et al., 2012; Tokuhama, 2011). Recognition possibly plays into the

underlying schema; as Tokuhama points out, "The process of ordering and imbuing value

ultimately demonstrates how advertising can not only create culture but also act to shape

it, a process also evidenced by marketing techniques' ability to consume and/or reference

previously shared cultural knowledge while simultaneously contributing to the cultural

milieu" (2013, p.36). In this case, stories that reinforce a university's image and brand

help people absorb more information about the university. If this is the case, then there

may be a positive link between a university's existing reputation and a positive or

favorable attitude toward that university's online programs. There is a paucity of

literature, however, that explores if universities are projecting the stories and images

centered on the reputations associated with their historical, established, traditional

programs into their narratives for their online programs.

**Agenda Setting in Social Media for Online Programs**

Based on this literature review, it is can be seen that campus image, university

sports, and overall university reputation contribute greatly to the public perception of

online programs. Because of these findings, this study will explore if universities are

using agenda setting by representing the university through images associated with these

three concepts in their social media posts specifically for their online programs. Building

on the work by Sung and Yang (2008), this study sets out to test if universities are using

imagery that is associated with their traditional branding—i.e., physical campus and

icons, sports programs, and overall reputation—to extend their brand to their online

programs when posting on social media on behalf of their online programs. This literature review shows a paucity of research examining how universities are using the marketing assets associated with their traditional programs to promote their online programs and hence, setting an agenda for students who are considering their online programs. This research will examine the intersection of university branding, agenda setting theory, university use of social media, and promotion of online programs—a niche that has yet to be explored in the academic literature—and the findings may show how universities "sell" their online programs based on the attributes of their traditional programs, and not on the strengths of the online programs themselves.

# Chapter 3: Methods

This study applies a quantitative approach to examine six universities' posts on Facebook and Twitter from their online programs' social media accounts. While many agenda setting studies take a qualitative approach, studies using quantitative approaches that rely on coding content have contributed to the body of knowledge as well (Barnes et al., 2008). Iqbal et al. (2012) establish the importance of branding for universities, stating, "University brand, in fact, is the perception and reputation developed in the minds of people about the university or institution" (p. 168). Iqbal et al. (2012) expand this idea further by pointing to a cause-and-effect relationship: When people see a name or symbol associated with a university, they react in a way that is aligned with the university's branding strategy. The authors test how audiences are influenced by specific brand attributes, to include awareness, acceptance, prestige, incentives, and quality. The results of their study show that these brand attributes form the university's brand image and this brand image, in turn, is a key determinant in a potential student's selection process. Image is key, and images fuel the brand reputation. Based on the literature review, it is hypothesized that universities use agenda setting through images associated with their brick-and-mortar traditional programs—campus image, university sports, and overall university reputation—to contribute to the public perception of their online programs.

**How Many Posts Constitute Agenda Setting?**

Although many studies that examine the social media and agenda setting rely on

interviews or surveys, a few have examined the specific numbers or percentages

of Twitter posts associated with agenda setting and agenda setting issues. For example,

Henry-Barrus (2012) indicates that six to 10 tweets focused on a specific topic with five

or more images are necessary to be effective in advocacy.

Furthermore, Schmidt and Eisend's (2015) meta-analysis of exposure to

advertising and its effects on brand recall and brand involvement show that repetition—

specifically 10 exposures—appears to be most effective. They also examined the role of

spacing—that is, the periodicity of the exposure—and found that spaced exposures

enhance the consumer's attitude toward the brand, while massed exposures enhance the

consumer's ability to recall the brand. Hence, deepening a customer's loyalty or support

of a brand requires spacing out exposures. Jeong, Sanders, and Zhao (2011) reinforce

these findings with research that indicates that frequency of adverting is more important

than the length of the advertisement; they also cite 10 exposures as optimum.

Regarding commercial best practices for how often to post on various social

media platforms, the numbers are clearer. According to various studies (Buffer Social,

2015; Butler, n.d.; Dow Social, 2015; Patel, 2015), the optimum frequency for posting in

general is three times per day for Twitter and once per day for Facebook; this equates to

approximately 90-180 times per month on Twitter and 30-60 times a month on

Facebook.  While there was a range presented by the various studies, all agreed on these benchmarks.

Because agenda setting theory—and priming especially—is focused on influencing a person's response and attitude, as opposed to brand recall, Schmidt and Eisend's findings on spacing are relevant here.  Hence, if a university is engaging in agenda setting, it appears that an effective approach would be to post ground program-related images 10 times over the course of a month for a total of 120 posts per year.  If the university were following minimum best practices for posting as set by industry benchmarks—three times per day for Twitter and once per day for Facebook—this would equate to approximately an 11% benchmark for agenda setting tweets (120 focused tweets divided by 1095 total tweets per year) and approximately 33% for agenda setting Facebook posts (120 focused posts divided by 365 posts per year).  An overall annual benchmark for both Twitter and Facebook postings would be 16% – that is, the university would post images about its ground-related program approximately 16% of the time for it to be considered agenda setting for this study.  The researcher discussed this approach with a professional statistician, who confirmed the validity and appropriateness of this approach (Pilch, personal conversation, January 16, 2018).

Building further on the work by Sung and Yang (2008) and applying the criteria for expected number of posts, this study will test the following hypotheses to determine if universities are engaging in agenda setting:

H0$_1$: Facebook posts that include imagery associated with campus image,

university sports, and overall university reputation for a university's online

program Facebook feed do not exceed 33% of all posts.

H0$_2$: Twitter posts that include imagery associated with campus image, university

sports, and overall university reputation for a university's online program do not

exceed 11% of all posts.

H0$_3$: The combined Twitter and Facebook posts that include imagery associated

with campus image, university sports, and overall university reputation for a

university's online program do not exceed 16% of all posts.

The dependent variable includes images associated with the three traditional branding

topics—e.g., physical campus, sports, and reputation—while the independent variable

consists of all other posts with images in the social media feeds. The study examined a

12-month period of social media posts for each university to ensure that all sports seasons

and significant academic events—e.g., graduation—were captured in the images.

**Choosing Six Universities**

This methodology studies six universities to ensure a large enough sample size.

Choosing the universities, however, requires that certain criteria be met. An examination

of the social media usage by the universities of the top 100 online programs—as ranked

by *U.S. News and World Report* (2016)—shows that not all universities take the same

approach when promoting online programs in social media. Some universities combine

their social media feeds for both their online and ground programs, while others have

dedicated social media feeds for each program. For the purposes of this paper, the

research requires that the university is using a social media feed that is identified solely with the online program, so as to control for the independent variable. Additionally, the examination of the social media feeds shows that not every university is using the same social media channels; the top five include Facebook, Instagram, LinkedIn, Pinterest, and Twitter. A review of the universities with online programs ranked in the top 50 shows that they use Facebook and Twitter most often.

Recognizing that certain characteristics must be applied to ensure that the focus of the data collection is valid, this study will analyze social media images specifically posted to the online program's social media account of a university that also has a traditional, physical campus. Hence, universities that are only online are immediately ruled out (e.g., University of Phoenix). The study analyzes and compares Twitter and Facebook feeds from six universities with the following required characteristics.

- Each university is a public, state university located in the United States. This is to enable the researcher to compare results across the universities and not be confounded with comparing public to private universities.

- Each university maintains both a traditional, physical campus and an online program that confers four-year bachelor degrees. This is to ensure that the university is promoting the same type of "product"—a four-year bachelor degree.

- Each university has an online program that is distinct from a traditional program at a physical campus (e.g., students can complete a degree online). This is to meet the need of assessing if the universities are using traditional branding elements in promoting their online programs.

- Each university has an online program that is ranked in the top 100 of the *U.S. News and World Report's* 2017 rankings. This is to ensure that the university's online program is recognized and, as such, could be promoted on its own merits.

- Each university has an active NCAA sports team. This is to meet the need for testing if the university is using its sports program in agenda setting for the online program.

- Each university uses a separate Twitter feed for its online program (different from the Twitter handle for the university's main campus or on-ground programs). This is to ensure that the study can assess images that are intended to promote the online program specifically and uniquely.

- Each university uses a separate Facebook feed for its online program (different from the Facebook page for the university's main campus or on-ground). This is to ensure that the study can assess images that are intended to promote the online program specifically.

Based on these criteria, the study analyzes the Twitter and Facebook social media feeds for Ohio State Online, Oregon State University Ecampus, the Pennsylvania State University World Campus (Penn State World Campus), University of Arkansas Global Campus, University of Georgia Online, and University of Nebraska Online. These universities meet all the criteria.

Appendix A provides more details about each online program, to include source of faculty; title of the institution on the diploma; accreditation; number of programs (e.g., degrees); number of students; residency requirements (e.g., if the student must go to the

campus); and any other notes of interest. Appendix A shows that half of the universities use only faculty from their ground programs—Ohio State Online, Penn State World Campus, and the University of Nebraska Online—while the other three use a mix of instructors that includes ground-program faculty as well as instructors who are hired specifically for the online programs. All of the universities issue diplomas that are the same for both the ground and online programs; that is, they do not flag that students completed their studies in an online program. Accreditation for the ground programs extends to the online programs for all six universities, as well. While most of the online programs can be completed without ever stepping foot on a campus, all six universities have a few programs—mostly graduate level—that require a brief residency on the part of the student. In the case of the University of Nebraska Online, online programs are specifically tied to one of four physical campuses.

**Choosing Content Analysis: Coding Images**

This study uses a coding system for the images gathered from the Twitter and Facebook feeds based on similar studies of imagery in social media (Clavio & Eagleman, 2011; Geurin-Eagleman & Burch, 2016). The author first assessed the content of the photo to determine its suitability for one of the three categories (Hum, Chamberlin, Hambright, Portwood, & Shat, 2011), and then consulted the caption of the post and any accompanying text to confirm the selection (Wang, Kim, Xiao, & Jung, 2017). The author performed random checks on her coding after a one-month period to ensure consistency and accuracy. See Appendix B for examples.

**Data-Collection Techniques**

     This researcher categorized, coded, and counted images used in the six universities' Facebook and Twitter accounts specifically dedicated to each university's online program over a 12-month period. The images had to originate with the university; a re-tweet, like, or share by the university was not counted. This is to ensure that the original motivation rests with the university and not another organization or person. Each image was assessed as to if it falls into one of the three categories because it displays a physical location on the university's traditional campus; is associated with a university sports program; or reflects a concept that is related to the university's reputation. The specific definition of each category is as follows.

- **Image related to physical campus**. The posted image displays an outdoor scene of the university, such as a building, sculpture, courtyard, stadium, or other physical structure (Duesterhaus & Duesterhaus, 2014). This category does not include the interiors of classrooms. If the categorization was unclear, the researcher consulted any verbiage accompanying the image to ascertain the intent and association.

- **Image related to sports program**. The posted image displays a physical location—e.g., stadium, practice field, basketball court—associated with a sports program, a sport team or sports team member, a spirit squad (e.g., cheerleaders, dance team), or other sports-related scene, to include fans at sporting events, as athletic programs are seen as an important extension of the university brand (Roy et al., 2008). If the categorization was unclear, the

researcher consulted any verbiage accompanying the image to ascertain the

intent and association.

- **Image related to reputation**.  The posted image displays a person associated

    with the traditional arm of the university—e.g., professor, student, alumni, or

    staff—who is portrayed as having achieved an accomplishment or is portrayed

    in a positive light (Chapleo, 2010; Duesterhaus & Duesterhaus, 2014; Sung &

    Yang, 2008).  If the categorization was unclear, the researcher consulted any

    verbiage accompanying the image to ascertain the intent and association.

If the image contains two or more elements—e.g., a football stadium, which could be

coded as either a part of the physical campus or related to the sports program—the

researcher consulted the text accompanying the image to determine which category is the

best fit.  Each image was assigned to only one category.

**Data Analysis**

The researcher built an Excel file to capture the coding of the images, and each

university had two spreadsheets—one each for their Twitter and Facebook feeds.  After

coding 12 months of data for each university's Facebook and Twitter feeds, the researcher

used the SPSS statistical software package to run a statistical analysis on the data.

# Chapter 4: Results

This section presents the data-analysis part of this study. The first part of the chapter provides descriptive statistics and characteristics. This is followed by an analysis of each hypothesis.

**How the Universities Scored: The Raw Numbers**

Figure 2 shows the tallies for the coded posts for both Twitter and Facebook, including both those with and without images. Overall, the researcher evaluated a total of 5,993 posts for both Twitter and Facebook from the six universities. As Figure 2 shows, the Pennsylvania State University World Campus was the most active of all six universities, having a combined total of posts of 3,411. Oregon State University Ecampus had the fewest number of posts at 122. The other universities averaged about 665 posts for both Twitter and Facebook over 12 months.
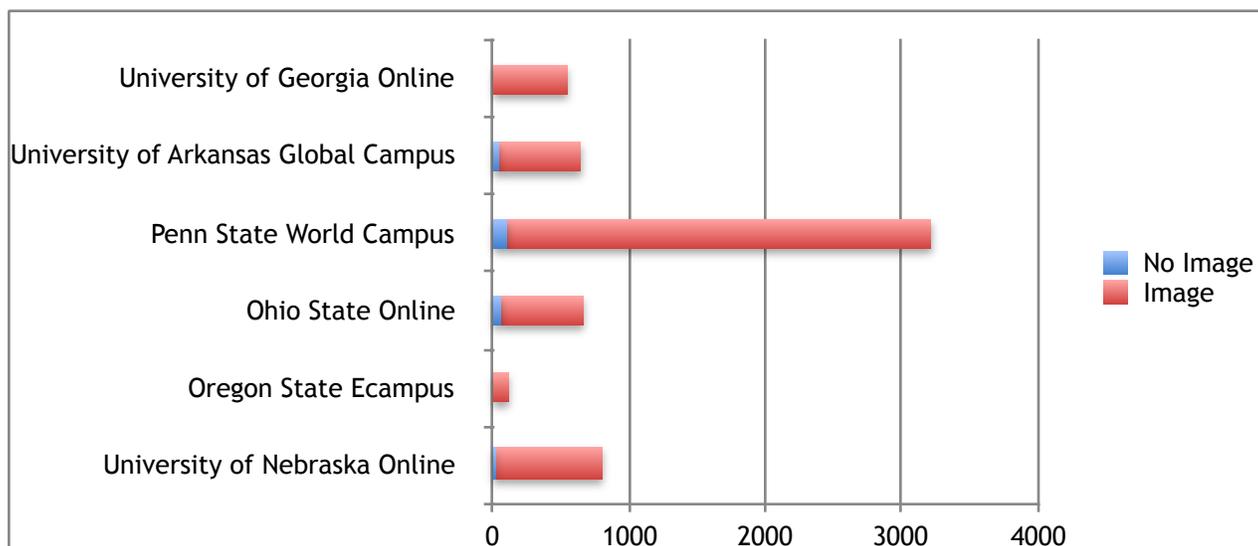


Figure 2. Totals for Twitter and Facebook posts for all six universities over a 12-month period.

Of these, 5,739 posts included images and compose 95.8% of the total posts

(Table 1). This statistic, which describes the overall status of activity, demonstrates that

all six universities place an emphasis on using imagery in their social media feeds. The

university that had the greatest concentration of images was the University of Georgia

Online at 97%, and the least was Ohio State University Online at 91%.

Table 1. Percentage of social media posts with images

| University | Image Included | | | |
| --- | --- | --- | --- | --- |
| | No | | Yes | |
| | n | % | n | % |
| University of Nebraska Online | 25 | 3.1% | 776 | 96.9% |
| Oregon State University Ecampus | 5 | 4.1% | 117 | 95.9% |
| Ohio State Online | 58 | 8.7% | 612 | 91.3% |
| Penn State World Campus | 111 | 3.5% | 3100 | 96.5% |
| University of Arkansas Global Campus | 39 | 6.0% | 607 | 94.0% |
| University of Georgia Online | 16 | 2.9% | 527 | 97.1% |
| **Total** | **254** | **4.2%** | **5739** | **95.8%** |

Next, the researcher examined when the universities were posting, sorting the

posts according to month. Figure 3 shows that, in general, posting tends to be higher in

the first part of the year, although the Penn State World Campus numbers tend to skew

this. The higher numbers in May and June are driven by images from the universities'

graduations on campus. Of note, some of the graduation images included graduates from

the online programs, and all the images included background scenes of the universities'
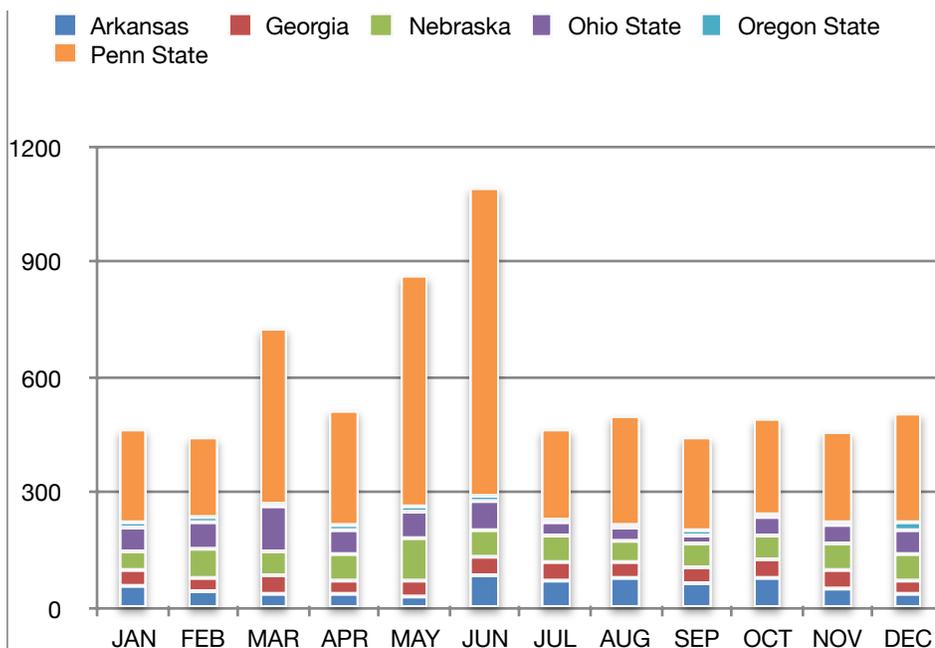
campuses.

Figure 3. Number of posts per month for all six universities

**Crunching the Numbers**

The researcher used the chi-square test of homogeneity to compare potential

differences in the distribution of focused posts.  Also, a test of goodness of fit was used

for individual areas of focus.  The chi-square goodness of fit is used to determine if the

observed frequencies of the postings of images associated with the specific categories

differ significantly from the expected frequencies as stated in the hypotheses (Sestraş,

Jäntschi, Bolboacă, Pamfil, & Sestraş, 2011).  In other words, the researcher was testing

to see how close the frequency of focused posts—e.g., campus, sports, and reputation—

fit the model.  The conditions for a chi-square test are met because the variable is

categorical and the sample observations for each category exceed five.  Next, the

researcher applied the tests to the null hypotheses:

H0$_1$: Facebook posts that include imagery associated with campus image,
university sports, and overall university reputation for a university's online
program Facebook feed do not exceed 33% of all posts.

H0$_2$: Twitter posts that include imagery associated with campus image, university
sports, and overall university reputation for a university's online program Twitter
do not exceed 11% of all posts.

H0$_3$: The combined Twitter and Facebook posts that include imagery associated
with campus image, university sports, and overall university reputation for a
university's online program Twitter and Facebook do not exceed 16% of all posts.

Table 3 shows that while there were images that did not reflect the researcher's
codes —labeled in this study as non-focused images—there is a significant percentage of
images that did (34.3%, p=.002). Table 4 indicates that the chi-square test of
homogeneity shows that overall the number of posts was not distributed in such a manner
to show that no agenda setting was taking place $X^2$ (1, N=5739) = 9.255, p<0.01.

Table 3. Overall distribution of types of images

| | Type of Image | | | | | |
| | Non-Focused | | Focused | | | |
| **Website** | **n** | **%** | **N** | **%** | **X²** | **P** |
| Facebook | 1157 | 62.9% | 682 | 37.1% | 9.255 | 0.002 |
| Twitter | 2613 | 67.0% | 1287 | 33.0% | | |
| **Total** | **3770** | **65.7%** | **1969** | **34.3%** | | |

Table 4. Chi square test of homogeneity for social media images

| | Type of Image* | | | | | |
| | Non-Focused | | Focused | | | |
| **Website** | **n** | **%** | **N** | **%** | **Z** | **P** |
| Facebook | 1157 | 62.9% | 682 | 37.1% | 3.74 | <.001 |
| Twitter | 2613 | 67.0% | 1287 | 33.0% | 43.91 | <.001 |
| **Total** | **3770** | **65.7%** | **1969** | **34.3%** | 37.82 | <.001 |

*Facebook tested at p > .33, Twitter at p> .11, Total at p> .16

Breaking this down further, the researcher tested each null hypothesis.  In the case of Facebook, $X^2$ (1, N=1,830) = 3.74, p<.001. The test was found to be statistically significant, and null hypothesis $H0_1$ is rejected.  In the case of Twitter, $X^2$ (1, N=3,900) = 43.91, p<.001.  The test was found to be statistically significant, and null hypothesis $H0_2$ is rejected.  Evaluating the combination of Facebook and Twitter posts and expected levels of posts, the results are $X^2$ (5, N=5739) = 37.82, p<.16. The test was found to be statistically significant, and null hypothesis $H0_3$ is rejected.

The researcher ran more tests, too, to explore the use of posts by the various universities.  Table 5 shows the results of how the universities employed the types of

images $X^2$ (2, N=5739) = 27.787, p<.001, which demonstrates a greater usage of images associated with reputation.

Table 5. Breakdown of images according to specific focus category

| | | | Specific Focus | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Campus | | Sports | | Reputation | | | |
| **Website** | **N** | **%** | **n** | **%** | **n** | **%** | **X²** | **P** |
| Facebook | 253 | 37.1% | 67 | 9.8% | 362 | 53.1% | 27.787 | <.001 |
| Twitter | 347 | 27.0% | 101 | 7.8% | 839 | 65.2% | | |
| **Total** | **600** | **30.5%** | **168** | **8.5%** | **1201** | **61.0%** | | |

Table 6, however, shows that universities do not approach the types of images used in the same manner, X2 (10, N=5739) = 151.407, p<.001.  The University of Arkansas Online and Oregon State Online rely heavily on campus images, while the other universities use images associated with reputation more often.  None of the universities placed a great emphasis on sports-related images.

Table 6. Breakdown of use of specific types of images for each university

| | Specific Focus | | | | | | | |
| | Campus | | Sports | | Reputation | | | |
| **University** | **n** | **%** | **n** | **%** | **n** | **%** | **X²** | **p** |
| University of Nebraska Online | 41 | 17.2% | 0 | 0.0% | 197 | 82.8% | 151.407 | <.001 |
| Oregon State Ecampus | 20 | 41.7% | 12 | 25.0% | 16 | 33.3% | | |
| Ohio State Online | 32 | 25.8% | 13 | 10.5% | 79 | 63.7% | | |
| Penn State World Campus | 341 | 30.2% | 115 | 10.2% | 674 | 59.6% | | |
| University of Arkansas World Campus | 127 | 50.8% | 2 | .8% | 121 | 48.4% | | |
| University of Georgia Online | 39 | 21.8% | 26 | 14.5% | 114 | 63.7% | | |
| **Total** | **600** | **30.5%** | **168** | **8.5%** | **1201** | **61.0%** | | |

# Chapter 5: Conclusions

This chapter examines and analyzes the study results presented in Chapter 4 and is divided into three sections. The first section discusses the study's results, the second section identifies limitations of the study and potential areas for future research, and the third section characterizes potential implications of the results.

**Results**

The rejection of all three hypotheses indicates that universities are engaging in agenda setting; their choice of images associated with their brick-and-mortar traditional programs—campus image, university sports, and overall university reputation—likely are intended to contribute to the public perception of their online programs. That is, universities are deliberately choosing to post images associated with the three brand-related categories at a rate higher than otherwise would occur if agenda setting was not present. Recent research by Vercic and Vercic (2018) indicates that a university's use of social media is important for reaching students, and the content and quality of the social media communications are critical for the university's reputation. As such, the frequency with which these posts occur suggests that universities are making a conscious decision to post images associated with these three categories to bolster their online programs. By doing so, universities may be trying to achieve a halo effect for their online programs (Beyond brand exposure, 2016), whereby the online programs may expect the prestige of the ground programs to rub off on the online programs.

Revisiting Table 5, universities collectively place the greatest emphasis on images that are associated with the institutions' reputations; 61% of the images fell into this category. Indeed, images of campus scenes overall composed 30.5% of all images. Because online students trend older, reputation may be more important for this demographic, who are focused on advancing current careers or starting new ones.

Regarding images of the physical campus, although it would be fairly easy to show images of buildings, stadiums, gardens, statues, columns, and other significant physical pieces, it may be that this could be too repetitious and does not engage viewers as desired (Fitzpatrick, 2017). Moreover, social media images of people associated with an organization are more memorable in general (Buffer Social, 2016; Fitzpatrick, 2017). Oregon State University and the University of Arkansas are the exception, as they placed slightly more emphasis on their campus images than on reputation.

Interestingly, social media posts including images associated with sports programs were the least frequently posted by these six universities, accounting for only 8.5% of posts (see Table 5). Of note, three of the universities are from the Big Ten, two belong to the Southeastern Conference (SEC), and one is a member of Pacific-12 (Pac-12) conference, all well-known and strong NCAA conferences. The paucity of sports-related images may be because college sports programs are coming under closer scrutiny by administrations or state legislators (Arnett, 2018), as some programs are viewed as excessively expensive or adding to institutional bloat. Additionally, universities may realize that the "traditional" student—especially those that online programs are targeting —no longer are dorm-dwelling 18-year-olds (Korn & Tam, 2018), and, as such, sports

programs may be less relevant for today's students who are trending older, working part-
or full-time, and far more diverse.

**Limitations and Directions for Future Research**

This study does not seek to correlate potential agenda setting with student

attitudes or achieving the university's desired outcome of attracting potential students to

its online program. While the results of the study imply that universities are using agenda

setting to make their online programs more attractive, the study does not demonstrate that

the strategy is effective. Follow-on research could conduct surveys with online students

to determine if and how social media posts influence their decisions to pursue or stay

enrolled in an online program. Alternatively, a qualitative approach could be used to

probe further, and interviews could be conducted with universities' administrators to

assess their approaches to promoting online programs through social media. Interviews

with the staff creating the social media posts may also reveal intentions and motives

behind the posts.

The study's data collection did not include messaging that echoed the ground

universities' social media activity, such as re-tweeting or liking a post by the ground

university. The reasoning was to keep the study focused solely on activities initiated by

the online university. However, during the data collection, it became clear that some

online programs were actively engaging in echo activities, where they would re-tweet or

like a post from the ground university social media feeds; this was particularly true for

Ohio State. Future research could include re-tweets and likes in the data collection, and

then assess if statistically these affected the outcomes; it is likely that this would skew it

more toward agenda setting. Also, the study limited the assessment to the top two social media feeds for universities overall: Twitter and Facebook. Additional research could explore if universities are engaging in agenda setting on other social media feeds, such as Pinterest, Snapchat, LinkedIn, Instagram, or YouTube. Each social media feed has its strengths and specific demographics, which would have to be considered when examining the data.

The study considered only public universities and did not assess the activities of private universities. Additional research could repeat the study methodology and apply it to private universities to determine if they were approaching their social media activity for their online programs in the same way as public universities and compare the overall approaches. Also, the study could be expanded to examine if the size of the university influences its approach to social media for online programs. The universities considered here are all large state universities; it is unclear if an agenda setting strategy is used by smaller schools.

The composition of the sports programs may matter, too. The NCAA classifies all of these universities as Division I, indicating that their sports programs are larger and more prominent, and benefit from more athletic scholarships, larger budgets, and better athletic facilities (Burrell, 2017). However, the study does not consider types or quality of programs. For example, a university with a strong basketball team—e.g., Duke—may spike with sports-related images during March Madness. Additional research could determine if the actual ranking of a sports program (e.g., a top-10 football team, a final-four basketball team, etc.) affects the choice of agenda in agenda setting.

Finally, the study did not asses if a university's geographic location factors into the use of imagery in the university's social media posts. This study included southern, mid-Atlantic, midwestern, and northwestern universities, but did not include universities from all regions, nor compare images based on geography. Future research could include geographic characteristics to assess if location plays a role.

**Agenda Setting by Universities: Why It Matters**

The results of this research are important for universities, potential and current students, and alumni. From a university perspective, institutions that are seeking to grow their online programs may wish to emulate this branding strategy in social media posts for their online programs.

Students, in their role as consumers, should be aware that agenda setting might be taking place, so they can assess if the promotion of a traditional, on-ground program as part of the online program's branding has skewed their decisions to attend or continue with a university. While this study does not demonstrate that universities are intentionally using agenda setting as misdirection, misrepresentation, or a bait-and-switch type approach in promoting their online programs by not focusing on the attributes of the online program itself, this research indicates that universities are expending considerable time and energy broadcasting images associated with their ground programs. The same may be said for enhancing retention rates for current students, as the agenda setting activities may reinforce the bond reputation based on the strength of the university's ground program.

By using images associated with the ground programs, universities also may be trying to influence their online program alumni. Graduates are an important source of fundraising, internships, and prestige for universities, but it is unclear if graduates of online programs are as likely to provide support to an online alma mater. By clearly associating the online program with the university's ground program, institutes of higher learning may be seeking to positively influence alumni feelings and encourage generous behaviors toward the university in general.

Conversely, universities may be using agenda setting to achieve a sense of community for all their students. For example, in the case of the Pennsylvania State University World Campus, the online program's website emphasizes that students enrolled in the online programs are "Penn Staters" and "part of the family" (Why Penn State, 2018), listing benefits such as eligibility to join the alumni association, which is the nation's largest. The University of Arkansas Global Campus makes a point of emphasizing that online graduates' names are etched into the university's Senior Walk on the Fayetteville campus, just like ground program graduates (University of Arkansas Global Campus, 2018). In the case of the University of Nebraska, each online program is associated with a specific ground campus, and this point is reinforced with campus-associated logos embedded in the online program's social media posts.

Although this study does not assess the effectiveness of this social media strategy, it does provide insights that other university online programs could use. For example, universities that lack or have underperforming sports programs could emphasize posts that promote their ground programs' reputations or include images of iconic locations on

campus. In particular, Penn State World Campus used images with the school mascot—the Nittany Lion—in posts associated with all three categories. If a university mascot is well known and immediately recognizable, the university can incorporate the mascot into posts in creative ways that relate to both the ground and online programs. Additionally, universities can post ground campus images from both the exterior and interior. As shown in Appendix B, an image from the campus can show items of interest inside university buildings, as well as the exteriors; in this particular case, Penn State World Campus tweets images from the inside of the art museum located on campus. Appendix B also shows how a single social media post can achieve multiple goals. For example, in the sport-related post showing a historic photo of a football player from the 1940s, the post focuses on the backstory, which was about racial equality. By drawing on a variety of ground-related stories, legends, and successes, universities can enrich their social media feeds for their online programs with images that convey a sense of belonging, build community, share triumphs, and build stronger relationships with students, parents, and alumni.

References

Alina, J. M., & Loan, P. (2014). Schema congruity: A basis for evaluating ambient

advertising effectiveness. *Annals of the University of Oradea, Economa Science*

*22*(1), 1765-1774.

Alves, H. (2016). Social media marketing: A literature review and implications.

*Psychology & Marketing, 33*(12), 1029-1028.

Arnett, A. A. (2018). Are institutional investments in athletics driving negative

perceptions of higher ed? *Education Dive*. Retrieved from https://

www.educationdive.com/news/are-institutional-investments-in-athletics-

driving-negative-perceptions-of/514694/

Bailey, J. S., & Flegle, L. V. (2012). Hiring managers' perceptions of the value of an

online MBA. *Online Journal of Distance Learning Administration, 15*(2).

Barnes, M. D., Hanson, C. L., Novilla, L. M. B., Meacham, A. T., McIntyre, E., &

Erickson, B. C. (2008). Analysis of media agenda setting during and after

Hurricane Katrina: Implications for emergency preparedness, disaster response,

and disaster policy. *American Journal of Public Health, 98*(4), 604–610. http://

doi.org/10.2105/AJPH.2007.112235

Barnes, N. G., & Lescault, A. M. (2013).  College presidents out-blog and out-tweet

corporate CEO's as higher ed delves deeper into social media to recruit students.

Retrieved from http://www.umassd.edu/cmr/socialmediaresearch/

collegepresidentsoutblog/

Bethke, R. (2016). Social media's top 50 colleges and universities. *eCampus News*.

    Retrieved from http://www.ecampusnews.com/top-news/social-media-colleges/

Betts, K. (2017). *The growth of online learning: How universities must adjust to the new*

    *norm*. Education Dive. Retrieved from http://www.educationdive.com/news/the-

    growth-of-online-learning-how-universities-must-adjust-to-the-new-norm/

    433632/

Beverly, J. A. (2013). *Public relations models and dialogic communication in the*

    *twitterverse: An analysis of how colleges and universities are engaging their*

    *public through twitter* (Order No. 3576728). Retrieved from https://

    csuglobal.idm.oclc.org/login?url=http://

    search.proquest.com.csuglobal.idm.oclc.org/docview/1461742910?

    accountid=38569

Beyond brand exposure: Measuring the sponsorship halo effect. (2016). *Measuring*

    *Business Excellence, 20*(3), 1-14.

Botha, E., Farshid, M., & Pitt, L. (2011). How sociable? An exploratory study of

    university brand visibility in social media. *South African Journal of Business*

    *Management, 42*(2), 43-51.

Bouchet, A., Laird, M. D., Troilo, M., Hutchinson, M., & Ferris, G. (2016). Effects of

    increased commitment on reputation and status: Evidence from NCAA Division I

    universities. *Sport Management Review*, doi:10.1016/j.smr.2016.11.002.

Buffer Social. (2016). Infographic: How often should you post on social media? See the

>   most popular research and tips. Retrieved from https://blog.bufferapp.com/how-

>   often-post-social-media

Burrell, J. (2017). What does NCAA Division I, II, or III mean? *The Spruce*. Retrieved

>   from https://www.thespruce.com/what-does-ncaa-divisions-mean-3570381

Butler, M. (n.d.). How often should you post on social media? Benchmarks for 9 different

>   industries. Retrieved from https://blog.hubspot.com/marketing/social-media-

>   frequency-industry-benchmarks

Carter, J. (2016). Colleges work to build donor base among young alumni. *Education

>   Dive.* Retrieved from http://www.educationdive.com/news/colleges-work-to-

>   build-donor-base-among-young-alumni/421941/

Chapleo, C. (2010). Exploring rationales for branding a university: Should we be seeking

>   to measure branding in UK universities? *Journal of Brand Management, 18*(6),

>   411-422.

Clavio, G., & Eagleman, A. N. (2011). Gender and sexually suggestive images in sports

>   blogs. *Journal of Sport Management, 7*, 295-304.

Clinefelter, D. L., & Aslanian, C. B. (2016). *Online college students 2016:

>   Comprehensive data on demands and preferences*. Louisville, KY: The Learning

>   House, Inc.

Constantinides, E., Alarcón del Amo, M. C., & Lorenzo Romero, C. (2010). Profiles of

>   social networking sites users in the Netherlands. In: 18th Annual High

Technology Small Firms Conference, HTSF, 25–28 May 2010, Enschede, The Netherlands.

Davie, W. R., & Maher, T. M. (2006). Maxwell McCombs: Agenda-setting explorer. *Journal of Broadcasting & Electronic Media, 50*(2), 358-364.

Dow Social. (2015). How often you should post on social media platforms. Retrieved from https://dowsocial.com/how-often-you-should-post-on-social-media-platforms/

Duesterhaus, A. P. (2015). Strengthening brand positioning through price transparency in higher education. *Journal of Brand Strategy, 4*(1), 58-69.

Duesterhaus, A. P., & Duesterhaus, M. (2014). Attributes of successful university brands in the USA. *Journal of Brand Strategy, 3*(2), 169-183.

Fitzpatrick, E. (2017). 2017's top social media marketing lessons. Retrieved from http://exclusive.multibriefs.com/content/2017s-top-social-media-marketing-lessons/marketing

Gray, B. J., Fam, K., & Llane, V. (2003) Branding universities in Asian markets. *Journal of Product & Brand Management, 15*(7): 466–467.

Geurin-Eagleman, A. N., & Burch, L. M. (2016). Communicating via photographs: A gendered analysis of Olympic athletes' visual self-presentation on Instagram. *Sport Management Review, 19*, 133-145.

Halkias, G., & Kokkinaki, F. (2014). The degree of ad-brand incongruity and the distinction between schema-driven and stimulus-driven attitudes. *Journal of Advertising, 43*(4), 397-409.

Henry-Barrus, T. (2017). Tweet for a cause. *Community College Journal, 87*(4), 31. Retrieved from https://csuglobal.idm.oclc.org/login?url=https://search-proquest-com.csuglobal.idm.oclc.org/docview/1936100480?accountid=38569

History of the columns. (2015, 20 March). Retrieved from http://missouri.edu/about/history/columns.php

Hosseini, M. H., & Nahad, R. F. (2012). Investigating antecedents and consequences of Open University brand image. *International Journal of Academic Research, 4*(4), 68-77.

House, J. (2018a). Online course enrollments continue to grow. Education Dive. Retrieved from https://www.educationdive.com/news/online-course-enrollments-continue-to-grow/514255/

House, J. (2018b). Report: 1.17 million fewer students on campus. Education Dive. Retrieved from https://www.educationdive.com/news/report-117-million-fewer-students-on-campus/515855/

Hubspot. (2016). The inbound methodology. Retrieved from http://www.hubspot.com/inbound-marketing

Hum, N. J., Chamberlin, P. E., Hambright, B. L, Portwood, A. C., Shat, A. C., & Bevan, J. L. (2011). A picture is worth a thousand words: A content analysis of Facebook profile photographs. *Computers in Human Behavior, 27*, 1828-1833.

Hussain, R., & Ferdous, A. S. (2014). Developing a framework of integrated visual brand identity touch-point (IVBIT) programmes in universities. *Marketing Review, 14*(4), 431-445.

Hussar, W. J., & Bailey, T. M. (2014). *Projections of education statistics to 2022* (41st

ed.). U.S. Department of Education. Retrieved from https://nces.ed.gov/

pubs2014/2014051.pdf

Hutchinson, M., Havard, C. T., Berg, B. K., & Ryan, T. D. (2016). Losing the core sport

product: Marketing amidst uncertainty in college athletics. *Sport Marketing

Quarterly*, *25*(3), 185-194.

Iqbal, M. J., Rasli, A. M., & Hassan, I. (2012). University branding: A myth or a reality.

*Pakistan Journal of Commerce & Social Sciences*, *6*(1), 168-184.

Jaschik, S. (2015). Pressure from all sides: The 2015 survey of admissions directors.

*Inside Higher Ed*. Retrieved from https://www.insidehighered.com/news/survey/

pressure-all-sides-2015-survey-admissions-directors

Jaschik, S., & Lederman, D. (2017). *2017 survey of college and university chief academic

officers: A study by Inside Higher Ed and Gallup*. Inside Higher Ed. Retrieved

from https://www.insidehighered.com/system/files/media/

2017%20IHE%20ProvostSurvey.pdf

Jeong, Y., Sanders, M., & Zhao, X. (2011). Bridging the gap between time and space:

Examining the impact of commercial length and frequency on advertising

effectiveness. *Journal of Marketing Communications, 17*(4), 263-279.

Korn, M., & Tam, K. (2018). Today's college students aren't who you think. *The Wall

Street Journal*. Retrieved from https://www.wsj.com/articles/todays-college-

students-arent-who-you-think-1515240000

Lee, J. W., Miloch, K. S., Kraft, P., & Tatum, L. (2008). Building the brand: A case study of Troy University. *Sport Marketing Quarterly*, *17*(3), 178-182.

Lederman, D. (2014). The enrollment slowdown. Inside Higher Ed. Retrieved from https://www.insidehighered.com/news/2014/02/28/us-projects-college-enrollment-grow-14-through-2022

Lenore-Jenkins, S. & Shasserre, J. (2016). Recruit today's college students with these digital strategies. *University Business*. Retrieved from https://www.universitybusiness.com/article/recruit-today-s-college-students-these-digital-strategies

McCombs, M. E., & Shaw, D. L. (1972). The agenda-setting function of mass media. *Public Opinion Quarterly, 36*(2), 176-187.

Miller, A., & Roberts, S. (2010). Visual agenda-setting & proximity after Hurricane Katrina: A study of those closest to the event. *Visual Communication Quarterly, 17*(1), 31-46.

Mitchell, J., & Banerji, G. (2017, 13 March). College stocks soar again. *The Wall Street Journal,* pp. B1, B2.

NEA Higher Education Research Center. (2004, September). *Proprietary education: Threat, or not? Update*. Retrieved from http://www.nea.org/assets/docs/HE/vol10no4.pdf

Nevzat, R., Amca, Y., Tanova, C., & Amca, H. (2016). Role of social media community in strengthening trust and loyalty for a university. *Computers in Human Behavior*, *65*, 550-559. doi:10.1016/j.chb.2016.09.018

Ohio State Online. (2018). Retrieved from https://online.osu.edu

Oregon State University. (2018). Degrees online | Ecampus. Retrieved from http://
ecampus.oregonstate.edu

Patel, N. (2015). Stop guessing: Here's a social media strategy that works. Retrieved
from https://www.quicksprout.com/2015/06/15/stop-guessing-heres-a-social-
media-strategy-that-works/

Perrin, A. (2015). *Social media usage: 2005-2015*. Pew Research Center. Retrieved from
http://www.pewinternet.org/2015/10/08/social-netowrking-usage-2005-2015/

Perrin, A., & Duggan, M. (2015). *Americans' Internet access: 2000-2015*. Pew Research
Center. Retrieved from http://www.pewinternet.org/2015/06/26/americans-
internet-access-2000-2015/

Penn State World Campus. (2018). A world of possibilities. Online. Retrieved from
https://www.worldcampus.psu.edu

Piotrowski, C. (2015). Emerging Research on Social Media Use in Education: A Study of
Dissertations. *Research in Higher Education Journal*, *27*.

Poulin, R., & Straut, T. (2016). *WCET Distance Education Enrollment Report 2016*.
Retrieved from WICHE Cooperative for Educational Technologies website: http://
wcet.wiche.edu/initiatives/research/WCET-Distance-Education-Enrollment-
Report-2016

Ragas, M. W., & Roberts, M. S. (2009). Agenda setting and agenda melding in an age of horizontal and vertical media: A new theoretical lens for virtual brand communities. *Journalism & Mass Communication Quarterly, 86*(1), 45-64.

Roy, D. P., Graeff, T. R., & Harmon, S. K. (2008). Repositioning a university through NCAA Division I-A football membership. *Journal of Sport Management*, *22*(1), 11-29.

Rutter, R., Roper, S., & Lettice, F. (2015). Social media interaction, the university brand and recruitment performance. *Journal of Business Research*, doi:10.1016/ j.jbusres.2016.01.025

Schmidt, S., & Eisend, M. (2015). Advertising Repetition: A Meta-Analysis on Effective Frequency in Advertising. *Journal of Advertising, 44*(4), 1-14.

Scott, R. (2012). Keeping the customer satisfied? *The Chemical Engineer*. Retrieved from http://www.tcetoday.com/

Sestraş, R. E., Jäntschi, L., Bolboacă, S. D., Pamfil, D. C., & Sestraş, A. F. (2011). Pearson-Fisher chi-square statistic revisited. *Information, 2*(3), 528-545.

Szwacka-Mokrzycka, J., & Abutalibov, R. (2014). Creating the image of the university. *Oeconomia, 13*(4), 169-179.

Sung, M., & Yang, S. (2008). Toward the model of university image: The influence of brand personality, external prestige, and reputation. *Journal of Public Relations Research, 20*(4), 357-376.

Tokuhama, C. (2011). Consumption, a modern affliction: Branding culture, youth identity, and college admission. *Journal of College Admission*, 32-38.

U.S. News & World Report. (2016). *U.S. News & World Report releases 2017 best colleges rankings*. Retrieved from https://www.usnews.com/info/blogs/press-room/articles/2016-09-13/us-news-releases-2017-best-colleges-rankings

University of Arkansas Global Campus. (2018). Retrieved from https://globalcampus.uark.edu

University of Georgia Online Learning. (2018). Retrieved from https://online.uga.edu

University of Nebraska Online. (2018). Retrieved from https://online.nebraska.edu

Vercic, A.T., & Vercic, D. (2018). Digital natives and social media. *Public Relations Review, 39*(5), 600-602.

Wang, R., Kim, J., Xiao, A., & Jung, Y.J. (2017). Networked narratives on Humans of New York: A content analysis of social engagement on Facebook. *Computers in Human Behavior, 66*, 149-153.

Watkins, B., & Lee, J. W. (2016). Communicating brand identity on social media: A case study of the use of Instagram and Twitter for collegiate athletic branding. *International Journal of Sport Communication*, *9*(4), 476-498.

Why Penn State World Campus. (2018). Retrieved from https://www.worldcampus.psu.edu/about-us/why-penn-state-world-campus

Appendix A

As part of this research, this study also examines the relationship of the online program with the ground program at the universities that are covered in this paper. This section examines the following.

- Source of the faculty—this indicates whether the faculty teach for the ground program or work solely for the online program;

- Title of the institution on the student's diploma—this indicates if the diploma reflects that the degree was earned through an online program, or if the status of the ground campus is represented on the diploma;

- Accreditation—this identifies the online program's accreditation;

- Number of programs—this refers to the number of certifications and degrees that can be completed in the online program;

- Number of students—this refers to the total number of students who are registered in the online arm the university;

- Residency requirement—if the programs require the online students to step on campus; and

- Notes—these comments capture any other aspects of interest.

Table A1. Details on six universities' online programs

| | Ohio State Online | Oregon State University Ecampus | Pennsylvania State University World Campus | University of Arkansas Global Campus | University of Georgia Online | University of Nebraska Online |
|---|---|---|---|---|---|---|
| Faculty | Ground program faculty | Mixed—ground and online instructors | Ground program faculty | Mixed—ground and online instructors | Mixed—ground and online instructors | Ground program faculty |
| Diploma | Ohio State University | Oregon State University | Pennsylvania State University | University of Arkansas | University of Georgia | Same as the individual campus (one of four) |
| Accredit-Ation | Same as ground—North Central Association of Colleges & Schools | Same as ground—Northwest Commission on Colleges and Universities | Same as ground—Middle States Commission on Higher Education | Same as ground—Higher Learning Commission | Same as ground—Southern Association of Colleges and Schools Commission on Colleges | Same as ground—Higher Learning Commission |
| # of Programs | 30+ | 45+ | 150+ | 47 | 29 | 194 |
| # of Students online | ~1,036 | ~21,000 | ~ 18,000 | ~3,048 | ~288 | Kearny: 874 Lincoln: 631 Medical Center: 352 Omaha: 249 |
| Residency require-ment | Yes—one master's program | Yes—Some programs require internships, research, or study abroad. Business degrees require residency. | Yes—four master's programs | Yes—graduate business degrees and certificates require some on-campus engagement. | Yes—for a few graduate programs and some undergraduate orientation | Yes—for a few graduate programs |

| Notes | OSU students primarily use and are encouraged to use online courses to augment their ground programs. Students can, however, finish a degree or certificate with only online courses. | | Penn State treats World Campus as another campus. | Graduates' names are carved into the Senior Walk on campus. | | University of Nebraska operates four campuses— Kearney, Lincoln, Medical Center, Omaha —and each online program is associated with one campus. |
|---|---|---|---|---|---|---|

*Note.* Data for Ohio State Online from Ohio State Online, for Oregon State University Ecampus from Oregon State University: Degrees online | Ecampus, for the Pennsylvania State University World Campus from Penn State World Campus, for University of Arkansas Global Campus from University of Arkansas Global Campus, for the University of Georgia Online from University of Georgia Online Learning, and for the University of Nebraska Online from the University of Nebraska Online.

Appendix B


Rather than leave the images as an abstract concept in the reader's mind, Appendix B provides one example of each of the three coding categories. All three images are from the Penn State World Campus Twitter feed—the most prolific for this study—and are recent as of February 7, 2018.

The first image captures the interior of Penn State's Palmer Museum and serves as an example of an image that shows a scene from the physical campus. While most of the Twitter and Facebook images showcase outdoor campus shots, this provides an interesting and alternative approach.

The second image provides a glimpse of a sports-related post, as it shows a football player running with the ball and a stadium with fans in the background. What is unique about this image for Penn State is that it also is associated with the school's legacy of refusing to play a game in the 1940s if black teammates had to be declared "ineligible" to play in their opponent's stadium. This allegedly is the source of the now famous cheer, "We are. Penn State." This image could be coded under two categories—sports and reputation—and is illustrative of the research involved that has to be conducted on posts prior to assigning them to a category.

The third tweet is an example of an image that would be coded primarily for reputation. While the image shows a Penn State building, the university's children hospital, the tweet is actually touting the hospital's surgical care and reputation.  This is another example of an image that would be noted as falling under two categories, but was counted under reputation.