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Engagement Behaviors on Social Media in Higher Education: Content Analysis Study on
Facebook Pages of 12 Universities

An Honors College Project Presented to
the Faculty of the Undergraduate
College of Arts and Letters
James Madison University

by Caroline E. Jessup

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Accepted by the faculty of the School of Communication Studies, James Madison University, in partial fulfillment of the requirements for the Honors College.

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Abstract

This study provides insight into factors that influence audience engagement behaviors on the official Facebook pages of higher education institutions. Many current and prospective students at universities, as well as recent alumni, are looking at Facebook as a way to gather information and build trust with colleges. Similarly, organizations such as universities see social media as the most effective way to reach their publics and build relationships with them. However, there is little literature that illustrates what factors such as inclusion of pictures, hashtags, hyperlink and even size and region of university affect audience engagement on Facebook. A content analysis was conducted, analyzing posts from 12 different universities from four regions in the U.S. over a two-week period. Results indicate that the region that the university resides in has an effect on what content topic receives the most engagement on a post. This study provides suggestions for ways to universities to strategically improve their online presence in order to reach the maximum number of target audience members.

Introduction

Lariscy, Avery, Sweetser and Howes (2009) defined social media as “online practices that utilize technology and enable people to share content, opinions, experiences, insights and media themselves” (p. 314). As early as in 2013, 72% of American internet users over the age of 18 used at least one social media site (Brenner & Smith, 2013). This trend is also reflected in professional and education organizations. Although there is always a risk that an organization can lose control over the message they sent out on social media, many universities are finding social media necessary just to stay on the same level as other competitive organizations. A majority of universities have official pages across many social media platforms as a result of this, and some schools have multiple pages on a single platform to represent small units within the organizational structure. For example, a university may have an official page that represents the entire university, but also have other pages that represent sports teams, student organizations, or majors. According to Brenner and Smith, almost 90% of Internet users from the ages of 18 to 25 indicated that they are active on social media. Jones, Ramanau, Cross, and Healing (2010) refer to this group of people as digital natives. Prensky (2005) stated that these users need connection in almost every facet of their lives, including online. Many current and prospective students at universities, as well as recent alumni, are also digital natives, and therefore it is important to utilize their desired platforms to build trust and loyalty towards colleges.

According to Lariscy et al., 77% of public relations and marketing practitioners felt networking sites like LinkedIn and Facebook were important. 65% felt sites like Twitter, classified as “micro-blogging” sites, were important and 57% felt blogs were important. Finally, 65% felt video sharing sites such as YouTube were important tools for public relations. This indicates that the value of social media is being recognized by modern public relations

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practitioners. Kelleher and Sweetser (2012) reported that organizations such as universities see social media as the most effective way to reach their publics and build relationships with them. Sweetser and Lariscy (2008) said, “the term social media describes a set of technology tools that are just as they sound—mediated opportunities for bringing people together and encouraging social networking and dialogic communication” (p. 180). A strong presence and tight-knit community on Facebook can lead to brand loyalty and identification. One way to do so is through a strong and consistent social media presence, following best practices suggested by researchers.

Current literature recognizes the opportunity that social media presents for higher education institutions in the United States. Efforts such as recruiting and retaining students, promoting university accomplishments in academia and sports and the engagement of important stakeholders such as the surrounding community, faculty and alumni. Little research has been done, however regarding social media’s potential for strategic communication practices. This study aims to expand insight into social media best practices among higher education institutions by exploring the social media usage and engagement behaviors of key stakeholders.

Literature Review

Higher Education and Social Media

With social media being a relatively new concept in connection to branding, certain organizations, such as higher education institutions, are just breaking onto the scene. Peruta, Ryan, and Engelsman (2013) indicated that institutions are perceived as more progressive when they are present on platforms such as Facebook, making them more desirable to their constituents when it includes prospective and current students. The group of 18–29-year-old internet users who were born into the internet world is referred to as digital natives (Jones, Ramanau, Cross, & Healing, 2010). Prensky (2005) indicates that these consumers will require to be connected in all aspects throughout their lives.

With their extensive use social media to seek and distribute information, Digital natives do not find organizations such as universities or higher education institutions as up to par in their social media presence. Since current and prospective university students are considered to be digital natives, it is crucial to see how they form brand trust and brand loyalty towards higher education institutions. It is also important to also consider that they are most likely looking for information to help them make decisions about college on Facebook, which is a preferred platform for information gathering (Yan, 2011). Therefore, an intentional and well-thought out social media strategy has many benefits that include fostering a better connection between a current or prospective student and a university (Wilson & Gore, 2013).

Different content topics are shown to increase engagement on individual posts on social media. Peruta and Shields (2018) indicated that there are certain factors in social media content that affects engagement by fans, specifically pertaining to higher education institutions. Especially, the content of Facebook relating to athletics, admissions, school pride and university

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promotions increase engagement. Brech, Messer, Vander Schee, Rauschnabel, and Ivens (2017) also found that posts pertaining to athletic events generate the most engagement on a university's social media. This reflects findings in France, Finney and Swerdzewski (2010) stating that athletic teams are a means in which fans can create an attachment to a university's brand. In addition, content categories such as campus events, artistic performances, academic events, administrative and staff, research and overall informative posts will decrease online engagement by constituents (Peruta & Shields, 2018). Thus, it is important to practice intentionality when selecting content material to post on social media platforms.

Maintaining variance in the types of media used in a post also has an effect on engagement. Brech et al. (2017) also indicated that the addition of photos in a Facebook post could directly increase engagement on posts in which the content by itself sees low engagement behaviors when used. Interestingly, Brech et al. found that longer posts with more text tend to drive more engagement by fans. Brech et al. speculate that this is because dedicated fans already have an emotional connection to a university's brand and therefore would have more interest in posts that are more informative.

Although photos are an effective way to make a post more appealing an audience, specific aspects of formatting a social media post also increase engagement behaviors, especially for organizations in academia. According to Brech et al., post formatting was also found to be an important factor for engagement on social media. Posts containing content that has been submitted by fans show increase engagement while those that contain a link to a .edu website or a call to action produce lower engagement behavior levels. The number of weekly posts is also an important factor that affects engagement. Brech et al. found that four postings per week on a university's social media page will avoid audience boredom and thus inactivity. Any number of

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posts more or less than four, they found, would affect engagement negatively. Finally, the time of day is an important factor that affects engagement. Posts that are published over the weekend receive the highest engagement above weekdays. The time of day with the heaviest traffic is during the times that people are going to or leaving work and times of relaxation such as right before going to bed. Therefore, engagement on posts by higher education institutions can vary based on source credibility, the posting time and frequency of posts in a week.

Social Media and Engagement Factors

There has been much research surrounding motivating factors for audiences that lead to engagement on social media. Baek, Holton, Harp, and Yaschur (2011) found through the application of the uses and gratifications theory that motivations behind using certain social media platforms can include sharing information, convenient communication channel, entertainment while trying to pass the time and promoting favored organizations to others in their social network. Other drivers of engagement may include perceived difficult of navigation social media site or application also known as perceived usability, the aesthetic appeal of the social media site, felt involvement by the user and empowerment felt by the user (Smith & Taylor, 2017). Therefore, organizations should understand their audiences well in order to determine which of these factors to appeal to.

Different actions on platforms represent a hierarchy of motivations in audience members. Specifically on Facebook, there are several different motivations behind common actions such as liking, sharing or commenting on social media posts. Often, these include forming connections between social groups and maintaining one's online social community and displaying his or her identity for the benefit of social status (Srivastava, Saks, Weed, & Atkins, 2018). Srivastava et

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al. said that many of these motivations are internally influenced by pre-existing attitudes and norms formed by societal expectations. However, according to Srivastava et al., other researchers argue that social media is merely a channel that elicits already established internal motivations and does not directly motivate users. Therefore, many audience motivational factors are outside of the control of the organization, although they do say a lot about how to appeal to a certain audiences.

In addition, according to Pentina, Guilloux, and Micu (2018), a hierarchy exists in engagement behaviors (EB's) in terms of the strength and complexity of the motivation that goes behind them. For example, simply following or liking the page of a brand is the engagement behavior that requires the lowest amount of effort by the user. According to Pentina et al., liking, Tagging and Sharing a brand's posts are the behaviors that are the most often reported by researchers. This is because they are triggered by a stronger emotional component and can cause engagement from other users within the social network of the user. Tagging Names and using related hashtags in photos is motivated by the need for social or self-presentation (Pentina et al., 2018). This behavior can affect the meaning of a brand due to communication exchanges being a continuous process. Finally, initiating and maintaining brand-related Conversations in personal social networks is one of the most complex behaviors. The goal of this EB is to promote a brand within one's own social network to those who are not familiar with it. This behavior has the potential to shift in control of building a brand away from an organization or company.

Pentina et al. (2018) also proposed five main aspects that can assess how social media users interact with a brand: 1) intended target audience for engagement 2) the degree of creativity in the social media content 3) the medium that the content was created on 4) dominant motivational factors for users and 5) differences and similarities among social media platforms.

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These five factors, when carefully considered, can help brands develop social media strategies that optimize engagement on many different social media platforms.

Social Media Engagement and Public Relations

The mass personal communication model (MPCM) suggest that maintaining a tone that is conversational in messages increases the perception of personalization for the intended audience (Sanders, Wang, & Zheng, 2019). According to Sanders et al., social media provides a channel that also increases the reach and speed of communication between an organization and critical publics as well as encourages interaction between individuals in those publics. This creates an organic environment that fosters word of mouth (WOM) and helps distribute information at a high rate. Sanders et al. also suggested that when brands themselves engage in conversation with their audience, it is assumed by the audience that the messages that are sent out are intended specifically for them, which enhances engagement as well and manufactures a stronger relationship. Essentially, target audiences have an innate desire to engage with organizations in a more personal and balanced manner.

The practice of public relations is centered around the engagement of a target audience with an organization in order to build a relationship. Engagement is a progression from user activity to a psychological state in which an individual becomes cognitively and emotionally absorbed in the experience leading to behavioral outcomes (Smith & Taylor, 2017). Zhang and Abitbol (2014) also argued that the responsibility of improving the connection between publics and organizations and engaging individuals in community relations falls to the public relations practitioner. Yang and Lim (2009) found that improving interactivity and dialogic communication can lead to an increase in relationship trust between publics and an organization.

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As a main aspect of building trust with publics, it is important to understand dialogic communication. Anderson, Swenson and Gilkerson (2016) determined that there are three levels of dialogic communication that all have unique building relationships with publics. The first is responsiveness. Stromer-Gally (2000) defined responsiveness as “when the receiver takes on the role of the sender and replies in some way to the original message” (p. 117). Responsiveness can also be the willingness of an organization to respond to individual users who give referrals directly. When writing for social media, the first goal is to engender an immediate reaction from users that can include a like, comment, or share. In order to do so, a public relations writer needs to understand their publics. Interactivity is defined by Kiousis (2002) as “the degree to which a communication technology can create a mediated environment in which participants can communicate...and participate in reciprocal messages”(p. 372). Anderson, Swenson, and Gilkerson (2016) found that users purposefully seek out organizations on social media because they have a desire to interact with people that have similar interests. According to Swenson et al., being transparent, authentic, and conversational is a way to begin building a relationship. Finally, engagement is a factor that leads to the establishment of trust between individuals within a target public and an organization. On social media, this can be seen in terms of visible, supportive behavioral intentions for an organization such as loyalty and positive WOM. Individuals who are engaged are invested, passionate, and deeply connected to a brand.

According to Kang (2018), social media has been a helpful tool for public relations practitioners for engendering public engagement since its rise at the beginning of the 21st century. She found mediating relationships between public engagement and trust and satisfaction that result in supportive behavioral intention such as spreading good WOM. Saffer, Sommerfeldt, and Taylor (2013) also found out engaging with the publics by improving

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interactivity and writing in dialogic communication improves outcomes, including trust, satisfaction, and commitment in publics. One of the roles of public relations professionals is to manage the brand of an organization by creating symmetrical dialogues and seeking out mutually beneficial relationships with targeted key publics (Kang & Woo, 2018). Social media sites such as Facebook, Instagram, and Twitter provide a unique channel for organizations to interact with publics. When brands foster engagement by personalizing communication and responding to consumers, they are engaging in mass personal communication, which is more beneficial for (Sanders, Wang, & Zheng, 2019). Based off of findings of previous research, the conclusion can be made that there is a relationship between social media engagement behaviors and a relationship between an organization and its key publics.

Research Questions

Based on the literature review, I posit two research questions here:

RQ1: How do higher education institutions use Facebook to communicate with the publics?

RQ1.1: What topics are discussed on the university's Facebook pages?

RQ1.2: How do higher education institutions engage the publics through Facebook?

RQ2: What posts are more likely to be commented, liked, and shared?

Methods

To examine the use of engagement behaviors by universities in the United States on their official Facebook pages, a content analysis was conducted. There were multiple steps involved including first selecting the universities to create the sample. In order to avoid bias, the top three universities from each region of the United States were determined from the 2019 U.S. News Ranking (<https://www.usnews.com/best-colleges/rankings/national-universities>). From the Northern region, Providence College, Bentley University and the College of New Jersey were selected. From the Southern region, Rollins College, The Citadel and James Madison University were selected. From the Midwestern region, Butler University, John Carroll University and Calvin University were selected. From the Western region, Trinity University, University of Portland and California Polytechnic State University were selected.

The social media platform of Facebook was selected because according to Waters, Burnett, Lamm and Lucas (2009), interested publics utilize the platform for seeking out general information about an organization, dissemination of information and as a catalyst for getting involved in an organization. Thus, analyzing engagement behaviors of publics on a platform can provide insight into what specific information target audiences are most interested in seeing.

A codebook was developed for analysis based on previous research on organizations and strategic social media practices (Fangfang, 2016). It included 1) the name of the organization 2) the region in the United States to which the organization belongs to 3) the classification of the university (e.g. Private or Public institution) 4) the posting date of the Facebook post 5) The posting time of the Facebook post 6) The length of the post 7) the use of a photograph in the post 8) the number of photographs in the post 9) the content topic. It was coded as 1 (Athletics), 2

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(Admissions), 3(School Pride), 4 (University Promotions), 5 (Artistic Performances), 6 (Academic Events) and 7 (Other); 10) the use of hashtags in the post 11) the use of graphics in a post 12) the number of hyperlinks in a post 13) the number of comments under a post 14) the number of shares of a post and 15) the number of likes on a post (See Appendix A).

Data for the content analysis was collected from Facebook between the dates of November 3rd, 2019 to November 16th, 2019. These dates were selected due to efforts to avoid any events or specific periods that would affect the data such as welcome back material for the beginning of the school year or a holiday break.

Two coders, both with research experience, were involved in testing the codebook for intercoder reliability. Initially, another coder and the researcher analyzed 10 different posts, 1 from the same date, November 7th, for 10 out of the 12 universities. The initial intercoder reliability reported agreement ranging from .50 to 1. Four of the items were below .70. The second coder was trained one more time, and both researchers coded a different set of 10 posts again. Holsti's method was used for measuring agreement both times and the reported the agreement, which ranged from .80 to 1, with an average of .94. The rest of the posts were coded by the researcher as the intercoder reliability was adequate.

Results

For the first research question, the researcher investigated how higher education institutes use Facebook to communicate with their publics, specifically in the context of content topics. As figure 1 illustrates, a total of 161 posts were examined during the designated two-week period. The number of posts placed into the “Other” content topic category was the highest (n=57, 35.4%). The Other content topics category was separated into smaller categories that include blog repost, holiday, student organizations and community life, and university announcement. The second-largest number of posts fell under the topic of School Pride (n=32, 19.9%) followed by Athletics (n=24, 14.9%), Academic Events (n=21, 13%), University Promotions (n=19, 11.8%), Artistic Performances (n=5, 3.1%) and Admissions (n=3, 1.9%).

Content Topic	Frequency	Percent
Other	57	35.4
School Pride	32	19.9
Athletics	24	14.9
Academic Event	21	13
University Promotion	19	11.8
Artistic Performances	5	3.1
Admission	3	1.9
Total	159	100

Figure 1. Descriptive statistics for Content Topic.

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The Topics that got the most comments were blog repost (m=41.16, sd=42.01), followed by admissions (m=16.67, sd=15.31), and student org (m=15.xx, sd=21.xx). The topics with the most shares were holidays (m=93.71, sd=226.21), followed by artistic performances (m=51.xx, sd=66.68) and blog reposts (m=49.xx, sd=23.35). Finally, the content topics with the most likes were holidays (m=383.14, sd=628.86), followed by artistic performances (m=299.8, sd=351.136) and blog reposts (m=256.5, sd=157.68).

A chi-square test was also performed to examine the relationship between school size and content topic (See Figure 2). Small universities posted most frequently about Athletics (n=10, 28.6%), then School pride (n=9, 25.7%), and finally university promotions (n=5, 14.3%). Medium-sized schools most frequent content topic was school pride (n=25, 28.1%), followed by academic events (n=20, 22.5%) and finally holidays (n=14, 15.7%). Large universities posted the most number of content about school pride (n=44, 27.7%), secondly, Academic Events (n=29, 18.2%), and third Athletics (n=23, 14.5%), $X^2=39.791$, $df=20$, $p<.005$.

School Size	Top 3 Content Topics		
Small	Athletics (n=10, 28.6%)	School pride (n=9, 25.7%)	University promotions (n=5, 14.3%)
Medium	School pride (n=25, 28.1%)	Academic events (n=20, 22.5%)	Holidays (n=14, 15.7%)
Large	School pride (n=44, 27.7%)	Academic Events (n=29, 18.2%)	Athletics (n=23, 14.5%).

Figure 2. Chi-square test, School size, and content topic.

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A chi-square test was performed to examine the relationship between university region and content topic (See Figure 3). In the Northern region, the content topic that was posted most was school pride (n=9, 32.1%) followed by Athletics (n=6, 21.4%) and Holidays and Academic Event (n=5, 17.9%). In the Southern region, Holidays were posted about the most (n=11, 25.6%) followed by school pride (n=10, 23.3%) and finally university promotions (n=9, 20.9%). Schools in the Midwestern region posted the most frequently about academic events (n=14, 33.3%), second school pride (n=12, 28.6%) and third, Athletics (n=5, 11.9%). Finally, in the Western region school pride (n=12, 26.7%) was the most frequently posted topic, followed by Athletics (n=11, 24.4%), and then Academic events and University promotions (n=6, 13.3%), $X^2=54.963$, $df=30$, $p<.005$.

School Region	Top 3 Content Topics		
North	School pride (n=9, 32.1%)	Athletics (n=6, 21.4%)	Holidays and Academic Event (n=5, 17.9%).
South	Holidays (n=11, 25.6%)	School pride (n=10, 23.3%)	University promotions (n=9, 20.9%)
Midwest	academic events (n=14, 33.3%)	School pride (n=12, 28.6%)	Athletics (n=5, 11.9%).
West	School pride (n=12, 26.7%)	Athletics (n=11, 24.4%),	Academic events and University promotions (n=6, 13.3%).

Figure 3. Chi-square test, School region and content topic.

For the RQ1.2 the researcher investigated the specific tools that universities use to engage publics such as hashtags, graphics, photos and hyperlinks. The number of posts that did not use

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hashtags was higher (n=125, 77.6%) than the number that did (n=29, 18.0%). In regard to graphics, the number of posts that included graphics (n=151, 93.8%) was also higher than the number that did (n=10, 6.2%). Finally, the number of posts that included photos (n=135, 83.9%) was higher than the number that did not (n=26, 16.1%).

A chi-square test was performed to examine the relation between the class of university and the use of photo. Private schools (N=90, 89.1%) had a higher percentage of posts with photos and thus were more likely to include photos in a post than were Public schools (N=45, 75.0%). The relation between these variables was significant, $X^2=5.533$, $df=1$, $p < .05$.

The average number of hyperlinks used in a post was 1.00 (SD=.939). The number of hyperlinks used most frequently was 1 (n=85, 52.8%), followed by none (n=46, 28.6%), then 2 hyperlinks (n=21, 13.0), 3 hyperlinks (n=6, 3.7%), 4 hyperlinks (n=1, .6%), 5 hyperlinks (n=1, .6%) and 6 hyperlinks (n=1, .6%).

A chi-square test was performed to examine the relation between hashtag usage and class of college (private or public) (See Figure 4). Public universities (n=15, 26.8%) were more likely to use a hashtag in a post than Private universities (n=14, 14.3%). The relation between these variables was not significant, but the researchers estimate that with a bigger sample, the relationship would become significant, $X^2=3.643$, $df=1$, $p = .056$.

Class	Frequency	Percentage
Public	15	26.8
Private	14	14.3

Figure 4. Chi-square test, Hashtag use and class of university.

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A chi-square test was performed to examine the relation between university size and use of hashtags. Large universities (N=12, 35.3%) were the most likely to use hashtags than were Medium (N=9, 10.5%) or Small universities (N=8, 23.5%). The relation between these variables was significant, $X^2=10.46$, $df=2$, $p < .01$

Class**	Frequency	Percentage
Small	8	23.5
Medium	9	10.5
Large	12	35.5

Figure 5. Chi-square test, hashtag use, and university size. *Note.* ** $p < 0.01$

Lastly, to answer research question 2, one-way ANOVA tests were conducted. As a result, found that colleges in the Southern region received the most number of comments ($m = 28.81$, $sd = 54.77$) compared to colleges in the West ($m = 4.33$, $sd = 6.49$), the North ($m = 4.44$, $sd = 5.51$) and Midwest ($m = 3.05$, $sd = 8.03$), $F(3, 153) = 5.28$, $p < 0.01$. It was found that colleges in the Southern region received the most number of shares ($m = 73.83$, $sd = 164.31$) compared to colleges in the West ($m = 7.71$, $sd = 12.30$), the North ($m = 10.2$, $sd = 13.08$) and Midwest ($m = 7.71$, $sd = 12.30$), $F(3, 153) = 6.07$, $p < 0.001$. Finally, universities in the Southern region received the most number of likes ($m = 373.66$, $sd = 484.85$) compared to colleges in the West ($m = 112.18$, $sd = 136.12$), the North ($m = 114.84$, $sd = 95.49$) and Midwest ($m = 96.67$, $sd = 164.60$), $F(3, 153) = 9.28$, $p < 0.001$.

Discussion

The purpose of the study was to examine driving factors of engagement on university Facebook pages. These findings can be used to develop future implications for undergraduate higher education institutions, such as how to strengthen a university's online social media presence to reach public relations or marketing goals.

For this study, there were two research questions I sought to answer with data from the content analysis. From data collected through in-depth content analysis, primary findings for the first question indicated that content topics such as school pride, athletics and academic events were posted about most common throughout all four regions and three school sizes.

Additionally, posts containing content topics such as blog reposts, admissions and artistic performances received the most likes, comments and shares. The inclusion of photos in a post was the only tool that universities were more likely to use than not, compared to graphics and hashtags. Between the two classes of university, public schools were more likely to use photos and hashtags in their posts than private schools. Finally, the relationship between size of school and the use of hashtags was found to be statistically significant, indicating that large universities were the most likely to use hashtags in their posts.

For the second research question, I found that region indicated which posts were more likely to be commented, liked, or shared. Southern schools received the most number of all three engagement actions compared to the other three regions. These results indicated a difference in post factors contributing to increased online engagement.

Theoretical implications

This study extends scholarship on social media best practices when it comes to strategic communication by higher education institutions. The results from the study support the notion that Peruta and Shields (2018) presented in their study that posts that contain content relating athletics, admissions, school pride and university promotions increase engagement. Interestingly, the assertion that photos in a Facebook post could directly increase engagement on posts was not supported by the results of this study. Tests were run to examine engagement surrounding photos, and the researcher found that the only statistically significant results indicated that Public schools were more likely to post about public schools, but both classes of university generally had a high percentage of posts that contained photos, which agrees with the findings of Brech et al. (2017). Thus, the number of posts that included photos was higher than the ones that did not. Therefore, this study added to the body of knowledge surrounding engagement on Facebook with the notion that other factors contribute to engagement than the inclusion of photos in a post. As Srivastava et al. (Year?) suggested posts that contained different kinds of media, such as pictures or graphics, were the most effective for generating likes and shares. Posts that contained more text were the most effective in generating the most comments than multi-media posts. Results from this project indicated that blog reposts was the content topic to generate the largest number of comments, followed by admissions and posts about student organizations. The researcher concludes that since blogs are writing-heavy, this type of post should receive the most comments, as Srivatava et al. suggested. Further, posts with content topics such as holidays and artistic performances received the most shares and likes, according to results from the content analysis. These posts were more graphic and picture heavy, thus adding to the literature on the effect of post content on different engagement behaviors.

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Finally, results indicated that Southern schools were found to have the most engagement on their posts in terms of likes, comments and shares out of all of the U.S. regions. These findings are surprising because it indicates a possible correlation between offline engagement on campuses and online engagement on Facebook. Junco (2012) supported this notion indicating that students who spend more time practicing engagement behaviors on Facebook are more likely to be involved in their university outside of the classroom. U.S. News released a list this year of universities with the largest concentration of male students in a Fraternity in. Southern schools made up almost half of the top 20 with Washington and Lee, located in Virginia, at number 1 with 75%. Greek life is an especially popular way to get involved on campus and findings indicate that there may be correlation between participation in organizations such as sororities and fraternities and increased engagement behaviors on university Facebook pages (Most Fraternities, n.d.).

Limitations and suggestions for future studies

The findings of this study can be generalized for other official university Facebook pages and compiled to generate best practices for social media to follow. Based on these best practices, universities can create a strategic plan to consistently maintain their brand and generally strengthen public relations and marketing methods.

A limitation of this study is the small sample pool that was used for the Content Analysis. For each of the 12 universities that were selected, only posts published within a two week period were analyzed. A larger sample pool could affect the tests that were run and found statistically insignificant, but only marginally. Another limitation of this study is the many aspects of Facebook that affect impressions of a post. For example, Facebook runs on a certain algorithm

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that determines how widely a post will be shared. Organizations can also pay to boost a post to a specific audience during a specific time period. These posts often take precedence in the Facebook algorithm before posts that are not boosted.

This research project only looked at engagement of publics on the Facebook pages of universities. Expanding the research to multiple social media platforms, such as Instagram and Twitter, could reveal differences in engagement behaviors from target audiences. The current study also doesn't take into account of the findings regarding engagement behaviors and the effects they have on building and maintaining a brand. Finally, there is no existing literature on the direct correlation between offline engagement on campus by students and online engagement on Facebook. Future studies focusing on this relationship could expand scholarship surrounding the topic of engagement on social media in the context of higher education.

Appendix A

Scheme	How to code?	Category
The Name of Organization	Write down the official name of the university	
Region	Any school from the Northern region will be coded as 1 Any school from the Southern region will be coded as 2 Any school from the Midwestern region will be coded as 3 Any school from the Western Region will be coded as 4	North = 1 South = 2 Midwest = 3 West = 4
Classification of university	Any University that is classified as public will be coded as 1 Any University that is classified as private will be coded as 2	Public = 1 Private = 2
Posting Date	Date / Month / Year (e.g. 01/05/18)	
Posting Time	00:00 pm (am)	
Length of post	Write down the number of words in the post.	#
Use of Photo	If the post has any picture or photo, code it as "yes."	Yes = 1 No = 0
Number of Photos	Count how many photos the post uses.	# of photos

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Content Topic	<p>Any post that mentions the university sports teams will be coded as 1</p> <p>Any post that contains announcements about admissions (e.g. Congrats class of 2024, Regular decision applications are out, etc.) will be coded as 2</p> <p>Any post that indicates university specific pride will be coded as 3.</p> <p>Any post that mentions an achievement of the University will be coded as 4.</p> <p>Any post that mentions or promotes performances of any arts related discipline will be coded as 5.</p> <p>Any post that highlights an event related to academia will be coded as 6.</p> <p>Any post that does not fit into the other designated categories will be coded as 7.</p>	<p>Athletics = 1</p> <p>Admissions = 2</p> <p>School pride = 3</p> <p>University Promotions = 4</p> <p>Artistic performances = 5</p> <p>Academic events = 6</p> <p>Others = 7</p>
Hashtags	<p>Does the post use hashtags?</p> <p>Code 1 for yes</p> <p>Code 0 for no</p>	<p>Yes = 1</p> <p>No = 0</p>

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Graphics	Does the post contain a graphic? Code 1 for yes Code 0 for no	Yes = 1 No = 0
Hyperlinks	Does the post contain a hyperlink? Code 1 for yes Code 0 for no	Yes = 1 No = 0
Number of comments	Write down the number	#
Number of shares	Write down the number	#
Number of likes	Write down the number	#

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