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Reevaluating Social Media Marketing Communications

Laxmi Vijigeesh Katragadda

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Reevaluating Social Media Marketing Communications

by

Laxmi Vijigeesh Katragadda

A creative component report submitted to the graduate faculty in partial fulfillment of the requirements for the degree of
Master of Science

Major: Information Systems

Program of Study Committee:

Dr. Kevin Scheibe, Major Professor

Dr. Sree Nilakanta

The student author, whose presentation was approved by the program of the study committee, is solely responsible for the content of this report. The Graduate College will ensure this report is globally accessible and will not permit alterations after a degree is conferred.

Iowa State University

Ames, Iowa

2019

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ABSTRACT

When looking for a college or university, apart from the world-class program, facility, and faculty, the students also look for a place to fit in and call home. Students can now connect with a school's campus life 24/7 through the power of social media along with the traditional marketing of printed booklets, campus visits, and overnights.

We have many websites and services that rank the universities using metrics for research income and academic impact. However, there is no metric provided by these services to measure the quality of life; Social media pages provide a means to look at the campus life and the culture.

The goal of College of Business is to identify what students and their families are looking for and to use social media to share their campus culture with prospective students and their parents. College of business is sharing campus life as it happens, using Instagram photos, Facebook videos, Tweets, and more. The primary objectives of Assessments are to sample, measure, and report on strengths, identify gaps in the existing marketing strategies.

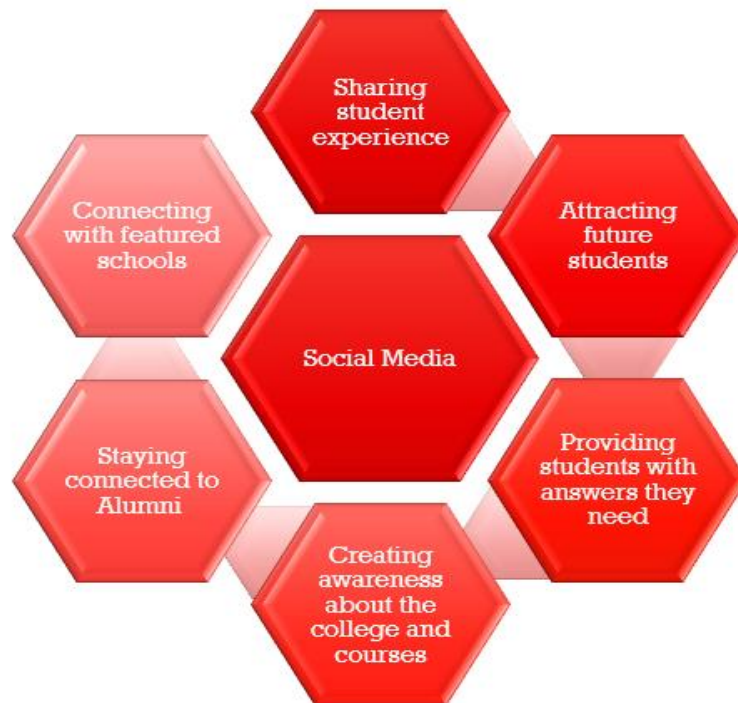


Figure 1 Objectives of Social Media Marketing

CHAPTER 1 – INTRODUCTION

History of the College Of Business:

Business education has been taught at Iowa State University since the early 1920s, well before the College of Business was officially established in 1984. The first courses were held in the Department of Economics, back when Iowa State University was called Iowa State College and students paid a nickel to ride the train to get from town to campus.

Throughout the decades, the business department continued to grow and adapt to meet the needs of our students, building our foundations on the commitment to educate the best business leaders and entrepreneurs of tomorrow. Accredited by The Association to Advance Collegiate Schools of Business (AACSB), the College of Business has a history of high-quality education through excellence in research, innovation in teaching, and diversity that broadens perspectives.

That's why we serve more Iowa high school graduates than any other 4-year business program in the country. After three decades as the College of Business and over a hundred years of business education, the future of business has never been brighter.

With a rich history like quoted above and being a pioneer in innovation and adaptability, the College of business has expanded its marketing horizon into Social media platforms. Which has become the source of information for this generation, and we see students have grown up communicating and sharing experiences on social media sites like Facebook, Twitter, and Instagram. Using the power of different networks and engaging content, Iowa State University College of Business is endeavoring to attract students, stay connected with alumni, and interact with current students.

Research Questions

Research questions will address:

- 1) Student's interest and engagement level with the College of Business
- 2) Which experiences and relationships are most influential in strengthening students' interest in the College of Business?
- 3) The Influence Social Media has on Enrollment

4) The Correlation Between Social Media and Life & Culture of College

Aim of the Project

The primary objectives of Assessments are to *sample, measure, and report on strengths, identify gaps in the existing marketing strategies*. The bigger picture of the project is to develop and refine the Social Brand and improve the Web presence of Iowa State College of Business.

Universities are continuously trying to understand their audiences. To be successful, universities should define their social media goals and learn their audience through the data. Key to successful social media measurement is asking the right questions like:

- Awareness and Reputation
- Social reach across all platforms
- Effectiveness of Social campaigns
- Content analysis
- Audience profile
- Competitor benchmark

Methodology

To audit and analyze the social media data, we need to understand the available resources from different social platforms and come up with means to extract the available data. Data extraction plays the most significant role, with tons of information available. The right information at the right time and its accuracy help in the strategic decisions and to understand the opportunity. In the highly competitive world, information, including customer data and operational data, play a significant role in building strategic decisions which help us shape the goals of the College of Business.



Figure 2 Research Methodology

The audience of the Research

Clients on this project would be the Social media marketing team of the Iowa State University's College of Business (CoB). New social media networks come out every week, most of which will never gain any traction. It's best to start with the platforms that the College of Business is already using; then once we have efficient systems running, we can look at allocating a percentage of your budget toward more experimental campaigns.

ISU College of Business uses the following major platforms:

- **Facebook:** With more than 2 billion monthly users, Facebook hosts over a quarter of the world's population, providing marketers with an unparalleled opportunity to reach virtually anyone and everyone.
- **Instagram:** While Facebook has a mind-boggling number of users, which makes it the undisputed king of social media. Instagram, which is Facebook's hottest acquisition, is

beginning to look like the king of social marketing. Instagram now boasts more than 500 million monthly active users and holds one of the highest audience engagement rates on social media, which is 58% higher than Facebook and 2000% higher than Twitter.

- **Twitter:** Twitter has always revolutionized news and provided unparalleled access for users to connect with both mainstream and niche influencers. With 330 million monthly active users, it remains one of the most popular social media platforms. Unlike Facebook, Twitter is still a base for organic engagement. Brands don't need to pay to reach their followers, which enhances the platform's value even when running paid ads.
- **LinkedIn:** LinkedIn is another unique social media platform that revolves primarily around the Business-to-Business market. LinkedIn has an estimated 230 million monthly active users, evenly split between female and male users. 61% of users fall into the 30-64 age group.

Stakeholders

Stakeholder for this project would be all the followers on the Social media pages of College of Business:

- Students
- Parents
- Recruiter
- Alumni
- Staff (Social media marketing team)
- Faculty (Iowa State University's CoB faculty) etc.

Our project will be focusing on the majority stakeholders, i.e., *students*. The clients (ISU College of Business) are also little inclined to address a few other stakeholders, like *Alumni and Recruiters*.

Social Media Platform:	Percentage of Students:
Facebook	40% +
Twitter	49%
Instagram	54%

CHAPTER 2 – LITERATURE REVIEW

Problem Diagnosis

Social media marketing's fundamental objective should be growth automation. Growth automation focuses on improving key customer metrics. Growth automation teams need platforms like Facebook, Twitter, Instagram, and LinkedIn to implement these highly segmented campaigns. Marketers rely on data analysis, creative initiatives, and an ever-widening personal knowledge base to effectively engage customers.

- **Awareness:** Since our primary stakeholders are students and a typical university undergraduate recruit is a high school student of age between 15 and 19 who are called as “digital natives,” as they are born into technology or are exposed to technology at an early age (Liang 2010). The campaign goals are to generate new qualified visitors and leads through social traffic via content marketing on available social media platforms. And it can be done by different creative ad combinations, testing new audience targeting techniques, and producing diverse types of content.
- **Activation:** In this phase, the audience takes the first action of testing our service through the web or social media visits. In this fidgety world, people want things clear and straightforward. A study by Weinriech and Obendorf (2008) proves that 77 percent of the people who visit a webpage leave in less than 10 seconds. Social media links on the homepage are one of the effective ways to reach the users in the small-time frame of their visit, and the ease navigation is highly important for young adults (Poock and Lefond 2001). The single visit doesn't mean that the visitor is active; at this point, the user is testing out and seeing if our services are useful. Metrics like repetitive visits, followers, and people who like our page back up the fact that onboarding and user-experience leaves a lasting impression and can influence later visits.
- **Retention:** Once users have started using our service, we work towards the goal of keeping it up. Now we can think of retargeting and re-engaging our best users. We all know that in recent years, the Web has transformed radically, changing from a platform for information to a more social environment where users are not only active harvesters or passive receivers of information, but also producers of content (Bruns, 2008). Our quality of service and spirit shouldn't disappear after a customer convert. Relationship and messaging should

grow even better. We should provide different content to keep users active with our College of business and to add value to their experience and encourage repetitive visits.

- **Revenue:** It's evident that users grasp the value of our service; now, it is crucial to ensure that feeling stays intact. Targeting prospective students is essential; it is equally important to retain the current students who are the source of revenue. Apart from all the amenities students get on campus, the social media platforms should be a place to express themselves and align with the college spirit.
- **Referral:** When our users bring in more traffic and especially more students who are willing to join the college of business, it is called a referral. Once users reach this phase, they're loyal to us and want to share it with their friends. Metrics and features like tagging, reshares, comments of friends and family can be used to understand this. It is essential to facilitate the user with optimal options so that they can refer their friends via both direct and indirect means. If we considered CoB web presence as a Brand, we could improve on the user's virtual experience which will lead to brand loyalty (Cheng, Chieng, & Chieng, 2014; Laroche, Habibi, Richard, & Sankaranarayanan, 2012).

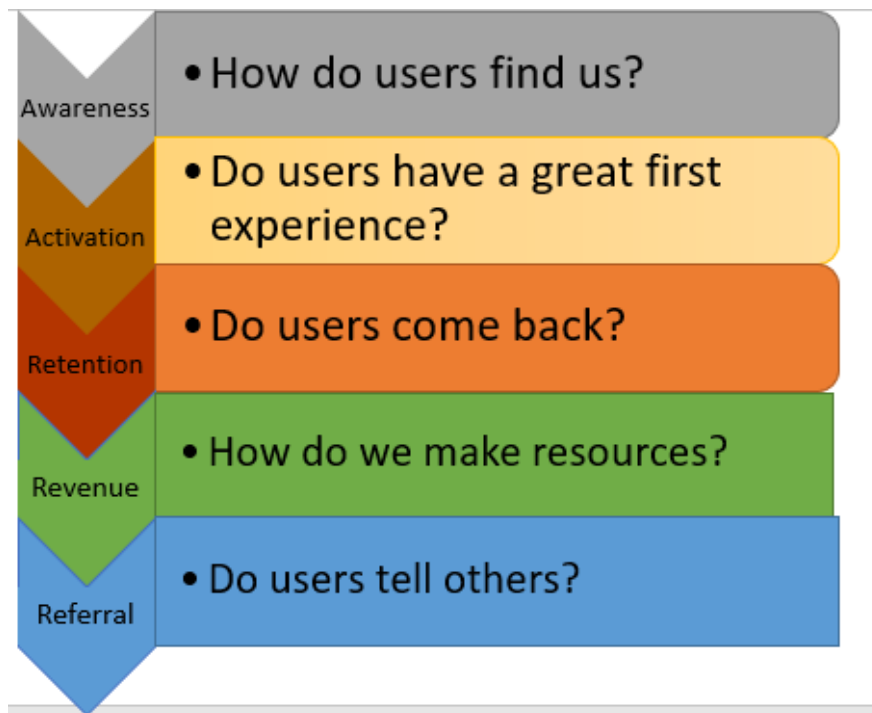


Figure 3 Social Media Marketing Objective

CHAPTER 3 - RESEARCH DESIGN

The possible way to approach this project is to layout a Roadmap and follow it phase-wise. The roadmap is divided into the following phases:

ROADMAP FOR SOCIAL MEDIA MARKETING:

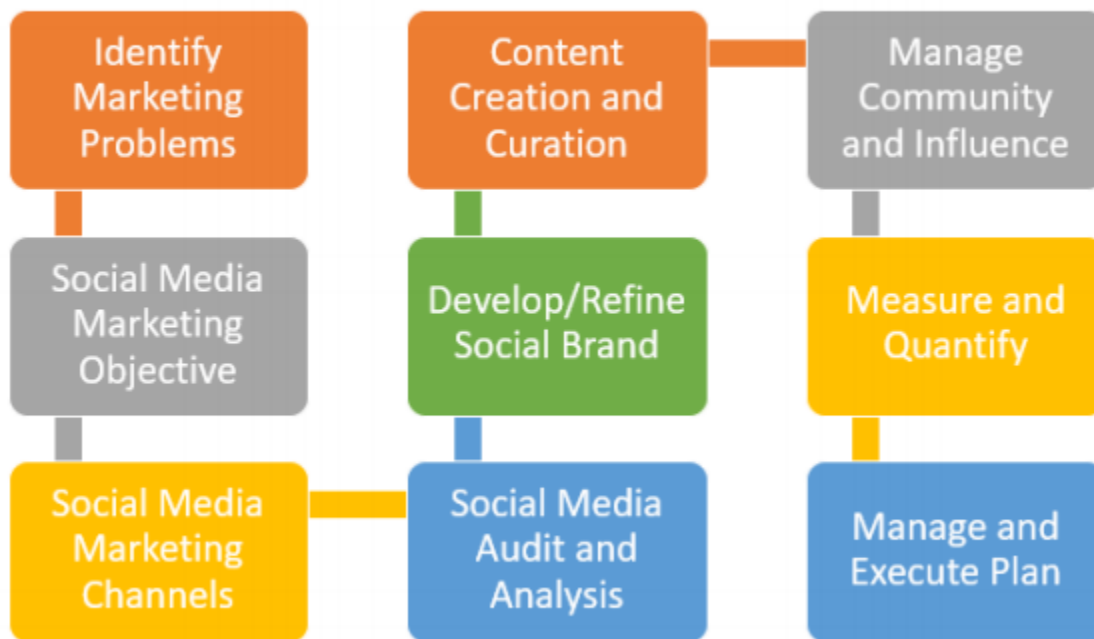


Figure 4 Roadmap for Social Media Marketing

1. Identifying marketing problems

The three major fields in understanding the marketing problems are:

Brand Image: It's the perception of our customers (in our case students, parents, recruiters, staff, and faculty) about the College of Business. It's critical to be aware of how customers view the College of Business as a brand. Determining the strategies, we want to use to positively influence our brand image can be done by researching our consumers' current perceptions and what they want from your company.

Market characteristics: It's the attributes of our target market (Audience.) We need to consider all aspects that drive our different audience towards our social media platforms. Our audiences who are students are going to have different behaviors and requirements than those from the Alumni/Faculty. Recognizing all these differences between subcultures, and meeting the needs of those differences will help our College of business' marketing strategies succeed.

Market Potential: It is an estimate of our potential profit. In the case of the College of business, it is the estimate of how many prospective students are we able to attract and the retaining of the current students. If we research how audiences might react to advertising about a new course or fee changes related to the course before we act, then we will be better prepared and market to our audiences more accurately

2. Social media marketing objectives

- Awareness
- Activation
- Retention
- Revenue
- Referral

3. Social media marketing channels

- Facebook
- Instagram
- Twitter
- LinkedIn

4. Social media audit and analysis

- Data Extraction
- Auditing internal (performance) and external (competitors) factors
- Analysis of the historical data provided by different platforms

5. Develop/Refine a social brand

- Knowing the customers
- Identifying what college of Business stands for
- Following a specific plan

6. Content creation and curation

- Platform-specific content creation & curation tools and methods
- Media-specific (Photos/Videos/Articles)

7. Manage community and influence

- Platform-specific benchmarks to address the community
- Platform-specific key metrics radar

8. Measure and quantify

- Quantify few metrics which play a significant role
- Measure the correlation of these metrics with other attributes

9. Manage and execute the plan. (Value Proposition/ Results of the project should be)

- Activation: increase in Fans and Followers
- Retention: through content Creation and Curation
- Referral: building a Community and Influence

Visualization and Analysis tools used:

Tableau: It is the tool to see and understand the data; it is flexible to suit the different needs of the project. We have used Tableau for data discovery & visualization, creating reports & dashboards, and for simple statistical analytics like forecasting and trends. Tableau is compatible with web service as a source (Web Data Connector), we planned to use the social media API to extract data (Due to privacy restrictions, we could not get this data).

RStudio: The SocialMediaLab package of Rstudio was used. It is a suited tool for constructing networks and collecting high influence user from social media data. It is compatible with platforms like Instagram, Facebook, and Twitter. Different types of networks can be produced for analysis, such as Social Network Analysis (SNA) and Text analytics.

Facebook insights tool, Twitter Analytics, LinkedIn Analytics, and Instagram insight analytics: All these are the platform-tools provided by different social media sites for the business profile users. These tools produce few dashboards which can be customized to get the results we need. The primary use of these tools was to review basic insights and download insightful data to get further understanding.

Python and its libraries such as Pandas, NumPy, Matplotlib, Seaborn, Time, Script.stats, Scikit-learn: Python was used to try and compare the popular keywords with the number of views provided to each keyword. The median of the views is considered as a baseline, and the score is assigned to each Keyword (Tag) based on the number of views it holds. The 30 best and worse tags were found from the score associated by it. For the tags which had higher the view count than the median value was considered as best tags otherwise were considered as worst tags.

CHAPTER 4 - PROJECT TIMELINE

The project began in May 2017 and initial months involved researching similar projects and to understand the domain knowledge. Process planning was a very iterative part, but the initial planning of the project took about a month. To attain the objectives of measuring, reporting on strengths, and to identify the gaps of the existing system, we have to understand the following:

- Existing market, competitors, and how the systems fit into the market.
- Understand the existing social media platforms and attributes provided by them.
- Convert the project requirements into measurable goals (relation between requirements and measurable attributes provided by different social media platforms)
- Prioritizing project requirements and deciding which requirements align with the organization's long-term goals.

The initial phase was to look through different platforms and come up with options for extra data. And to understand different metrics and measures after extraction- for example, Facebook and Twitter both use the attributes Engagement and Impression. However, the definition differs, and based on the underlining meaning; the approach has to be modified. Once the data was collected, it had to be cleaned and loaded for analysis.

By analyzing at the historical data, we had to document the benchmarks and best practices by find patterns or trends. While the data was being collected on all the platforms with a view of the analysis in mind, the documentation and deployment of best practices from the primary analysis were put into action. As the data had to be maintained privately in a secure location, I worked with the IT team to set up a remote server. Much brainstorming was done for choosing the right visualization tool and analysis tools, and also between desktop and server versions. Every social media platform had its restrictions in providing data, we had to request the access for the API, so data unification was a tedious task.

Task	Start Date	Duration	End Date
------	------------	----------	----------

Identifying Marketing problems	5-Jun	7	12-Jun
Social Media Marketing Objective	13-Jun	7	20-Jun
Social Media Marketing Channels	21-Jun	7	28-Jun
Social Media Audit and Analysis	29-Jun	14	13-Jul
Develop/Refine Social Brand	14-Jul	14	28-Jul
Content Creation and Curation	29-Jul	14	12-Aug
Manage Community and Influence	13-Aug	14	27-Aug
Measure and Quantify	1-Sep	30	1-Oct
Manage and Execute Plan	2-Oct	14	15-Oct

Table 1 Project Timeline

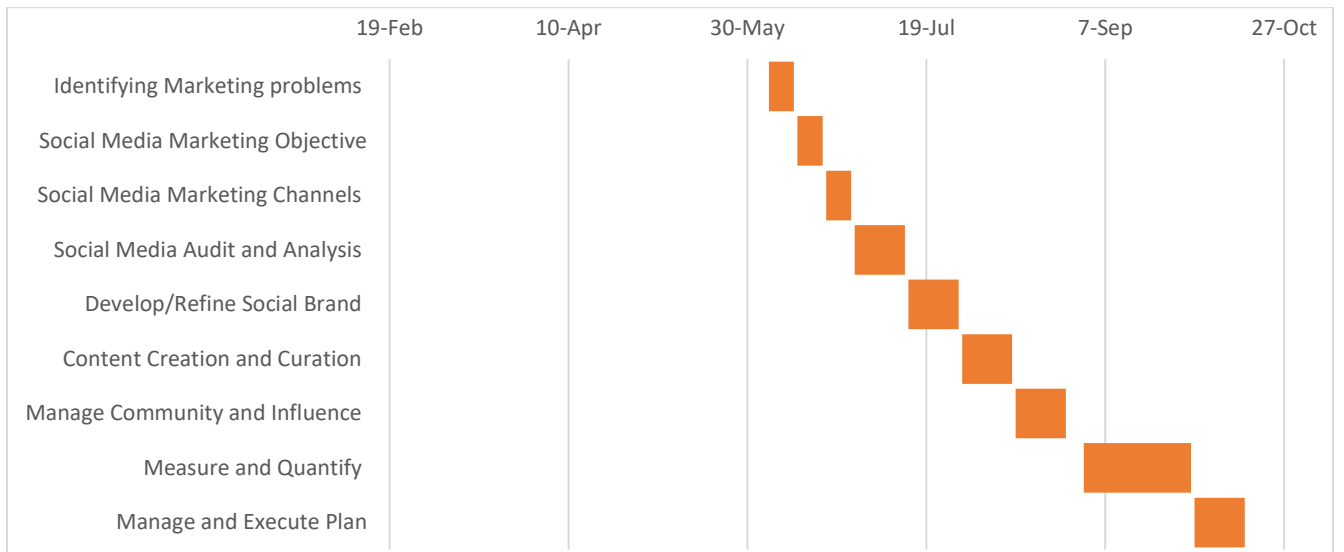


Figure 5 Gantt Chart of Timeline

CHAPTER 5 - DATA DICTIONARY AND UNDERSTANDING

Understanding the data and metrics:

1. **Facebook:** The metrics provided by Facebook can be divided into six major groups:
 - a. *Likes:* Page Likes, Net Likes and Where Your Page Likes Happened
 - b. *Reach:* Post Reach, Likes, Comments & Shares, Hide, Report as Spam & Unlikes, and Total Reach
 - c. *Visits:* Page & Tab Visits and External Referrers
 - d. *Posts:* When Your Fans Are Online, Post Type and Top Posts from Pages you Watch- Competitors
 - e. *Videos:* Video Views, 30-Second Views and Top Videos
 - f. *People:* Your Fans, People Reached and People Engagement

To get much insight on the metrics used by Facebook, please use the link provided in reference one.

2. **Twitter:** Apart from the few common metrics Twitter has a whole new set of metrics like: Engagement, Follows, Hashtag Clicks, Impressions, Engagement Rate, Leads Submitted, Likes, Link Clicks, Permalink Clicks, Replies, Retweets, Shared Via Email, User Profile Clicks, App Install Attempts, App Open, Detail Expands, and Embedded Media Clicks. Please use the link in reference two to understand the definitions of each of these metrics.

3. **Instagram:** The metrics provided by Instagram can be divided into three types:
 - a. *Posts:* Likes, Comments and Saved
 - b. *Account:* Impressions, Reach, Website clicks, and Profile Views.
 - c. *Stories:* Taps Forward, Tabs Back, Replies, Swipe Away, and Exits.

The link in reference four can give a detailed explanation of the metrics.

4. **LinkedIn:** LinkedIn also provides metrics which can evaluate the engagement of the user for individual posts, understand more about followers (demographics and backgrounds) and helps the page owner with page traffic and activity details. Here

are few metrics: Post Performance, Page Reach, Engagement Rate, Follower Demographics, How to Compare, Who's Viewed Your Profile, Who View Your Updates, Network Growth, Long-Form Publications, and Followers Segmentation.

Focus and approach of Analysis were to investigate the following issues majorly:

Know your Customers: College of Business voice/spirit should profoundly reflect on the target audience. The better you know we the customers, the better we can reach them.

Identify what College of Business stands for: What is College of Business's values and motto, and how would you talk about them to the users? Social media platforms may be a place for fun, lighthearted social banter; however, it's not a perfect fit for everyone. Representing the College of Business's spirit and targeting the users should be done professionally and respectfully.

Follow a specific plan: Chances are there won't be just one person handling your social media for the entire lifespan of the college of business. Because of this, it's important to write down a clearly defined list of do's and don'ts for how to talk to your fans. For example, are incomplete sentences, okay? How many exclamation marks are too many? Are there keywords or phrases that define the college of business values or cyclone spirit that you'd like to see used frequently? What should you not say, do, or highlight? By thinking critically about the details of your posts, you'll inevitably create a long-lasting voice that won't change as your staffing evolves.

The tools and processes used in extracting data for this project:

1. Facebook: Most of the data was exported from the insights page of Facebook. The insights page gives us the portability to export data related to all the attributes in a single go, or we can customize and download data related to required fields. However, the restriction with the insights tool is that it only allows us to export data of 180 days at a time.
2. Twitter: We used Twitter's inbuilt Analytical tool to extract data (https://analytics.twitter.com/user/ISU_CoB/tweets). Even Twitter has a few

restrictions on allowing only 90 days of historical data to be downloaded in a single attempt. And Twitter holds all the data of Tweets posted after October 2013.

3. Instagram: Instagram does not provide data in CSV format as the API is currently in the beta testing phase. However, it gives us the needed plots about the audience and sorts posts in descending order of impressions and reaches. We used these plots provided by the Instagram Analytical tool and additional third-party tools like Locowise and Simply Measured to come up with few findings.
 - a. Locowise: The platform allows users to optimize posts, measure and analyze campaigns and produces reports on the important aspects of the performance. It also helps in comprehensive benchmarking by providing the basic metrics and content used by peers and competitors.
 - b. Simply Measured: This is another tool which is used to generate actionable insights from Instagram. This tool is similar to that of Locowise, with few extra features such as extra insight on the users or fans.
4. LinkedIn: Same as Instagram LinkedIn also restricts the download or export of data in CSV format; we could only download the recent 60days of data. However, we can use its inbuilt Analytical tool for visualizations and get an idea of the strengths and gaps on our page.

CHAPTER 6 - DATA ANALYSIS AND VISUALISATIONS

This chapter consists of the following phases from the Roadmap: Audit and Analysis, Develop/Refine Social Brand, and Content Creation and Curation. To audit and analyze the data, we need to understand the historical data and get a glimpse of what the brand stands for and how do we represent our brand value in the available, versatile platforms. We will be discussing the next phases first and then go back to the Audit and Analysis done in these phases.

Develop/Refine Social Brand:

To develop and refine the social brand, we need to identify the voice of the brand (College of Business). We have inspected numerous factors like the diversity in the audience, the type of content posted, how users react to distinct types of content posted, how do COB Social Media respond to the advertisements on all the platforms, etc.

Know your Customers: College of Business voice/spirit should heavily reflect on the target audience. The better you know the customers, the better we can reach them.

- How old are they?
- What's their educational background?
- Where do they live?
- What are their interests?

These facts can help us bridge the gap and point to the customers where they are.

– *Facebook:*

❖ Report on fans: The highest section of the audience is between age 18-24 and 25-34. Please refer to the Figures 1&2 in the appendix for the visualization related to Age, Sex, and Demographics.

❖ Report on reach: Ideally, reach should be more than the no of fans and followers. We are reaching users more than who follow us in all age groups except for the 18-24 and 25-34. The highest gap is for male fans between 25-34. The details can be seen in figure 3&4.

❖ Report on engagement: We have a good engagement of users more than who follow us in all age groups except for 25-34. The highest gap is for male fans between 25-34, followed by female fans of the same age group. Please refer to the visualizations in the figures 5&6.

– *Twitter:*

❖ The figures 7,8&9 in the appendix show the statistics related to the Age, Sex, and Demographics of followers on Twitter. Majority of the followers are from 18-24 Age, and 54% of the followers are female.

❖ Figures 10-13 provide information about the interests, educational background, and other personal interests related to the followers.

– *Instagram:*

❖ Since Instagram does not give out the data in CSV format, we were only able to use the analytical tool provided by them.

❖ From the appendix figures, 14-19 provide the details related to Age, Sex, and Demographics. And we can see that most of the users are from the 18-24 age group and 58% of the followers are women.

– *LinkedIn:*

❖ Apart from the details like Age, Sex, and Demographics, LinkedIn also provides information related to education and job backgrounds, which can be found in the figures 20-24. Tailoring content to address the above age groups, sex, and demographics would impact the reach and engagement as we have a sizable number of fans in this group. The personal information like educational, job backgrounds, and interest can be used to streamline the target audience.

Content Creation and Curation

The process of creating content from scratch and marketing it to your followers or fans is called content creation. Whereas Content Curation is the process of collecting existing information like social media posts, blogs, or, ebooks and sharing it with your followers. It is recommended to create content than curate from other sources as it would generate leads, gives strong ownership, drives traffic, reflects the voice/motto, helps in becoming a thought leader. Curating content occasionally is good as it builds a relationship, saves time, and widens the knowledge.

Visualization related to the content posted on different platforms:

Facebook:

1. Posts:

- The most important attribute to be considered is the content related to the posts, and we used the two years historical data and checked all the posts with good reach and engagements and extract features using TFIDF (Term Frequency Matrix and Inverse Document Frequency Matrix). We have used sklearn.feature_extraction Module to extract features in a format supported by machine learning algorithms from the text format dataset. Also, we have used TfidfVectorizer class to convert a collection of raw documents (transcripts) to a matrix of TF-IDF features and have used fit_transform() to learn vocabulary and IDF, and return term-document matrix.

The python code for the same is as follows:

```
In [8]: from sklearn.feature_extraction.text import TfidfVectorizer
vectorizer = TfidfVectorizer(stop_words="english",
                             use_idf=True,
                             ngram_range=(1,1),
                             min_df = 0.05,
                             max_df = 0.3)

t = time()
tfidfvector = vectorizer.fit_transform(transcripts_df['transcript'])
print("done in %0.3fs." % (time() - t))
print(tfidfvector)
```

Figure 6 Python Code

- The output obtained after executing the same was as follows:

```
done in 7.510s.
(0, 983)    0.023433866959717834
(0, 723)    0.03157715377946044
(0, 879)    0.061517216060674194
(0, 1292)   0.048426494342229676
(0, 319)    0.06184967901174021
(0, 1246)   0.0356085437979077
(0, 563)    0.11588929784229926
(0, 535)    0.054293093955065465
(0, 362)    0.16656751931601518
(0, 1592)   0.03435708015064108
(0, 1214)   0.02931628390350915
(0, 1512)   0.046259116777913195
(0, 1125)   0.04125361558902474
(0, 487)    0.5340064971136239
(0, 533)    0.061562676576848115
(0, 438)    0.06398516213461924
(0, 1082)   0.03016129837517571
(0, 1444)   0.02851190337855373
(0, 1385)   0.06510215925616829
(0, 170)    0.027685567090977473
(0, 1291)   0.04026896120275225
(0, 568)    0.03989467760537819
(0, 1045)   0.02102158111987542
(0, 691)    0.0739208513034542
(0, 1023)   0.0834791544408461
```

Figure 7 TFIDF Output 1

- Finding out Most Important Words: Our next step was to find out the most important words, for which we created a function to determine the top-ranked words in the vectorizer. This enabled us to determine the top-ranked words/terms in the vectorizer. The obtained output on the execution of the python code is as follows:

	term	rank
998	music	68.048454
1652	women	64.483524
182	brain	59.787632
1626	water	56.787625
385	data	55.732181
255	children	49.843905
842	kids	48.477749
266	city	45.796482
416	design	45.743707
798	information	45.729102
1400	space	44.118302
174	body	41.620530
477	earth	41.098926
892	light	40.458203
1597	video	39.883032
1375	social	39.869247
503	energy	39.183741
634	food	39.048995
1308	science	38.838536
953	men	38.258052
199	building	37.411208
728	health	37.215294
350	countries	36.969061
1125	play	36.184333
454	dollars	35.574664
221	care	35.567550
302	community	35.321948
313	computer	35.320969

Figure 8 TFIDF output 2

- Then, we tried to visualize a word cloud with the frequencies obtained by the IDF transformation. From the word cloud, it can be seen that the most highly ranked words. We categorized the posts with highest reach and engagement (with highly ranked words) into the following: Personal Life of Professors, Events, Famous

Personalities, Alumni, Student Spotlights, Professor Spotlights, Candid pictures, Career Fair, Clubs, Giveaways, Graduation, Orientation, Prospectus, Sports, Staff spotlights.

- No of posts vs. reach and engagement: To check if the no of posts posted in a single day affect the reach of all the post for that day. If we consider the total reach (organic plus paid reach, figure 25), it seems like the total reach is not dependent on the no of post posted per day. However, if we just consider the Organic reach (figure 26), there seems to be 64% dependency on the no of post posted in a day. We have an average of 1.47 post per day since 2015 if we consider even holidays and non-working days. This report helped in identifying that three posts per day are the optimal number to get a good organic reach.
- Best time to post: There are many factors to be considered to decide on the best time or best day to post content. Factors considered are the time when most of our fans are online and based on the historical data, we can check at what time do our posts get more interaction (comments, likes, and reshares). Based on figure 27, we see that most of the post got good reach and engagement during 12 PM- 3 PM. However, 6 PM-9 PM is the time when most of our Fans are online. Similarly, from figure 28 we can see that Thursdays we have good reach and engagement followed by Saturday. Posting on these times and days would affect the reach and engagement.

2. Photo Album:

- Facebook does not provide a metric to measure the total album rating. However, we can consider the album data and check manually. As per the manual checking, I see that the likes total album reach and engagement is high than the individual photos.
- There is no trend, however, for few albums only first few photos have been viewed much time compared to the other photos in the album. The trend mentioned above is disrupted if there are any photos tagging people in the album or photos of famous personalities. Tagging people attract a new set of audience.
- Data was not sufficient to decide on an optimal number of Photos to be uploaded per album as the reach and engagement are skewed for few photos based on tags.

- Cover pictures and photos from posts have a different trend. Photos from the posts follow the trends of categories derived based on reach and engagement.

Twitter: Twitter provides generalized data about followers and data related to the tweets. And because of that, our analysis is limited mostly to measuring metrics related to tweets.

1. Tweets:

- The average no of tweets per day is 2.5723 including weekends and holidays (calculated for data from 2013-2017)
- The no of tweets posted per day does not affect the engagement. Engagement is purely depended on the content, which can be seen in figure 29.
- No of tweets posted per day impact the Impression by 44%, which can be seen in figure 30. Based on the historical data, 4-5 Tweets per days is the optimal number. However, Twitter feeds appear on every user's feeds, unlike Facebook, where the feeds are filtered based on EdgeRank. And because of this, the impression and reach of tweets are strong, but the Click rate and engagement depend on the content.
- Categorization of Tweets based on High Engagement and Impressions (Psychometric analysis), to find a pattern or genre of tweets with good no of engagements. (Categories: Personal Life of Professors, Events, Famous Personalities, Alumni, Student Spotlights, Professor Spotlights, Candid pictures, Career Fair, Clubs, Giveaways, Graduation, Orientation, Prospectus, Sports, Staff spotlights, Student replies, Updates and Pictures of Young women).
- Tailoring and customization of content can be done based on categories mentioned above to increase engagement and impressions.
- Scheduling of tweets based on the audience location can impact the impressions. Tweeting around events helps in gaining proper engagement.
- Use of popular hashtags can help in reaching a wider audience. Twitter does not need a two-way trust relation, and we can address the audience who do not follow us, and this helps to target a potential audience (prospective students).

- Twitter has this feature to organize people to a list which helps in organizing conversation (can use this to find people with similar interests and concentrate of posting more tweets of that category).
- Following our popular audience or the audience who are active on Twitter helps increase the interaction and reach.
- Sending out messages to everyone who follows us and replying to their messages builds up a positive relationship as well as reach and impressions.
- Twitter can be used to drive traffic to our website by writing messages that compel people to click on to learn more.
- With an advanced search option, we can target the local audience (Gerdin or College of business as a location).

Instagram: Instagram does not provide data in CSV format as the API is currently in the beta testing phase. However, it gives us the basic plots about the audience and sorts posts in descending order of impressions and reach.

1. Instagram feeds:

- We have 471 followers and have posted 149 posts till Aug 22nd, 2017.
- 33% of our followers are male and 67% female, out of which most followers belong to 18-24 (54%) age group (refer figure 14&15).
- In male followers, we have 48% belonging to 18-24 age and 30% belonging to 25-34 (figure 16).
- In female followers, we have 58% belonging to 18-24 age and 22% belonging to 25-34 (figure 17).
- As per the historical data, the followers are active and live mostly on Tuesday and Saturday. However, there is not much variation for the remaining days, except for Sunday (figure 31).
- From figures 32-38 we can see the time when most of our followers are online. The no of followers who are online remains almost flat for the whole week from 9 Am-9 PM with little fluctuations.

Manage Community and Influence

Social media marketing influence is a marketing term that describes the organization's ability to affect other people's thinking in an online community. The more influence the organization has the more appeal that organization has on other firms or other individuals who want to connect with them.

In basic terms, influence can be estimated by examining an organization's LinkedIn connections or Twitter followers or Facebook fans. However, a more thorough analysis is required, to determine who those connections are, how the firm makes social connections, and the level of trust between the organization and their connections. It's advisable to use social influence measurement tools and to do so; we need to establish credibility with our followers by maintaining consistency and transparency. This phase "Manage Community and Influence" use the previous two phases "Content Creation and Curation" and "Develop/Refine Social Brand" as the pillars. We use the data from the previous phases and associate them together to get favorable results.

Facebook:

- Page Likes: In this section, we can look at Net Likes- which gives us the breakdown of likes, unlikes, paid, and organic likes (figure 39). It also helps us in identifying "Where Your Page Likes Happened"- on the page, page suggestions, ads, and others (Figure 42).
- Average Net likes from the 24 months are 1. However, there are certain quarters per years, which are further analyzed to get a better insight. The highest number of Net likes are 14 during the September month of 2015.
- As we can see, the number of Unlikes have increased over the years and 2017 has a greater number of Unlikes. Further analysis is done on the Unlikes Data of 2017.
- Page New Likes vs. Unlikes: Graph to check the seriousness of the Unlikes for the current year over previous years (Figures 40&41). In 2017, we had 25.16% of Unlikes in comparison with New likes. Table 1 gives a breakdown of each month's no of likes and unlikes.
- In 2016, we had a total of 486 New likes and 109 Unlikes, which brings up to 22.42% of Unlikes against the New likes. This percentage was 10-15 for years 2012-2015.
- Where the Likes happened (Figure 42):

- On Your Page: Users who liked your page by visiting it directly.
- Search: Users who searched Facebook for your page specifically, and then started following you.
- Uncategorized Desktop: Likes from a desktop device that cannot be categorized.
- Most of the Likes happened “On Your Page and Uncategorized Desktop
- Post Reach: applies to the no of users — both followers of your page and non-followers — who have seen your posts. The two sets of data shown here represent organic and paid reach, also known as boosted or promoted posts (Figure 43).
- Benchmarks for boosting posts: Organic reach 1500 and Engagement 100. Benchmarks are set a bit above the avg scores. Overall, avg organic reach of posts since 2015 is 1057, and avg of engagement is 89.
- Total Reach: applies to any method your page or its content has reached others on Facebook, including posts on your page, check-ins, or page like ads. Figure 44 segments data into paid and organic reach.
- The avg Total reach of posts is 1245, the avg organic reach is 706, and avg Paid reach is 3220.
- Here organic and paid reach is the measures to be concentrated, as certain posts without Boosting (Paying for additional reach) have been viewed by more than 3000 users, and few paid posts have not been viewed by more than 100 users. Trends or similarities in such posts help in the optimizing and making better use of the “Boost” tool.
- There are some spikes which are further analyzed so that we can recreate for future posts.
- Reactions, Comments, Shares, and more: reports exactly what it states, and is directly tied to your page’s engagement. Increasing these will help you gain additional reach through the page suggestions.
- As seen in post reach here in Figure 45 also only certain posts have a high reaction rate. Analysis of content was done to identify patterns of posts which get more reactions and reach so that we can post similar data in the future.

And based on these analysis results, the categories mentioned under posts have been modified.

- Reactions: If we are looking to calculate the sentiment in a field or subject, we can post content related to that and then analyze the reactions.
- Hide, Report as Spam and Unlikes: reports the number of users who do not want to see your content in some form or another.
- It can be a much larger issue when users hide all your posts or report something as spam regularly.
- The posts should rarely be reported as spam, and you should consider a serious reassessment to your posting strategy if this happens with even a degree of regularity.
- We have some data on hiding All Post, which was analyzed to check the cause. And we found that posts with high engagement are the once which were opted to Hide by many users as they do not wish to get any notification related to this.

Twitter:

- Figure 48 gives the statistics on the Engagement rate, Link clicks, and No of Retweets. With the increase in the rate of the measures mentioned above, the overall Engagement on the page increases.
- Figure 49 visualizes the Likes and Replies we got since 2015. These metrics play a significant role as they represent direct interaction with followers.
- Table 2 shows the sum of Engagement rate, Engagement, and Impressions for all the years.
- Table 3 shows the average of Engagement rate, Engagement, and Impressions for all the years. Tables 4&5 show the same date quarter wise. Figure 50 shows the representation of the above mentioned tabled data.
- The avg engagement rate since 2013 is 0.04436 (0.44%), Twitter statistics consider 1% and above as a healthy account or page.
- The avg engagement is 47.42; we have considered the benchmark as 100. The avg Impressions since 2013 are 1,100, and the benchmark was set in 2000.
- Using the benchmarks, we have manually analyzed the content of tweets which crossed the benchmarks and categorized them.

- No of Tweets per day and Engagement (Figure 51): The average no of tweets per day are 2.5723. The no of tweets posted per day does not affect the engagement. Engagement is purely depended on the content.
- The highest number of impression received on a single day was 10,002.

Instagram:

- Twenty-seven posts have impressions more than 400, the strongest impression we have received till Aug 2017 was 666. (Figure 52-54)
- Carousel posts also have a sizable number of impressions. (Figure 55). We have three posts that have been saved by other users into their profiles. (Figure 57)
- Figure 56 gives the basic explanation of the metrics used in Figures 52-57.
- Figure 58 gives the consolidated stats of Instagram from Aug 2015. Figure 59 shows the audience growth.
- Figures 60 and 61 provide the visualization about engagement and no of posts.
- Figure 62 gives out the vital information on engagements breakdown related to the hashtags we used. Hashtags play a significant role in diverting new traffic to the page, and use of unique hashtags help users locate our account easily.
- Based on the historical data, we can say that Wednesday has the best engagement followed by Thursday (figure 63).
- Figure 64 and 64 provide the information about top posts and the engagement rates, avg likes, avg comments, etc.
- Based on the historical data, figure 66 visualizes the prediction of the increase in audience or followers of our Instagram page.
- We analyzed two years of data we had from Instagram and checked that engagement per post was better than the slab set by Instagram. However, we see that the engagement per post could be increased when we upload one per day. Historically data shows that we did three posts per week and the avg engagement was 39, and when we did one post per day, the engagement was 39.2. (figure 67)
- We have also looked at the engagements timewise to come up with optimal time to post. Based on the historical data, lunchtime seems to be the peak for engagement.

Monday – Saturday 14:30- 15:00 is the best time and for Sundays 09:30-10:00. (Figure 68).

- It's important to keep track of what type of posts the users approve off; figure 69 shows that Images are the optimal type.
- We have also checked on the users who are our top commenters. As the number of comments, we got are way less, and they are starting to increase since this quarter. Figure 70 provides the list of users who commented and figure 71 provides the sample of comments.
- We used text analysis to check if there are any word clouds (frequent words which attract users). Figure 72 provides this information.

LinkedIn:

- With the limited amount of data provided by LinkedIn, we were able to get the basic information about the followers and were able to focus our content more toward the followers.
- Figure 83 shows the increase in traffic over the year in both desktop and mobile pages.
- Figures 84-89 provides the visualizations related to the different metrics related to engagement: Impressions, Likes, Comments, Shares, and Social Engagement percentage. As we can see, there is a raise, and a drop in between as most of the users do not indulge in LinkedIn during holiday seasons.
- Figure 90 and 91 shows the data related to the follower's gain. And figure 92- 97 show the demographics, job functionality, job level, industry, and employment status.
- Every platform has a distinct set of users or followers, and the needs differ. It is crucial to understand these gaps to tailor and target our content more specifically toward the users specific to that platform.

Measure and Quantify

Quantification is a way to have more meaningful discussions, less obscured by subjective language. Whereas, Measurement is about seeing more objectively what's happening in your

world. From the observation of previous phases, we quantified a few metrics which played a significant role in attaining our goals and measured the correlation with other attributes.

Testing the findings, benchmarks, and best practices: As mentioned created a to-do list based on best practices and findings from historical data specific for each platform and tested them over one month (Sep-Oct 2017). We followed the to-do list to check the credibility of the best practices and to see their impact on the engagement, retention of users, and improvement in the number of followers.

Instagram:

- To compare the improvement, we have analyzed the data from the test month, including the previous two months. Figure 73 gives an overview of the three months report.
- In figure 74, we see the visualization of engagement breakdown (likes and comments) based on the type of the post (photo or video). The engagement per photo is 39.5 (likes plus comments), which is a little above our previous best record.
- To better understand the engagement rates per post and its comparison with the existing benchmark, we used the benchmark as a scale and created a new metric called a brand average. And in figures 75-77 we presented few posts and their engagements in compared to the brand average.
- Understanding our users is one of the goals of this project, so we have used the comments data and analyzed them to check who our active commenter was and what were the frequently used words or hashtags. (Figure 78&79).
- Based on the historical data analysis, we know that Tuesdays and Saturdays are when most of our users are online (Figure 31). We tried to check if we get most of the responses during the same days. In figure 80, we can see that most of the comments we got were on Thursday followed by Friday and the top hours for engagement was 11 AM.
- To check if visually appealing photos attract more engagement, we have analyzed the data related to the filters used. Figure 81 suggests that the content and message behind the image is more important than visual effects.

- Figure 82 is a breakdown of the engagement we got location-wise, which helps in targeting the audience more in the future.

Facebook:

- Facebook provides many metrics, and we have selected few metrics which align with our goal of the project like Fans or followers (new followers and lost fans), Engagement (impressions, likes, shares, comments, reactions, and interaction rate). Figures 98 and 99 provide the stats of these metrics for Aug-Oct 2017.
- Figures 100, 101, and 104 provide the visualization on the Fan growth and lost fans. As we can see the number of fans lost is way less compared to previous months, which are skewed as we tend to lose fans once the semester ends due to graduation or other reasons?
- Figure 102 gives an idea of the breakdown of engagement we had for the month of Aug-Oct. Figure 103 is used to assess our improvement, and we can see that the interaction rate improved to 1.2236%, which is a good range as Facebook suggests the optimal range to be 1-2%.
- Awareness is the metric used to check if our existing users think of us in their posts (mentions) and it is collaborated with “shares” to check how much new traffic are we getting. Figure 105 gives a breakdown on both mentions and shares related to COB page.
- We need to be vigilant in deciding optimal posts to boost, and figure 106 gives the stats on impression (paid, organic, and viral). Here Viral impressions are calculated based on the views we got with the first few hours of posting.
- Clicks count is also a way to check our reach, engagement, and awareness. Figure 107 shows how many clicks we got for photos, videos, and links. Figure 108 shows that we have much interaction on links and photos compared to videos, status, and MISC.
- Interaction Rate is a prime metric which can be used in many forms, and one of it is shown in figure 109 to decide which days of the week we have a good interaction.
- We have concentrated much of our resources on the content we post as it is the drives the increment in new fans and engagement from existing fans. We have interlinked few metrics and came up with few special metrics which add meaning

to our requirements like Fan penetration, Viral amplification, CTR Average, and Spam source. (Figure 110)

- Figures 111- 114 show the tables of the content we posted and their respective metric measurement. It is evident that we have few posts with good fan penetration and few posts with good viral amplification ETC. Ideally, we look for content which has a good amount of fan penetration, viral amplification, and CTR avg with less spamming.
- Fan penetration is the reach calculated, just considering fans. Viral amplification is the reach and engagement we get on posts with the first few hours of the post. CTR avg is the average number of clicks on the post. Spam source is to check which of the posts the fans are unfollowing or hiding.
- After analyzing all the data, the correlation between the metric and our performance, the following metrics seems to be the key to attain the goals of the project: Fan Change Rate, Own Posts, Interaction Rate, Interaction Tools. Figure 115 shows their effect in the increase of our fans. These metrics are specific to the Facebook platform.
- We leverage our existing fans to drive new traffic to the page, and it's crucial to keep track of our key influencers. Figures 116-119 show the tabulated data related to our influencers and their contributions.

Twitter:

- Twitter has its own set of metrics out of which we used the metrics: Own tweets, Retweeted tweets, Replies to users, Retweets on Own tweets, Likes on Own tweets, and Mentions. (Figure 120).
- Figures 121-125 tabulate the tweets and shows which of those are our tweets or retweeted tweets, number of likes, and number of comments. Using this information, we can see the categories we decided on primary test have succeeded in attaining the benchmark or not.
- From our primary research, we have decided to use famous hashtags and unique hashtags to drive new traffics to our page and create a brand value of our own.

Figures 126-128 tabulate all the hashtags we used during the test period and their respective metrics.

- Figures 129 and 130 shows the number of tweets we posted week wise. We have visualized this as we wanted to increase the number of tweets tweeted.
- Combining the results of the primary analysis and test analysis, we see that for twitter: Own tweets, Retweets of our tweets by fans and Mentions play a vital role in achieving our goal.

CHAPTER 7 – CHALLENGES

The blueprint of the project should be dynamic and should be assessed & adjusted for successful completion. The planning of the project should not be restricted just for scheduling and meeting deadline; the fundamentals should be defined clearly:

- What is the problem/goal?
- Who are all involved?
- How do we attain the goal?
- Where to start?

If the fundamentals are defined precisely, then the means of attaining them can be altered, and it has to be altered to keep up with the dynamic and volatile nature of the Social media world. Social media is a trend which is spreading beyond traditional newsrooms or customer service channels. Lives of people are moving towards the digital world more and more every day, and the dynamics of the market also change like the human mind. We have to keep up with these changes and modify our plans frequently to reach the primary goal.

Few of such challenges that we faced during this project are:

- **Facebook algorithm:** Facebook keeps on updating its algorithm to make sure the users are engaged in their platform. In the past, when a user logs in to his page, the hundreds of updates waiting to be populated were presented in chronological order. However, later, they started using the stack ranking algorithm to present the new feeds that interests the user, and this algorithm are modified at least twice every year. During our project, a few modifications were done, and we had to update our best practices.
- One example of the modification included demoting engagement baiting techniques like vote baiting, comments baiting, tag baiting, etc. Many of the social media pages assess their campaigns based on the engagement rate (likes, comments, shares, reactions) and to increase the engagement good practices should be followed but not baiting techniques. Whenever the page admins or owners get smart and find new techniques to improve their engagement or number of fans, Facebook keeps a check if the technique is genuine or not and improves its algorithm accordingly.



Figure 9 Facebook algorithm Challenge

- **Career fair week:** We created a to-do list based on best practices and findings from historical data specific to each platform and tested them over one month (Sep-Oct). We followed the to-do list to check the credibility of the best practices and to see their impact on the engagement, retention of users, and improvement in the number of followers. During this testing phase, our results were a bit skewed due to the overlapping of the Career fair, and we had to remove the one-week data to make sure we calculate the genuine credibility. Also, because of events like the career fair and business week, the to-do list tasks were not followed by the content writer, and we worked around that data.
- **Seasonality:** We started the project during summer and had to wait for the semester to start to test our findings as the College of business has seasonality effect based on many factors like holidays, new student's enrollment, students graduating, mid-sem holidays, etc. Our plan and benchmarks were modified multiple time after identifying these patterns in the time series. We decomposed the time series into multiple series to make sure we address all the patterns.

CHAPTER 8 - CONCLUSION AND FUTURE RESEARCH

Manage and Execute Plan

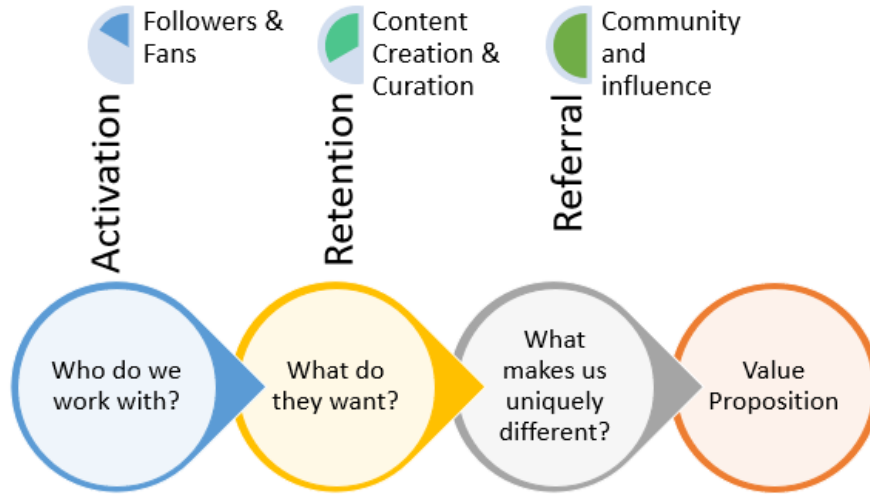


Figure 10 Manage and Execute plan

Insights from the descriptive analysis of the data: We analyzed the data from different platforms and could discover a range of correlations and insights. Below mentioned are few self-defined metrics which align with the project goals:

1. Awareness and reputation: Calculated using the measure “Mentions” divided by industry conversations and sentiment analysis.
2. Social reach across all platforms: engagement, likes, shares, retweets ETC.
3. Effectiveness of Social campaigns: an increase in fans or followers after a campaign.
4. Content analysis: Analyze content metrics to see what works.

Reports for individual platforms: Below figures depict the key findings and best practices for three different social media platforms.

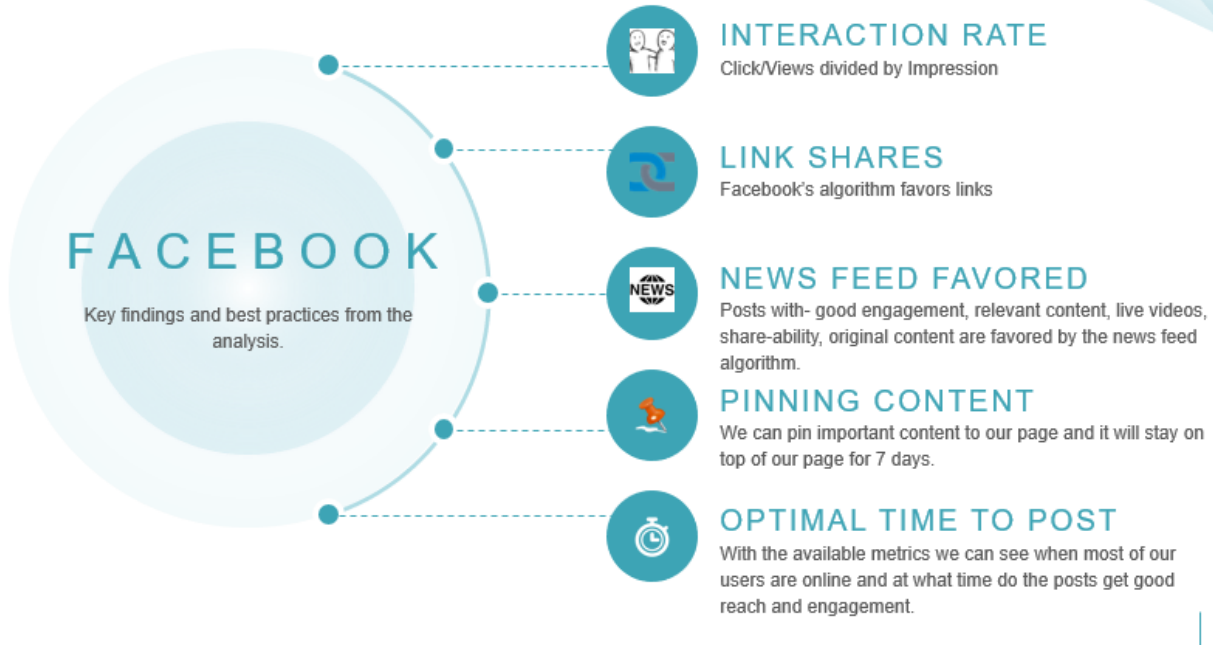


Figure 11 Facebook Key Findings

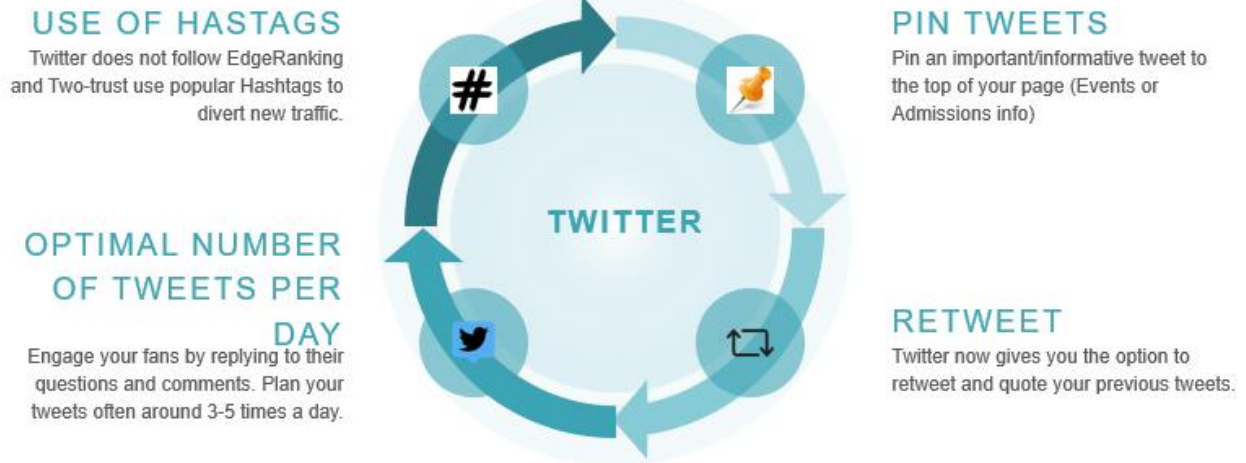


Figure 12 Twitter Key Findings



Figure 13 Instagram Key Findings

Guidance document: This document contains the best practices or benchmarks, which are to be followed practically by the content writer or social media admin. It has the steps to be followed or the methods, below mentioned are a few key points from the guidance document:

1. Step to view or create reports/dashboards for different platforms.
2. Guidelines like best time or best day to post based on the analysis of metrics which capture when most of our followers or online and metrics which capture the time when our post got the highest interaction and engagement.
3. Types of content or genre of content to be posted, based on content analysis.
4. Benchmarks on when to boost (pay for ads) a post or how to choose which post to boost.
5. Priority is given to different types of by Facebook and Twitter algorithm.
6. The optimal number of post to be posted per day.
7. The dos and don'ts for different platforms.

Audience profile: Profiling of audience/followers is important to determine the ideal target. One

of the goals of the project to identify the major audience and their interests to make sure of their retention. Followers profiling can help in the determination of marketing strategies and designing successful social campaigns. We can also build a fan network and check which of the fans bring high volumes of traffic to our page. Even the demographics of the fans can help us determine the time or content to be posted. Universities are continuously trying to understand their audiences. To be successful, universities should define their social media goals and learn their audience through the data. Key to successful social media measurement is asking the right questions.

Competitor benchmarks: In the social media world, every University has its own set of followers with their requirements from the Social media pages. And if we try to replicate exactly what our competitors do or follow, it may or may not result in the same for us. However, it is important to keep an eye on what the competitors are doing and how they are doing it. The purpose is to gain knowledge and insights to work toward the evolved digital marketing strategy. After the testing phase, we made a list of things that can go wrong when it comes to competitors benchmarking:

1. We must be clear about what the competitor benchmarks are and how they are different from our page benchmarks.
2. Benching should be an ongoing process and should be done for every month or quarterly.
3. We must identify indirect competitors as well, in our case, ISU College of Engineering and Iowa State Enrollment services.
4. Making sure that the right weight is given to measures when creating a table comparing the competitor's metrics with ours.

Best practices from the analysis and findings:

Facebook:

- There are many factors to be considered to decide on the best time or best day to post content. Factors considered are the time when most of our fans are online and based on the historical data, we can check at what time do our posts get more interaction (comments, likes, and reshares). We see that most of the post got good reach and engagement during

12 PM- 3 PM. However, 6 PM-9 PM is the time when most of our Fans are online. Similarly, we can see that Thursdays we have good reach and engagement followed by Saturday. Posting on these times and days would affect the reach and engagement.

- Interaction Rate is also a prime metric which can be used in many forms, and one of them is to decide which are the days of the week we have a good interaction. Saturday has the highest interaction rate, followed by Friday and Monday.
- Use link-shares. Facebook's focus on making the feed a better news source for users means their algorithm favors links.
- Facebook news feed favor: Posts receiving a lot of engagement, Posts most relevant to each user, Trending conversations, Facebook Live, Share-ability, Informative posts, Entertainment posts, and Videos posted natively (Original content).
- While boosting the post, please follow the benchmarks of Organic Reach 1500 and Engagement 100.
- Pinning content on the page helps posts get noticed and stay noticed. It will keep your post at the top of your page for up to 7 days making it the first post fans will see.
- The optimal number of post per day is *Three*.
- While posting photo albums, please upload photo up to 10-15 maximum. Also, try to tag as many people as possible. Albums with at least four photos tagging people (repetition of the same person in the tags is also good) would get a good set of audience.
- Upload post which falls under the following category: Personal Life of Professors, Events, Famous Personalities, Alumni, Student Spotlights, Professor Spotlights, Candid pictures, Career Fair, Clubs, Giveaways, Graduation, Orientation, Prospectus, Sports, Staff spotlights.

- Interaction through comments on “on-page posts and on shared posts” is recommended.
- Prioritizing the types of content and fan interactions, the current algorithm favors will help increase feed impressions.
- Use of features like Facebook Live, Native video content, Using link-shares, Facebook Reactions, Posting news, Tagging other relevant pages, Creating event pages and Gif Sharing.
- Include new/recent release info in a cover photo (like Prospectus or events poster).
- Tag other pages mentioned in your posts. If the content is relevant to fans of the other pages, Facebook will show the post in those fan’s feeds.
- Share important news across multiple platforms. Some people like Twitter, while some are always checking Instagram. Having info on every platform extends your reach and keeps you from missing fans.
- Join or create conversations by tracking trending topics and using relevant hashtags.
- Interact with fans as much as possible. Use the “reply” option to answer fans within 24 hours. Ignoring comments can create possible anger or disappointment.
- Use Facebook’s new feature for cross-posting video to reach new, relevant audiences. This makes it possible to use the same video in a new post and see aggregated insights for posts across all pages.
- Share images that are HD and use text. This has been shown to grab Facebook user’s attention and encourage engagement. Use the short link format when premiering with media partners.

- Create Facebook event pages for major events. Fans will be alerted through notification when there is an event near them and a reminder when the date gets closer. Followers can also see which of their friends are going as well as invite friends that may be interested.
- Bring your fans into an interactive full-screen mobile experience through a Facebook Canvas. Create your canvas through Publishing Tools. Add photos, videos, links and information for your fans to discover while they swipe up, down, left and right through the canvas

Twitter:

- Mix up your feeds with an array of tweets. Engage your fans by replying to their questions and comments. Plan your tweets often around 3-5 times a day.
- Since Twitter does not follow EdgeRanking and Two-trust use popular Hashtags to divert new traffic. Use relevant hashtags in posts which allows users tracking a hashtag to see your posts even if they do not follow you.
- Pin an important/informative tweet to the top of your page (Events or Admissions info)
- Twitter now gives you the option to retweet and quote your previous tweets. Keep in mind you can only retweet each tweet once keeping user's newsfeeds from being full of tweets they have already seen. Do this to reflect on a previous tweet you think may have gone unnoticed or a tweet that is relevant again.
- 4-5 Tweets per days seems like an optimal number.
- The content of the tweets: please follow the same type of categories, as mentioned above for Facebook. Keep tweets short and sweet.
- Use Twitter to drive traffic to our website (most suitable during events or admissions).

- Use the Twitter search option and keywords like “Iowa State Gerdin” or “Gerdin building” to find tweets relevant which you can reshare or reply to increase interaction.
- New and Key Features: iOS and web now have muted auto-play for native videos, GIFs, and Vines. Clicking/tapping causes full-screen video with sound to pop up. Videos now appear larger in your timeline.
- Use the Go live via Periscope option by composing a tweet and pressing the “live.” Take fans on a tour of the college or an event.
- Polls: iOS, Android, and desktop now could create two-choice polls. Voting will be anonymous and remains open for 24 hours. Just select the poll option within the compose box to get the public’s opinion on anything.
- The Explore tab showcases the top happening, current stories on Twitter. This allows users to discover popular and relevant news in an instant.
- Twitter now gives you the ability to add stickers to your photos. Add these stickers to make your photo pop in fan feeds.

Instagram:

- We looked at the engagements timewise to come up with optimal time to post. Based on the historical data, lunchtime seems to be the peak for engagement. Monday – Saturday 14:30-15:00 is the best time and for Sundays 09:30-10:00.
- Tagging accounts on photos will add the photo to their tagged section, which is a fantastic way for expanding the reach? Tagging accounts in our captions, and comments will just notify the person we tagged. This should always be done when responding to comments.

- We know that Instagram can be used to post promotional videos and photos; this content doesn't always make for the best fan experience. Aim for at least 70% authentic, non-promotional photo and video posts. Fans get excited by candid insight into the lives of their favorite professors.
- Be sure to take well-composed, well-lit photos that catch the user's attention. Consider adding a theme to your photos through filter choice and color to catch the user's eye and distinguish the posts in their feed.
- It's best practice to upload video and photos natively to each social platform. Even though at times, sharing content from your Instagram to Tumblr and Facebook can be an excellent way to cross promote the platforms. We know that both services have great Instagram integrations, and by sharing may let your fans know where to find you.
- Posts using features like hashtags and location tagging tend to over-index in engagement. Hashtags help viewers from different communities find the content they would be interested in. Tagging the location on posts adds them to the feed for that spot, which helps in boosting discovery and reach.

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Description of metrics used by Twitter:

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APPENDIX

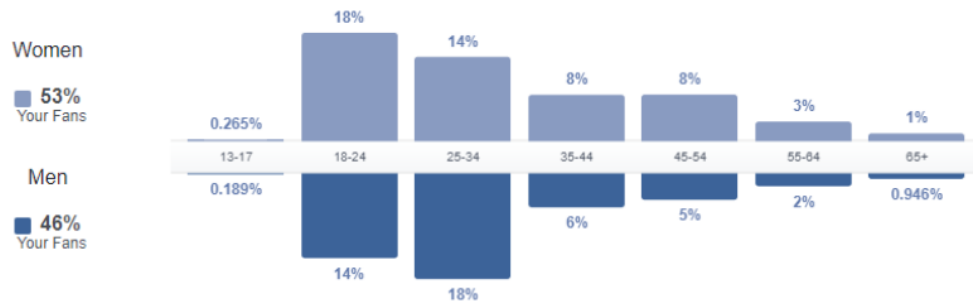


Figure 1

Country	Your Fans	City	Your Fans	Language	Your Fans
United States of America	2,239	Ames, IA	424	English (US)	2,410
India	89	Des Moines, IA	145	English (UK)	124
Malaysia	24	Ankeny, IA	87	Spanish	14
Bangladesh	18	West Des Moines, IA	86	Arabic	11
Egypt	17	Minneapolis, MN	54	French (France)	10
Pakistan	16	Chicago, IL	39	Simplified Chinese (Chi...)	9
South Korea	13	Cedar Rapids, IA	34	Portuguese (Brazil)	8
United Kingdom	13	Johnston, IA	23	Indonesian	7
Indonesia	12	Urbandale, IA	23	Italian	7
China	10	Waukee, IA	19	Korean	6

Figure 2

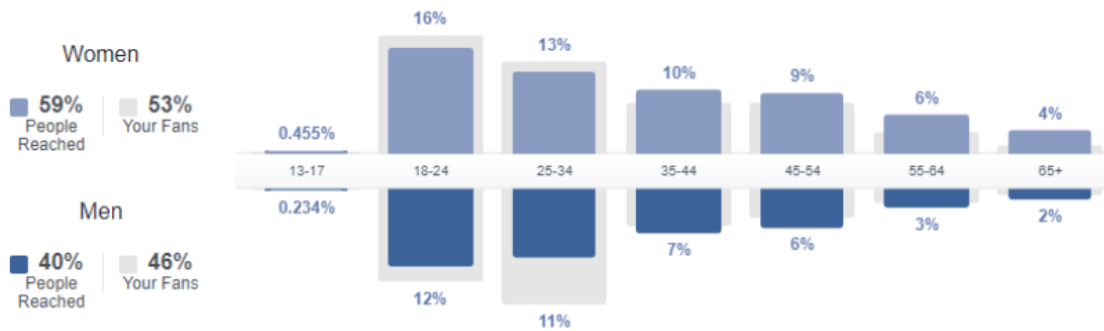


Figure 3

Country	People Reached	City	People Reached	Language	People Reached
United States of America	28,185	Ames, IA	2,881	English (US)	28,410
India	232	Des Moines, IA	1,860	English (UK)	560
Mexico	127	Ankeny, IA	969	Spanish	190
Canada	84	West Des Moines, IA	770	Korean	39
United Kingdom	64	Carroll, IA	506	French (France)	35
South Korea	48	Omaha, NE	482	Spanish (Spain)	28
Australia	44	Council Bluffs, IA	421	German	24
Nepal	43	Chicago, IL	363	Italian	23
Germany	34	Johnston, IA	301	Vietnamese	23
Vietnam	34	Minneapolis, MN	348	Traditional Chinese (Ta...	23

Figure 4

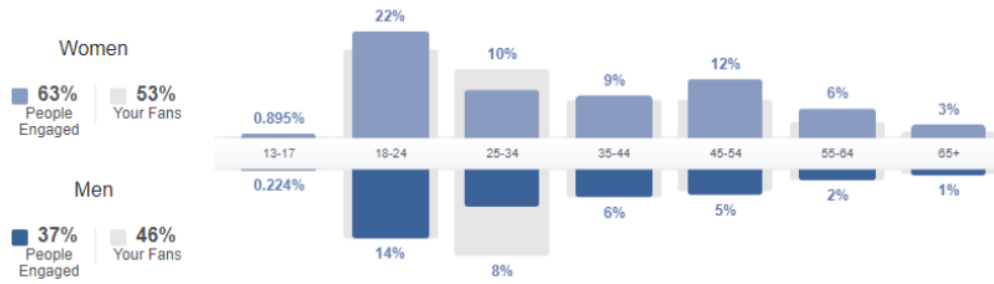


Figure 5

Country	People Engag...	City	People Engag...	Language	People Engag...
United States of America	873	Ames, IA	205	English (US)	872
India	6	Des Moines, IA	51	English (UK)	16
Italy	1	Ankeny, IA	39	Spanish	3
Finland	1	Council Bluffs, IA	37	French (France)	2
United Kingdom	1	West Des Moines, IA	31	Arabic	1
Gambia	1	Carroll, IA	29	Finnish	1
Israel	1	Johnston, IA	23	Simplified Chinese (Chi...	1
China	1	Omaha, NE	16	Traditional Chinese (Ta...	1
Dominican Republic	1	Waukee, IA	12		

Figure 6

Gender

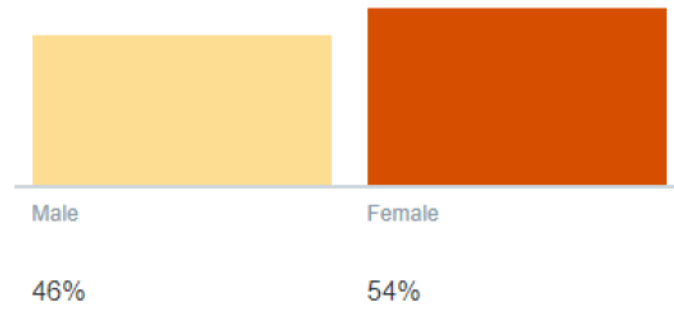


Figure 7

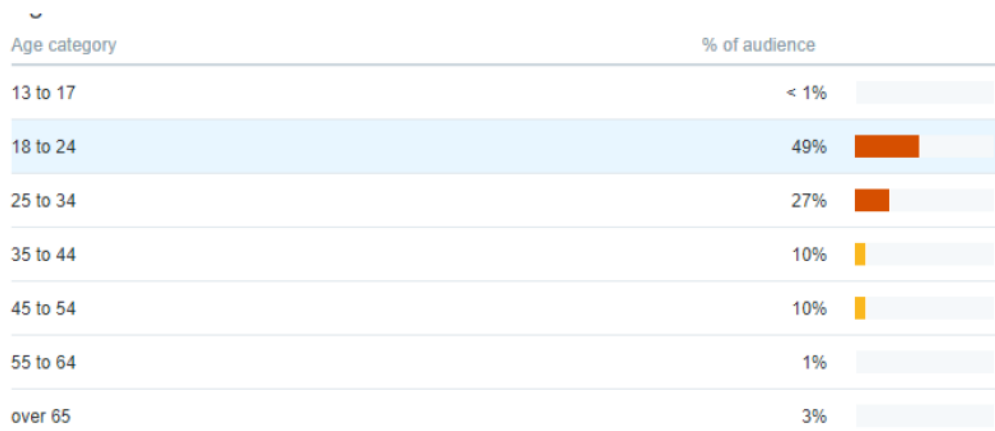


Figure 8

Region

State or region	% of audience
Iowa, US	50%
Minnesota, US	9%
Illinois, US	7%
Nebraska, US	3%
Texas, US	2%
Colorado, US	2%
California, US	2%
Wisconsin, US	2%
Georgia, US	2%
Florida, US	2%

Figure 9

Education (highest level completed)

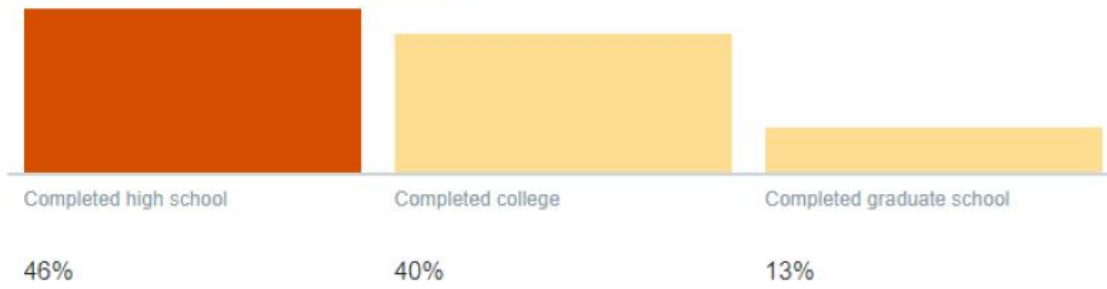


Figure 10

Interests

Interest name	% of audience
Business and news	63%
Comedy (Movies and television)	58%
Politics and current events	56%
Business news and general info	51%
Movie news and general info	49%
Music	47%
College basketball	41%
Business and finance	41%
Technology	40%
Tech news	38%

Figure 11

Political party affiliation

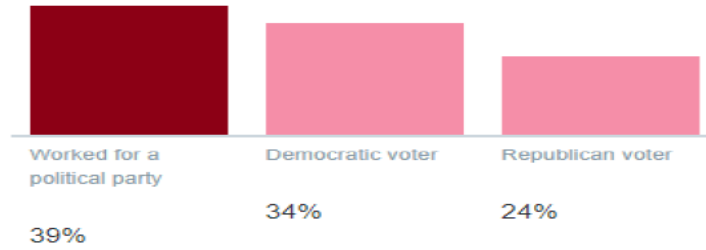


Figure 12

TV Genres

Genre name	% of audience
Sports	71%
Drama	40%
Movies	28%
Comedy	27%
Reality	26%
Children & Family	19%
Sci-fi	18%
Talk	17%
Sports Talk	14%
Game Show	11%

Figure 13

Gender

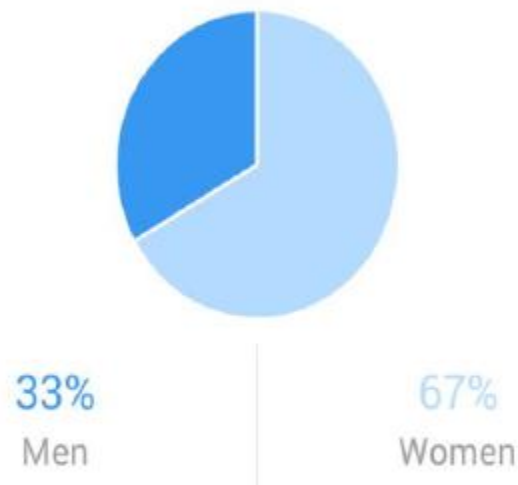


Figure 14

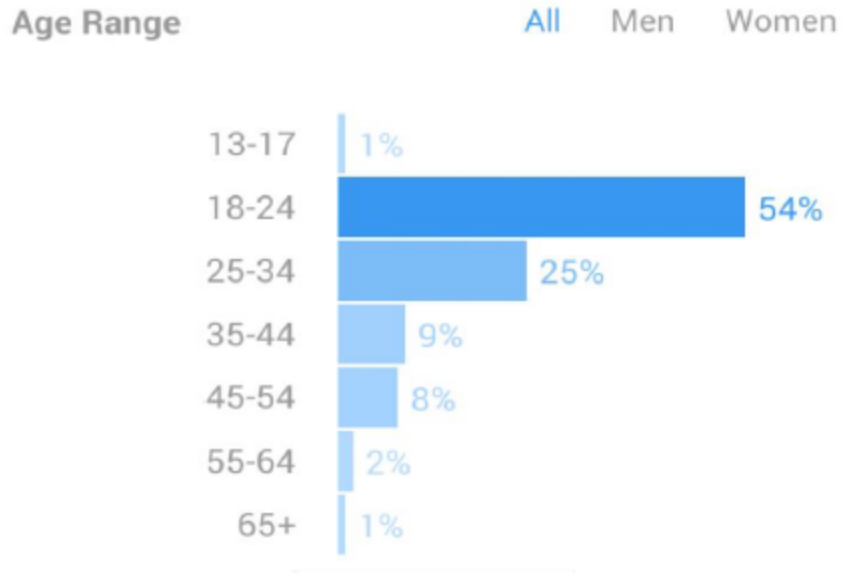


Figure 15

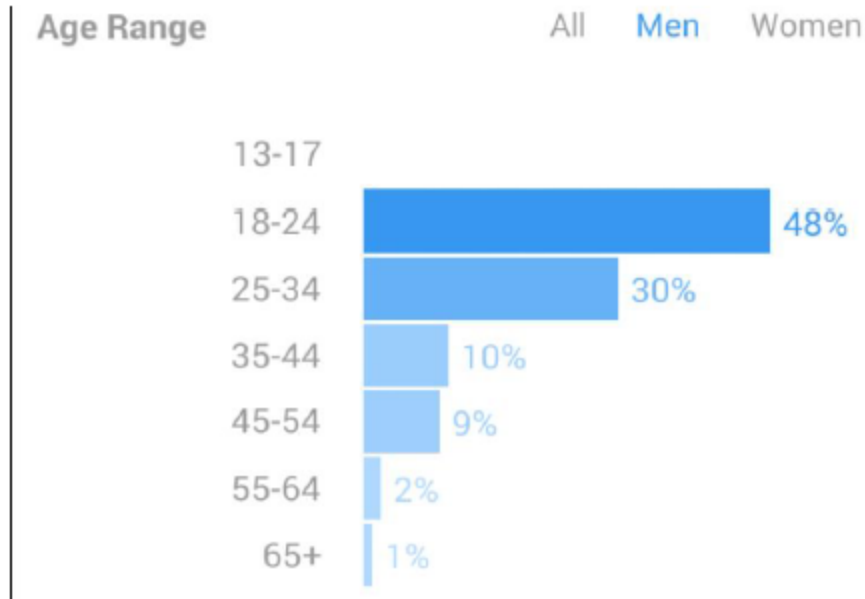


Figure 16

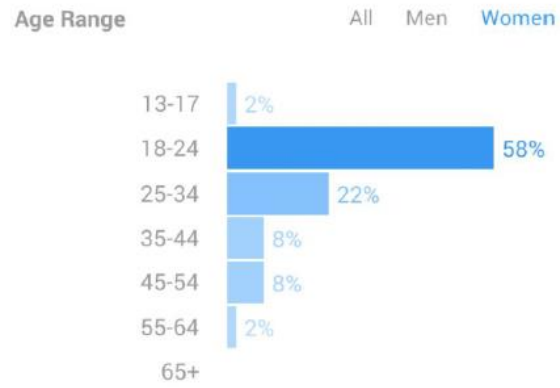


Figure 17

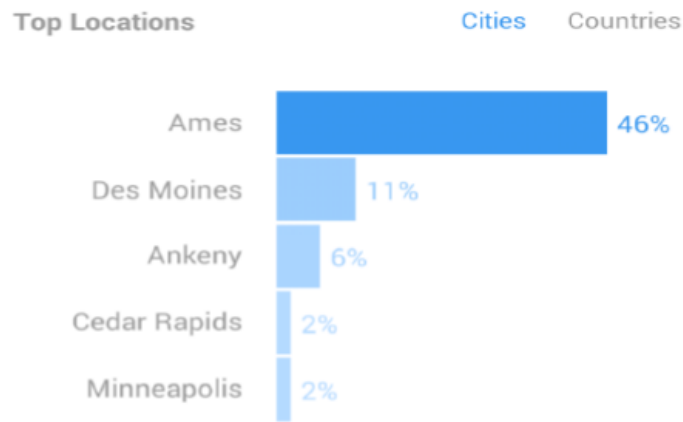


Figure 18

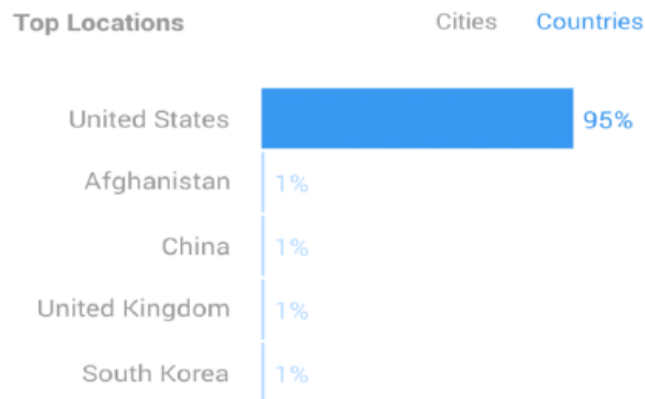


Figure 19

Visitor demographics ⓘ | Country ▾

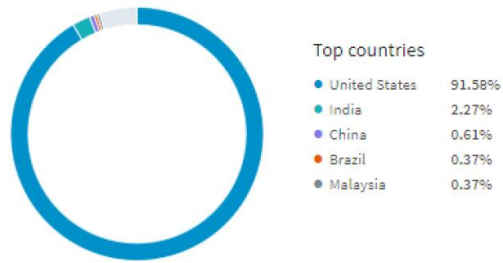


Figure 20

Visitor demographics ⓘ | Region ▾



Figure 21

Visitor demographics ⓘ | Seniority ▾



Figure 22

Visitor demographics ⓘ | Industry ▾



Figure 23

Visitor demographics ⓘ | Company Size ▾



Figure 24

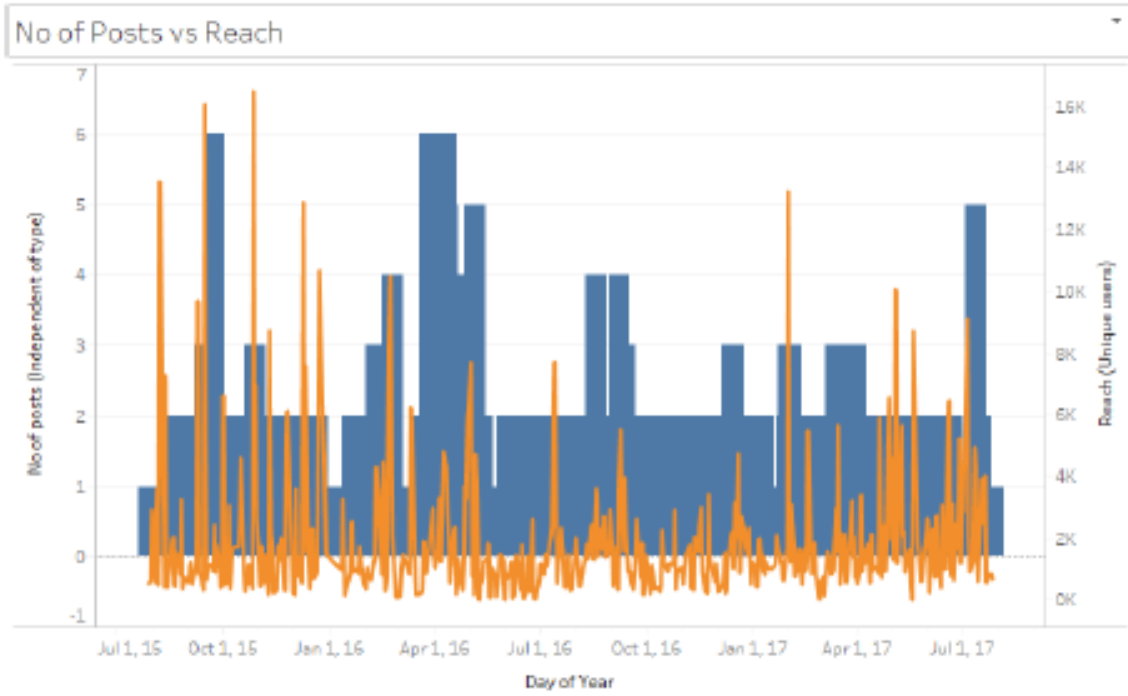


Figure 25

No of Posts VS Organic Reach (unique users)

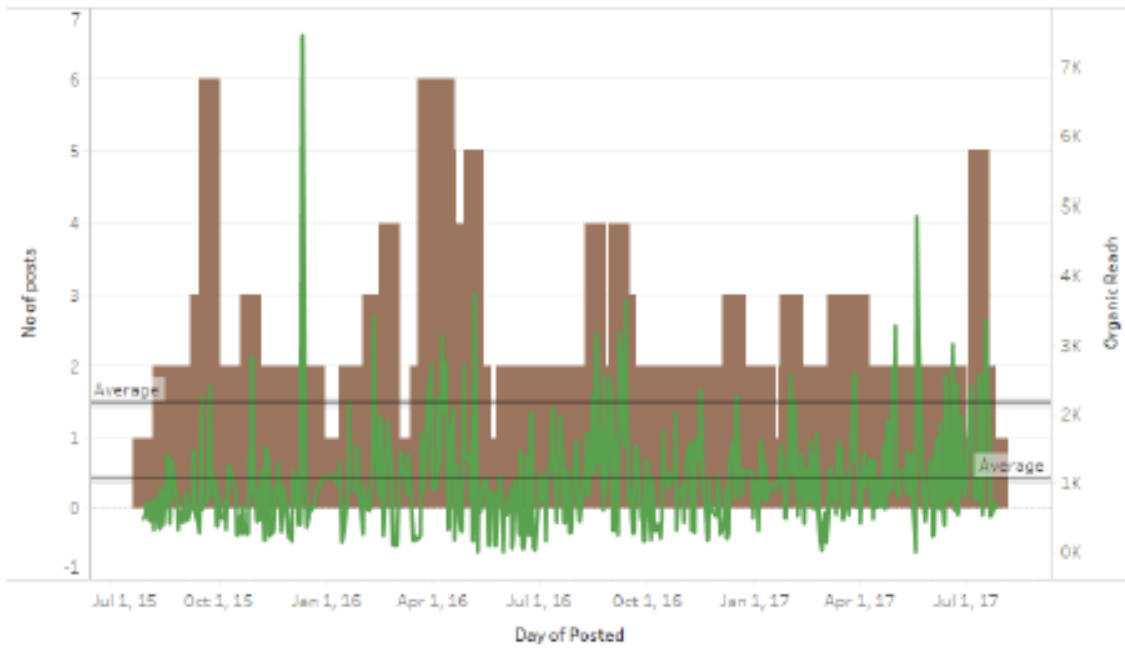


Figure 26

Best time to post

Best time to post based on previous posts' performance (reach and engagement).

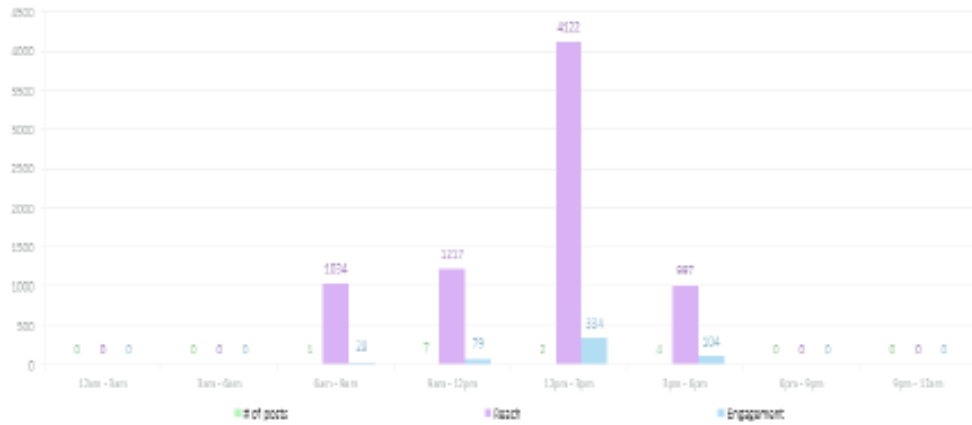


Figure 27

Best day to post

Best day to post based on previous posts' performance (reach and engagement).

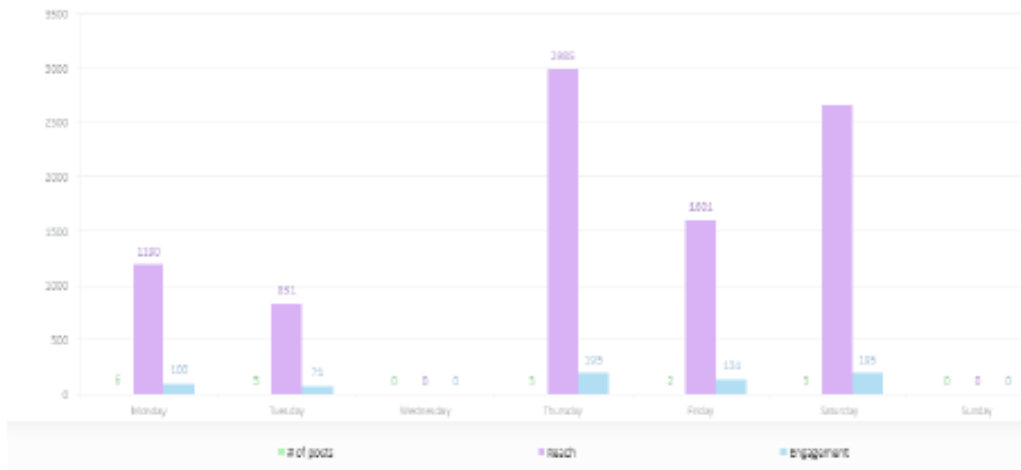


Figure 28

No of Tweets and Engagement

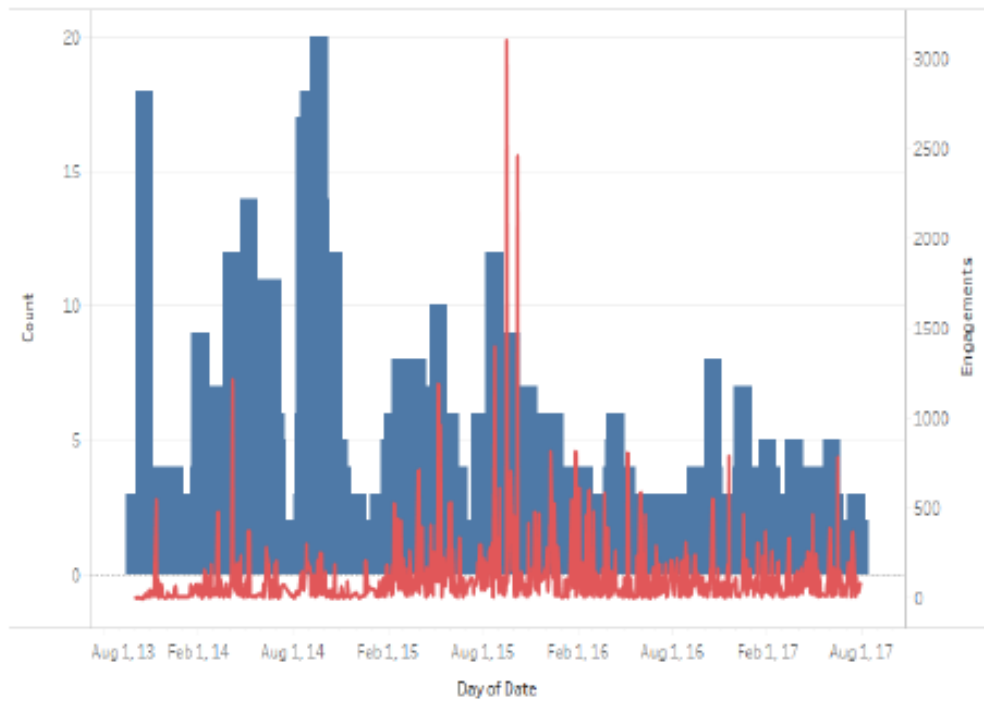


Figure 29

No of Tweets and Impressions

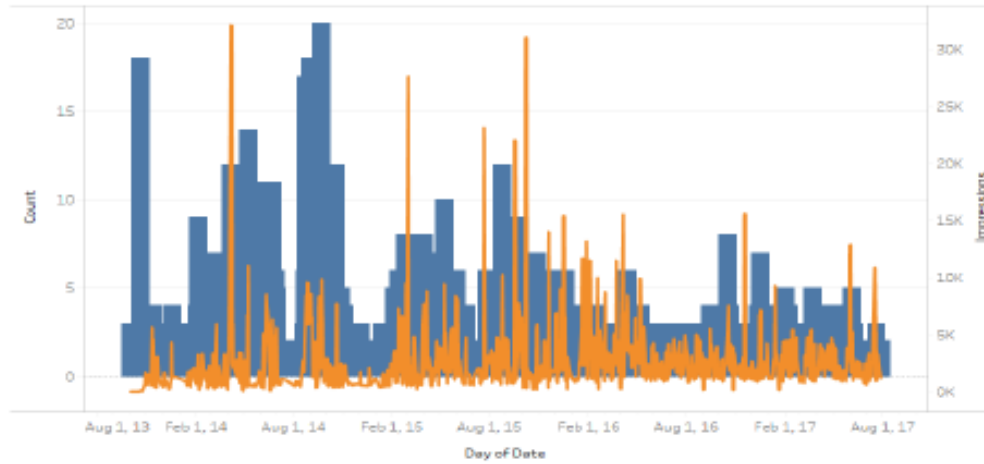


Figure 30

Followers

Hours

Days



Figure 31

Followers

Hours

Days

< Sundays >



Figure 32

< Mondays >

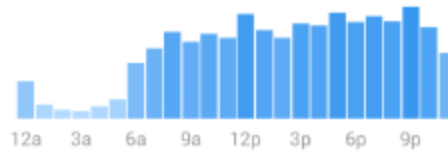


Figure 33

< Tuesdays >

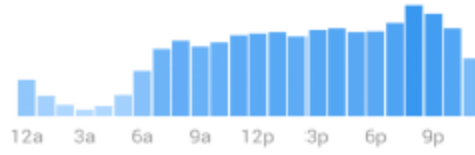


Figure 34

< Wednesdays >

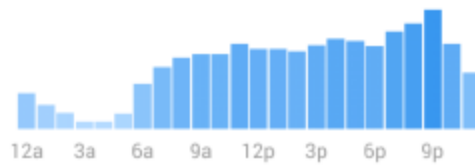


Figure 35

< Thursdays >

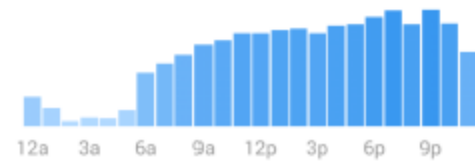


Figure 36

< Fridays >

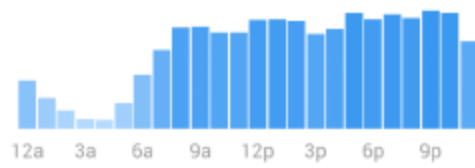


Figure 37



Figure 38

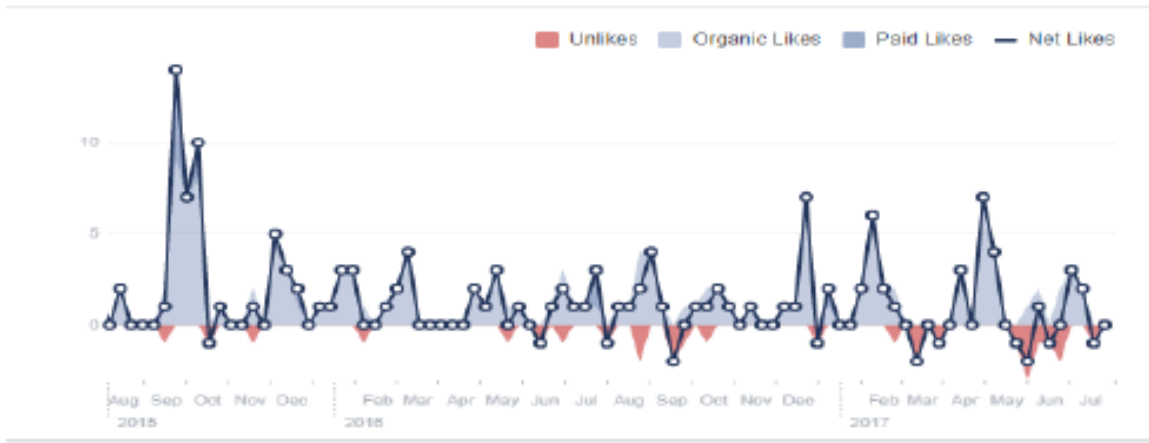


Figure 39

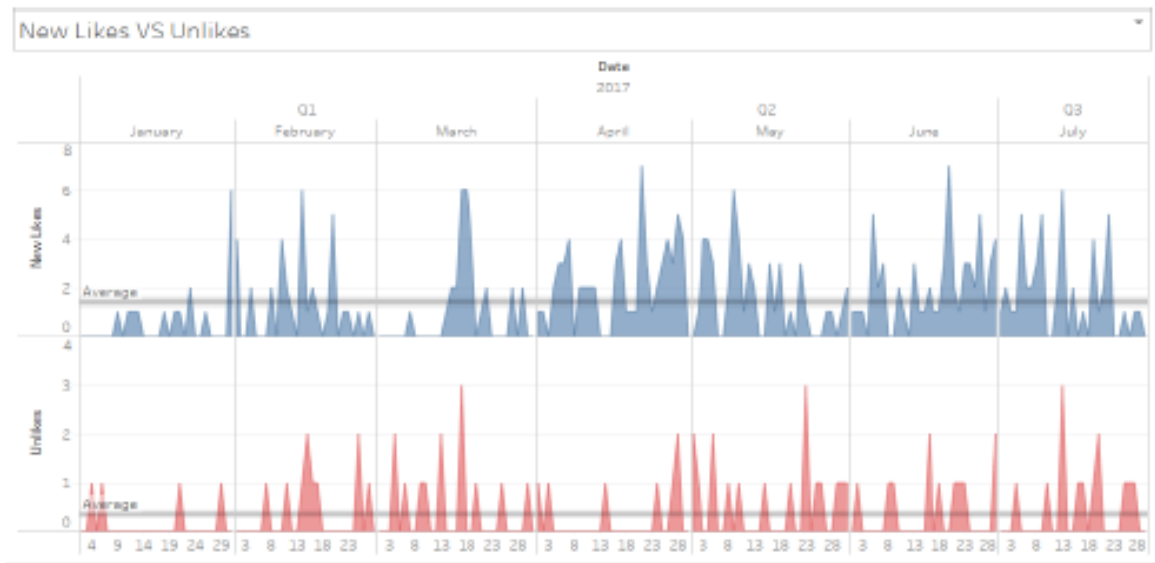


Figure 40

MONTH	Sum of New Likes	Sum of Unlikes
January	16	4
February	35	10
March	29	13
April	64	7
May	47	17
June	59	11
July	48	13
Total	298	75

Table 1

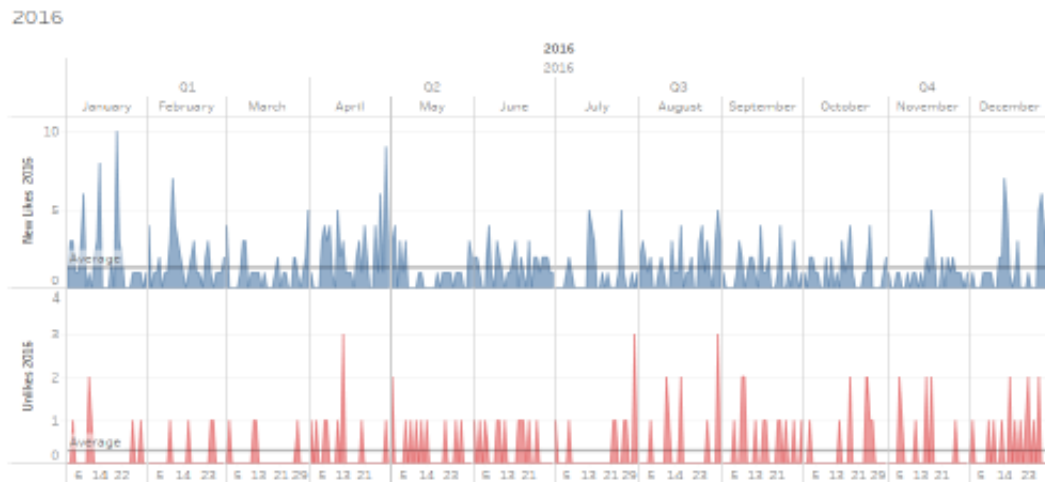


Figure 41

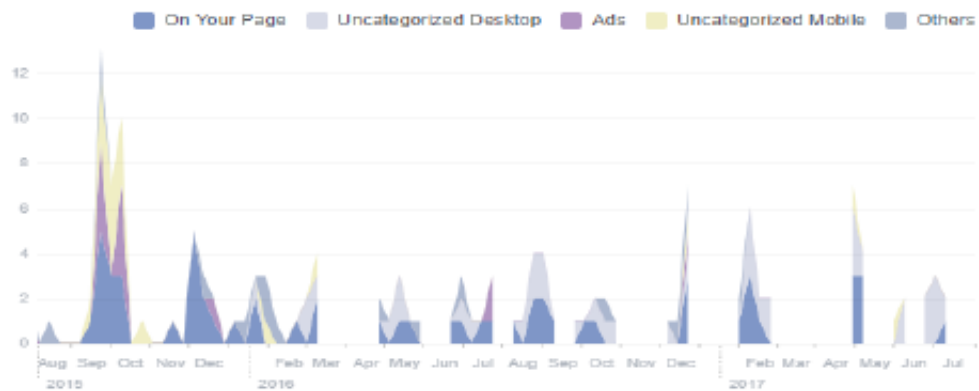


Figure 42



Figure 43



Figure 44



Figure 45



Figure 46



Figure 47

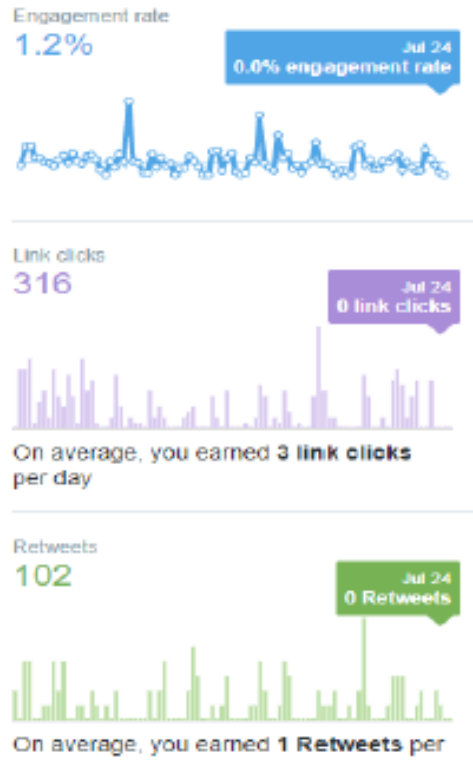


Figure 48



Figure 49

Table for Engagement and Impressions year wise:

	2013	2014	2015	2016	2017
Engagement Rate	12	17	36	14	10
Engagements	1,355	12,080	41,321	24,974	12,792
Impressions	44,110	426,034	630,848	702,994	329,619

Table 2

	Date				
	2013	2014	2015	2016	2017
Avg. Engagement Rate	0	0	0	0	0
Avg. Engagements	13	18	74	54	49
Avg. Impressions	432	631	1,127	1,518	1,253

Table 3

Quarterly report:

	2013	2014				2015				2016				2017		
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Engagemen.	12	3	4	7	2	7	8	14	7	4	3	4	3	4	5	1
Engagemen.	1,355	2,240	4,842	3,686	1,312	6,385	9,733	14,122	11,081	8,605	5,519	5,764	5,086	5,241	6,120	1,431
Impressions	44,110	65,952	154,553	145,976	59,553	131,236	142,137	183,133	174,342	208,266	205,819	147,973	140,936	158,707	137,224	33,688

Table 4

	Date															
	2013	2014				2015				2016				2017		
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Avg. Engag..	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg. Engag..	13	19	27	14	12	50	70	80	95	71	43	53	49	40	55	68
Avg. Impres..	432	564	863	539	551	1,025	1,023	1,041	1,490	1,707	1,595	1,358	1,368	1,221	1,225	1,604

Table 5

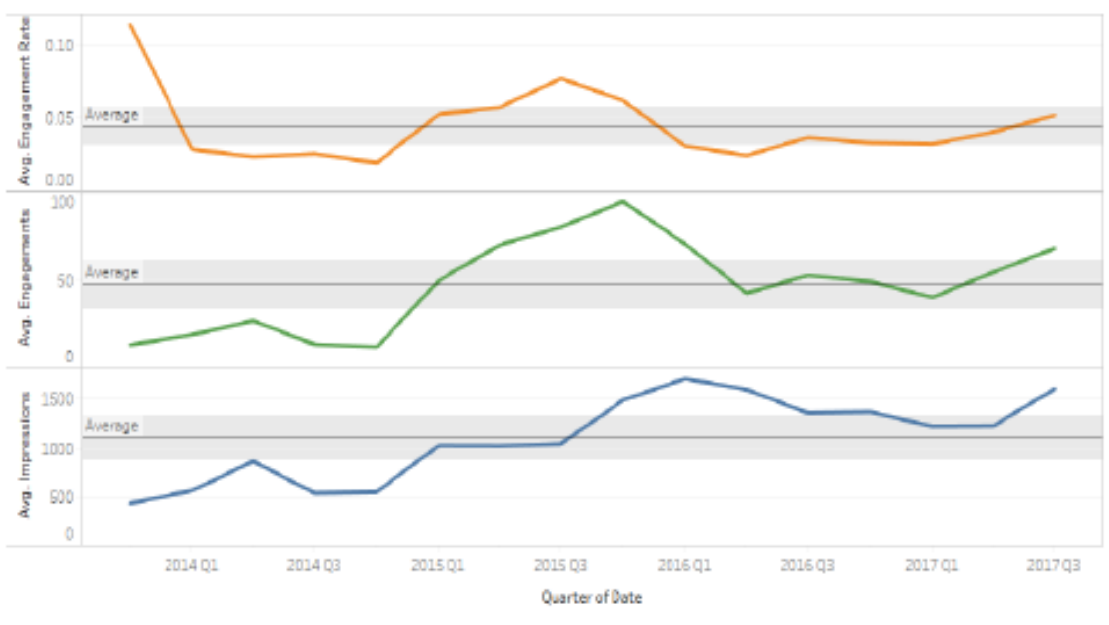


Figure 50

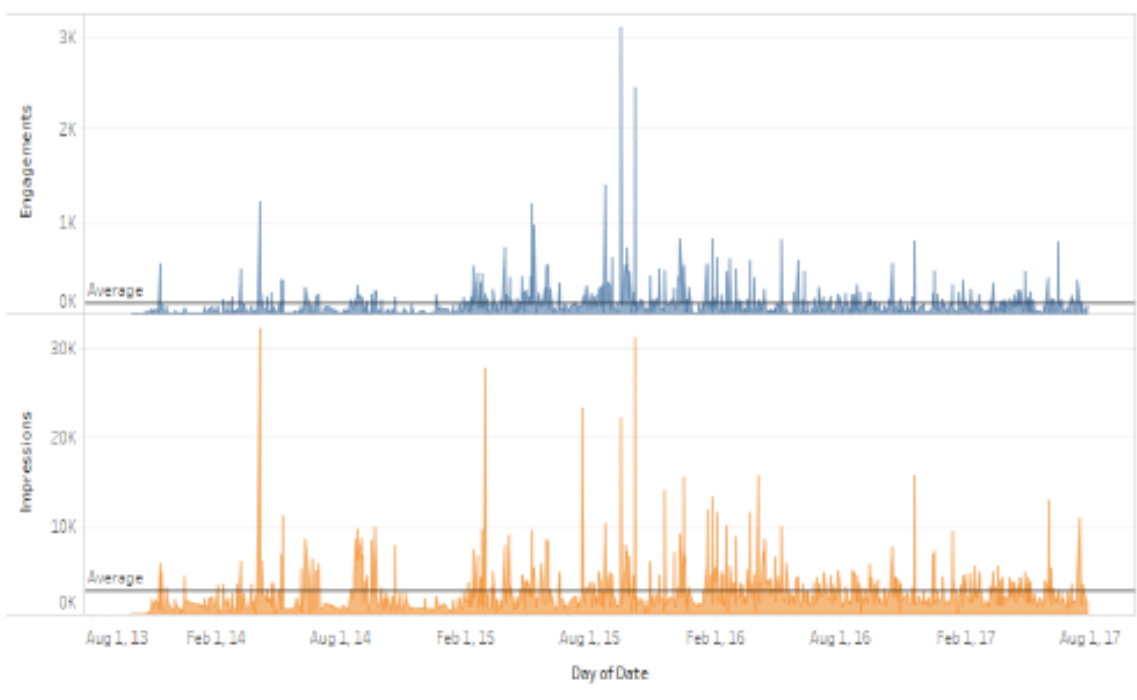


Figure 51

Showing All posted in the past 2 years sorted by Impressions



Figure 52



Figure 53



Figure 54



Figure 55

Impressions

The total number of times your post has been seen.

Reach

The number of unique accounts that have seen your post.

Engagement

The number of likes and comments on your post.

Saved

The number of unique accounts that saved your post.

Figure 56



Figure 57

Instagram Analysis report for 2 years (Aug 2015 – Sep 2017):



Figure 58

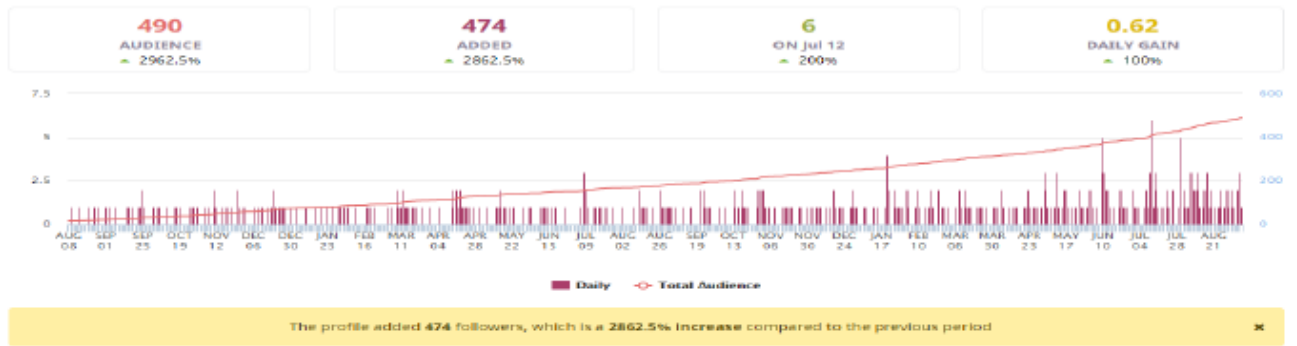


Figure 59

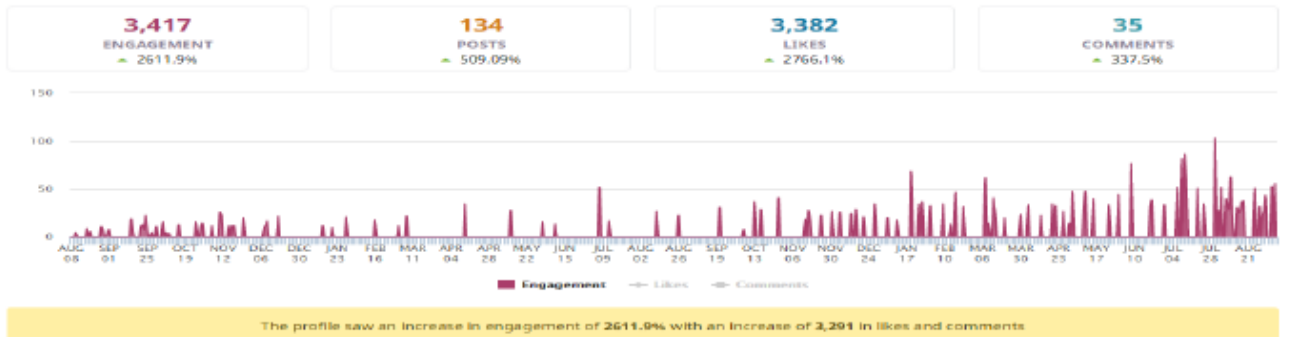


Figure 60

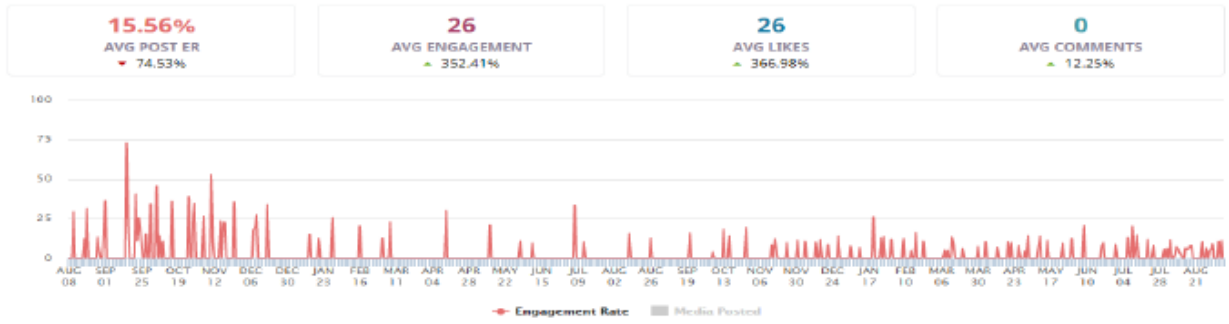


Figure 61

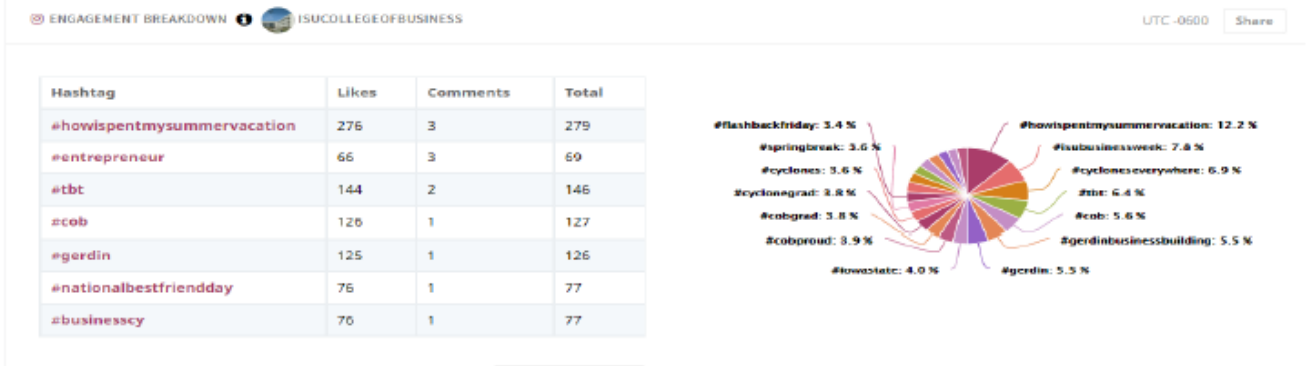


Figure 62

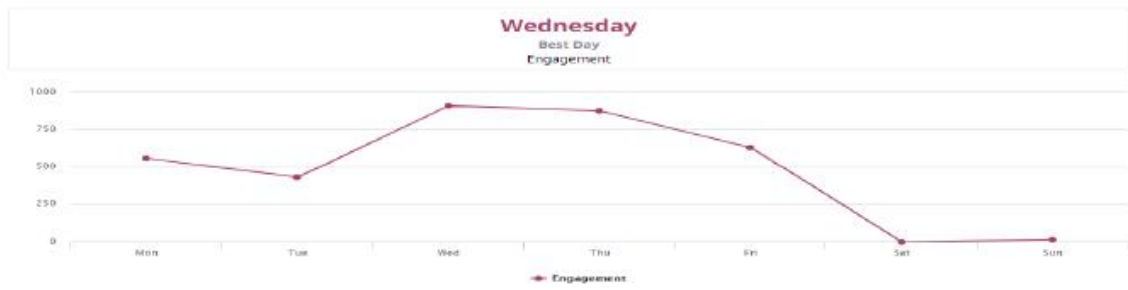


Figure 63

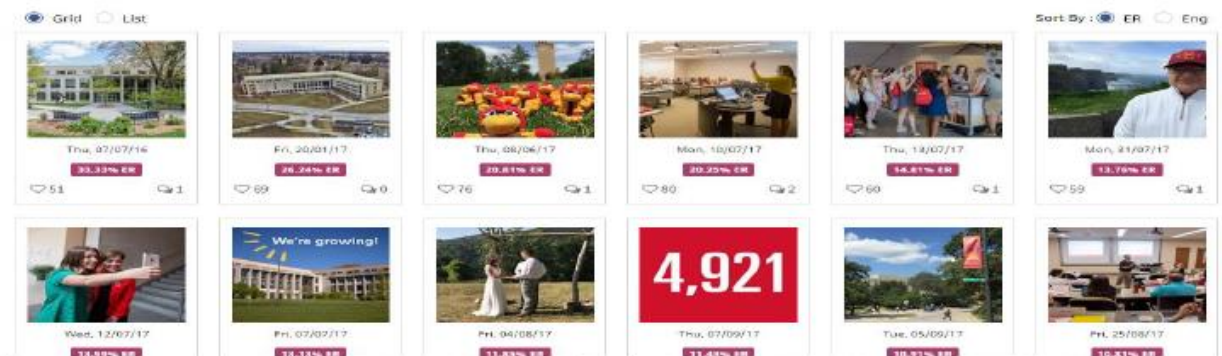


Figure 64

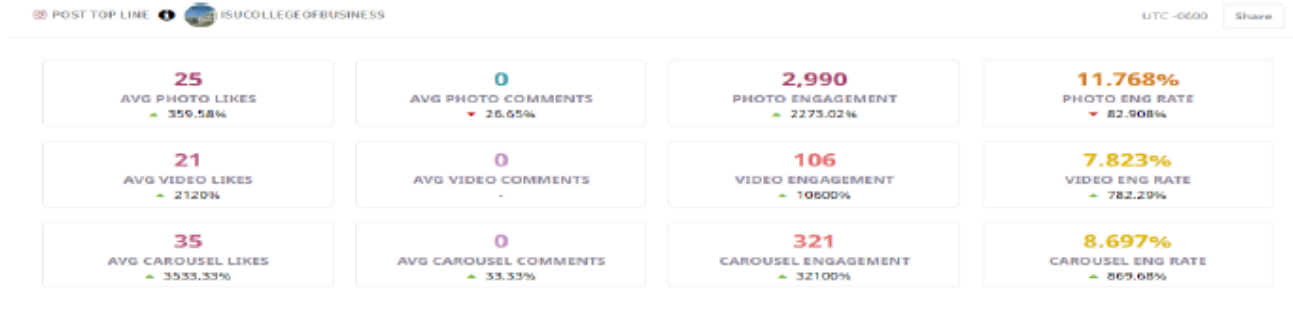


Figure 65

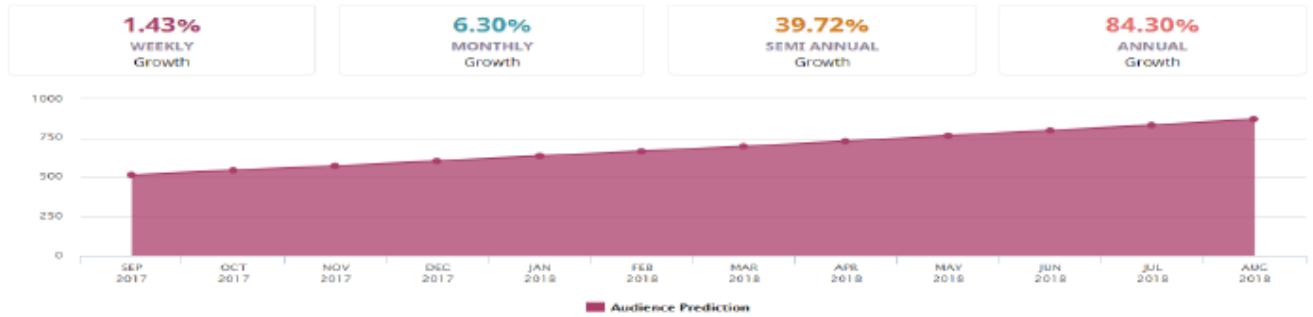


Figure 66



Figure 67

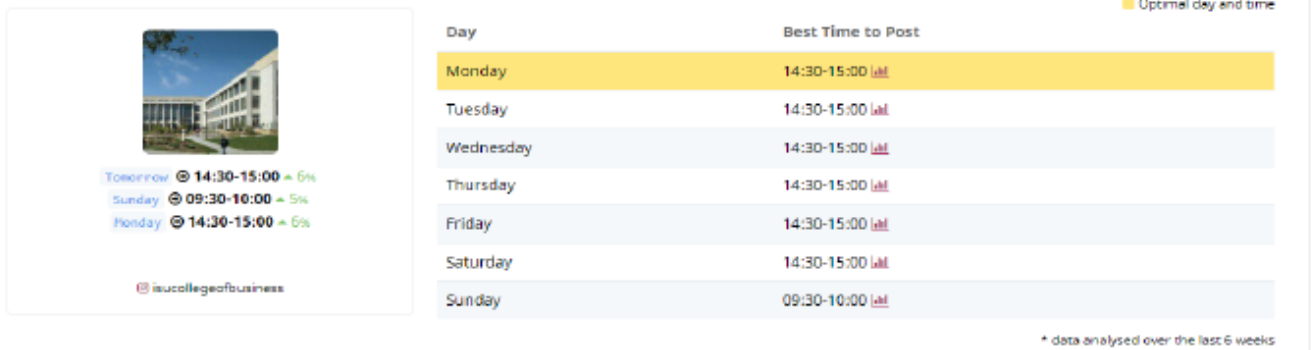


Figure 68



Figure 69

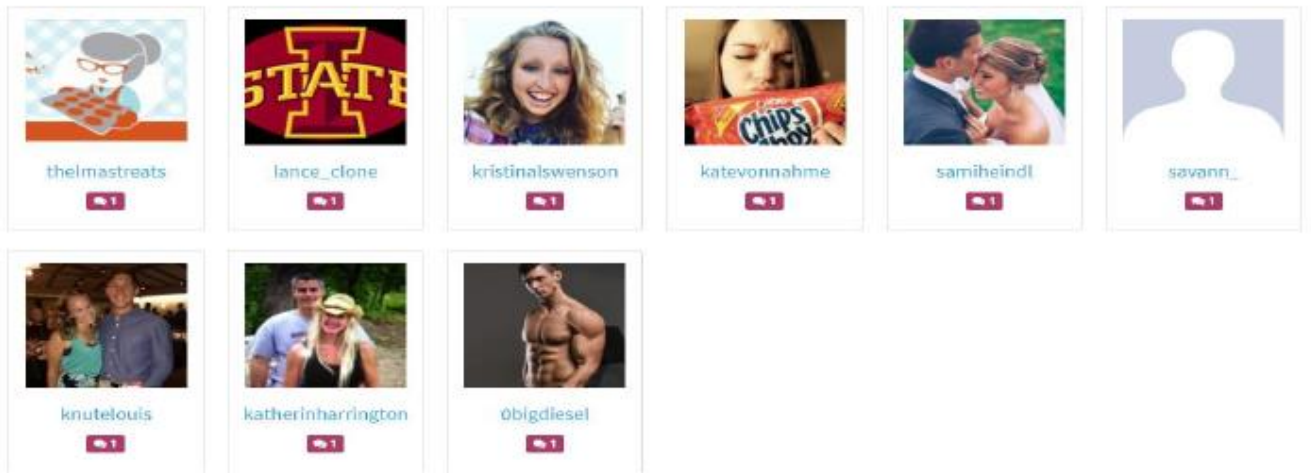


Figure 70

RESPONSE COMMENTS ISUCOLLEGEofBUSINESS UTC -0600 Share

Date	Username	Comment	Post
13/07/17	thelmastreats	👍👍👍👍	View
04/08/17	savann_	@knutelouis you made it!! 🙌👍👍	View
10/08/17	samiheindi	ugh i love this	View
10/07/17	lance_clone	Is this for high school students? Can you send information about this to South Hamilton high school, attention Lance Keller?	View
17/08/17	kristinalswenson	@katvonnahme Dang cutie, I wish you were my leader 😍	View
04/08/17	knutelouis	Thank you @isucollegeofbusiness for letting me steal her away for an amazing 3 weeks and all the love and support! #blessed #loved	View
11/08/17	katherinharrington	What a great 🍷 idea. Ireland 🇮🇪 looks breathtaking!	View

Figure 71

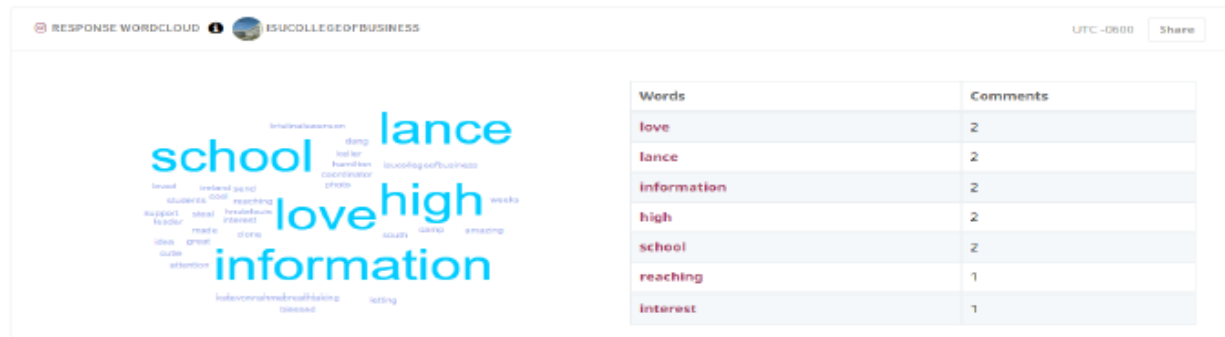


Figure 72

Instagram Analysis report for this quarter (July 2017 – Sep 2017):

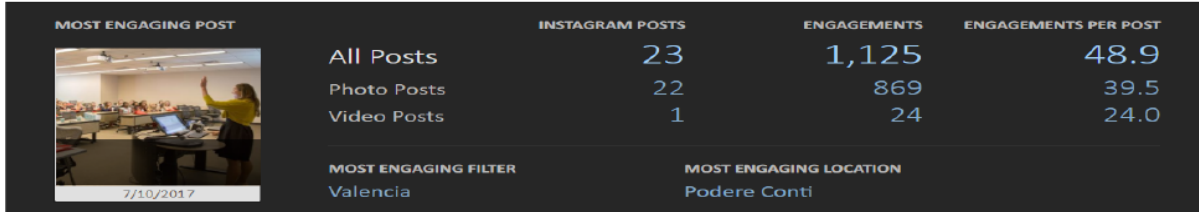


Figure 73

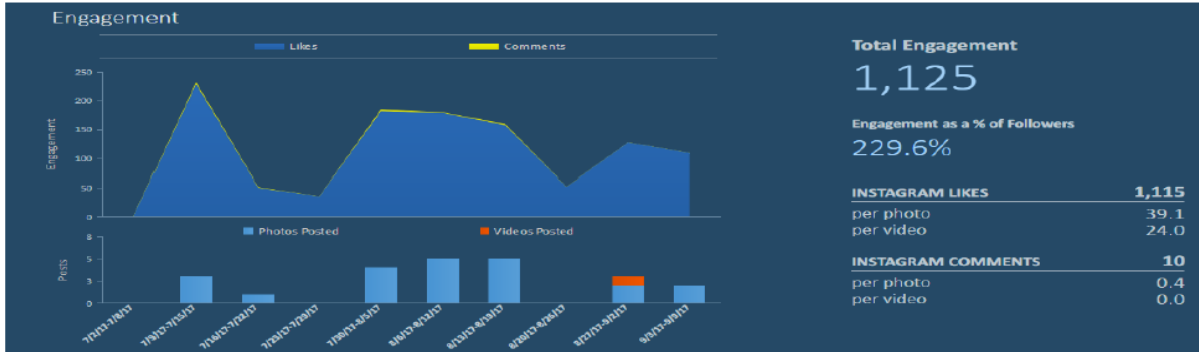


Figure 74



Figure 75

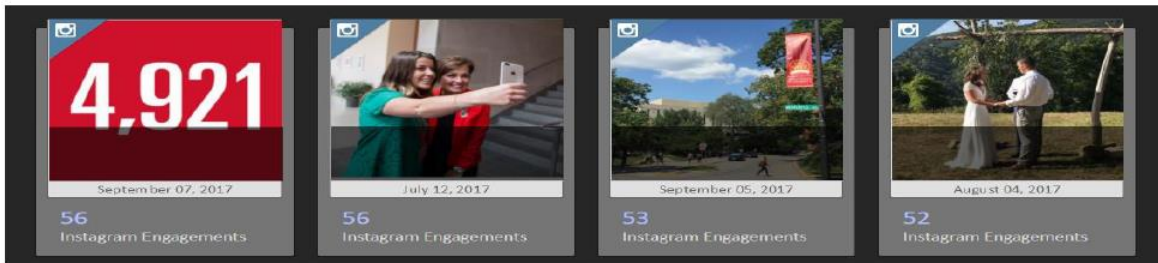


Figure 76



Figure 77

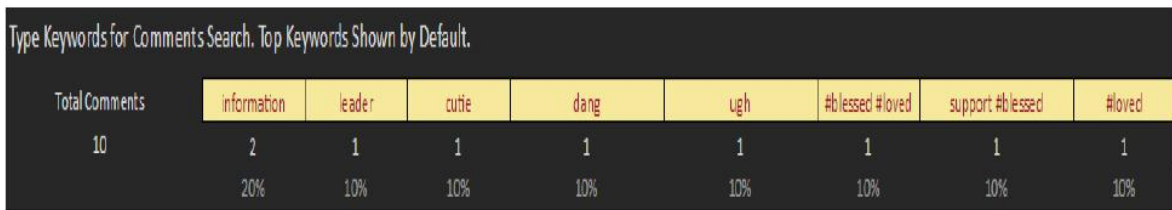


Figure 78



Figure 79

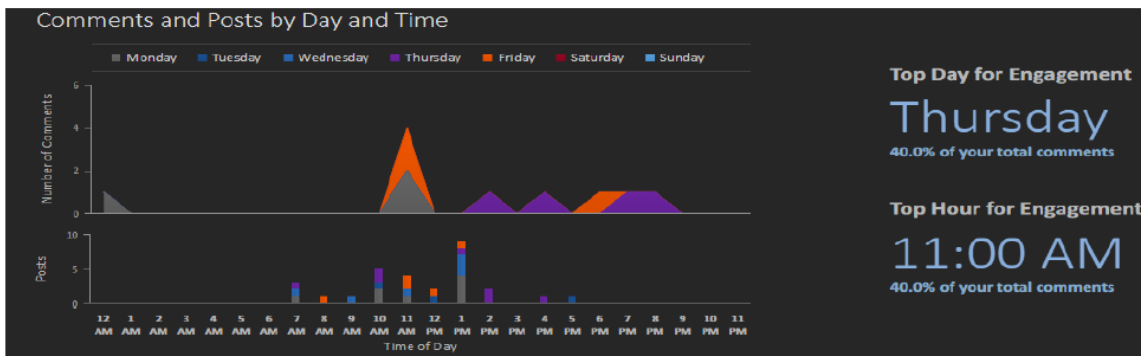


Figure 80

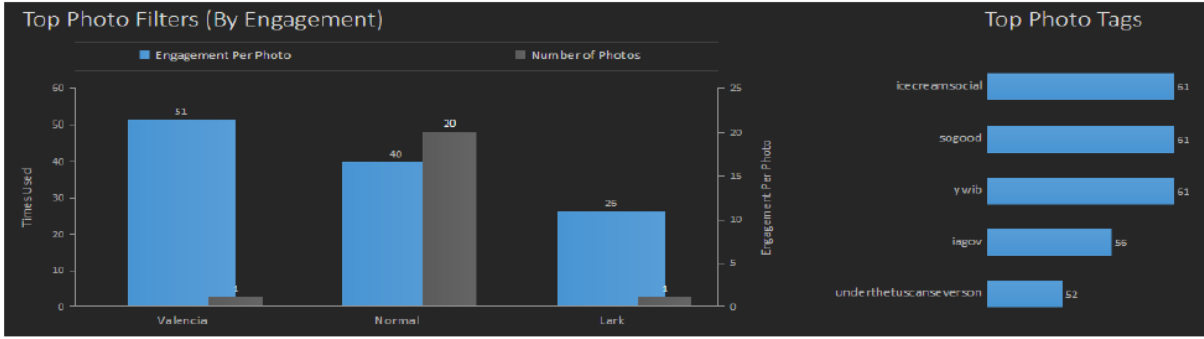


Figure 81

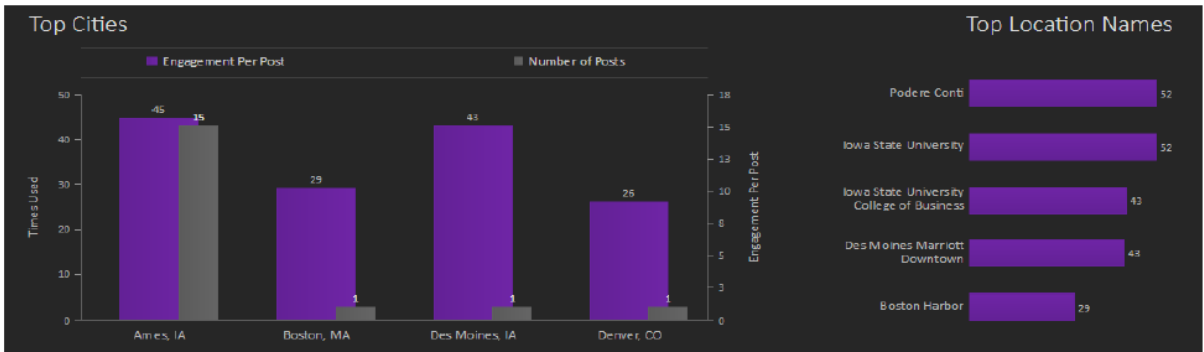


Figure 82

Traffic metrics:

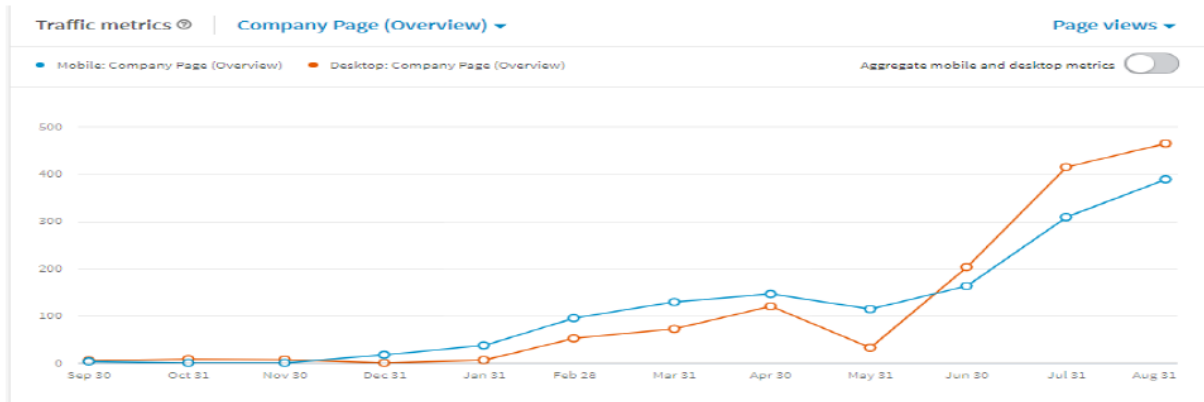


Figure 83

UPDATES & CONTENT DATA:

Engagement highlights

854

likes in the last 30 days
▲10% from previous 30 days

13

comments in the last 30 days
▲8% from previous 30 days

60

shares in the last 30 days
▲253% from previous 30 days

154

follows in the last 30 days
▲95% from previous 30 days

Figure 84

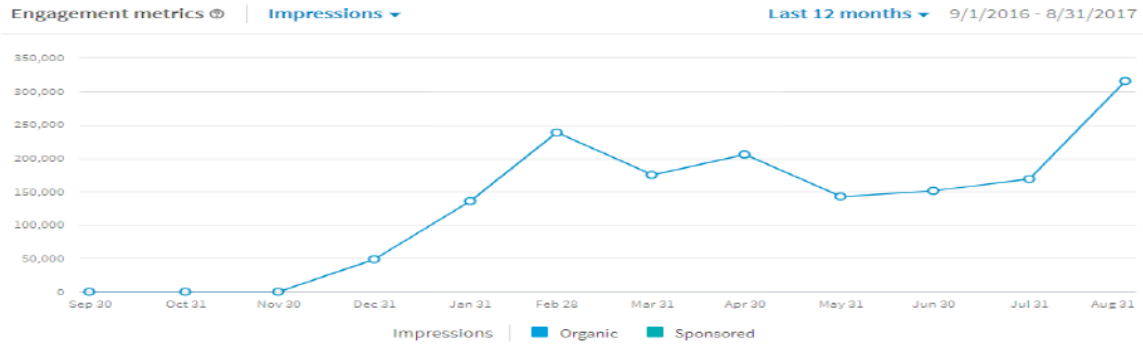


Figure 85

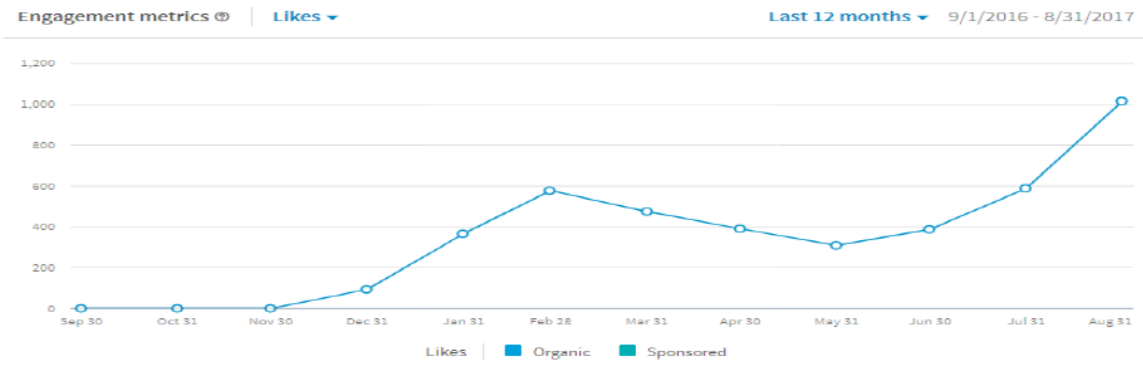


Figure 86

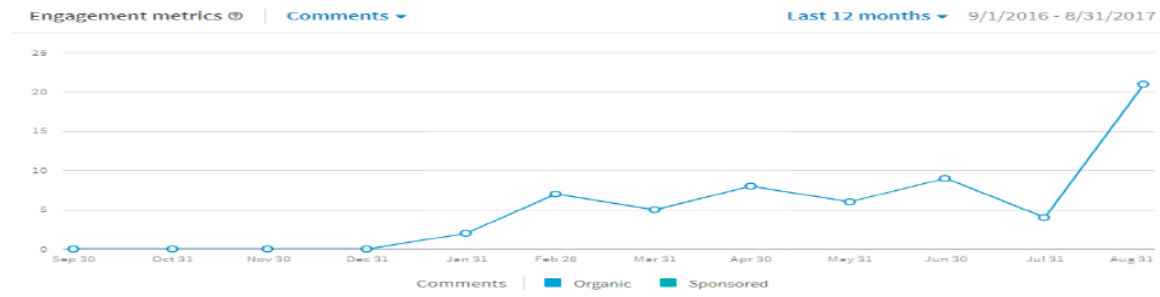


Figure 87

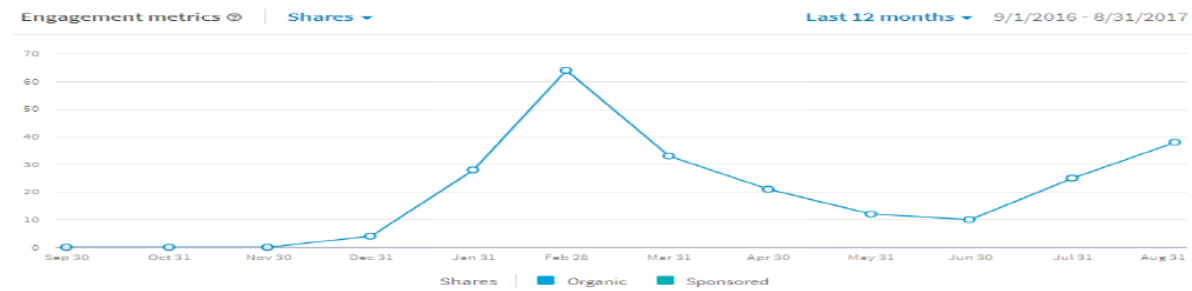


Figure 88

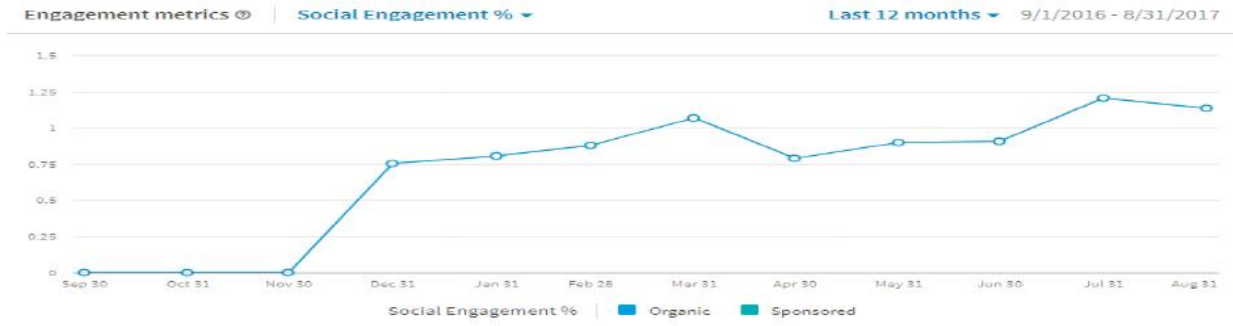


Figure 89

FOLLOWERS DATA:

Follower highlights

28,244
total followers of all time

148
organic follower gains in the last 30 days
▲105.56% from previous 30 days

Figure 90

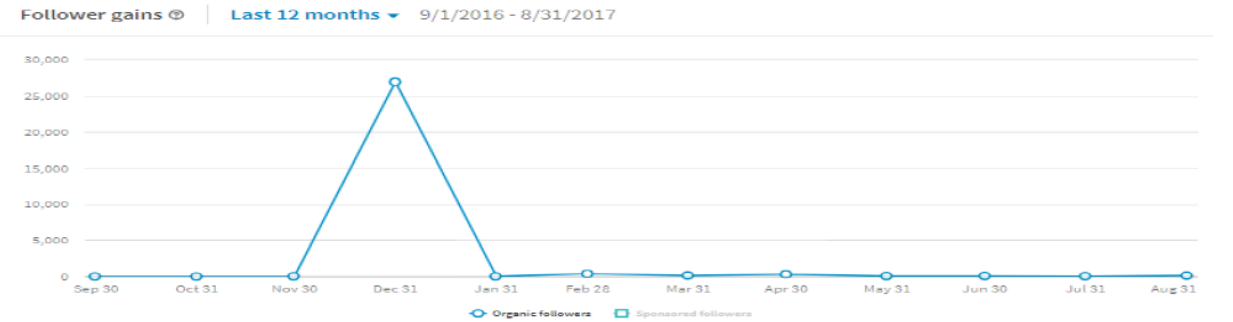


Figure 91

Follower Demographics

Top 5 countries

United States	26,365
India	174
China	170
Canada	94
Brazil	82

Figure 92

Follower Demographics ⓘ | Region ▼

Top 5 regions

Des Moines, Iowa Area	13,252
Greater Minneapolis-St. Paul Area	1,809
Greater Chicago Area	1,252
Greater Omaha Area	551
Kansas City, Missouri Area	522

Figure 93

Follower Demographics ⓘ | Job Function ▼

Top 5 job functions

Education	3,954
Business Development	2,867
Operations	2,723
Sales	2,644
Research	2,269

Figure 94

Follower Demographics ⓘ | Employment Status ▼

Employees who follow your page

Non-employee	28,529
Employee	76

Figure 97

Key Metrics

TOTAL FANS

2.834

TOTAL ENGAGEMENT

2.388

REPLIES

4

AWARENESS

42

IMPRESSIONS

278.688

CLICKS

3.914

Figure 98

08/27/2017 - 10/24/2017

Name	Fans	+/-	Posts	Reactions	Comments	Shares	User Posts	I-Rate	Response Rate
Iowa State University College of Business	2843	160	115	3445	170	273	1	1.2236%	0.0%

Figure 99



Figure 100

Facebook Fans Total

08/27/2017 - 10/24/2017

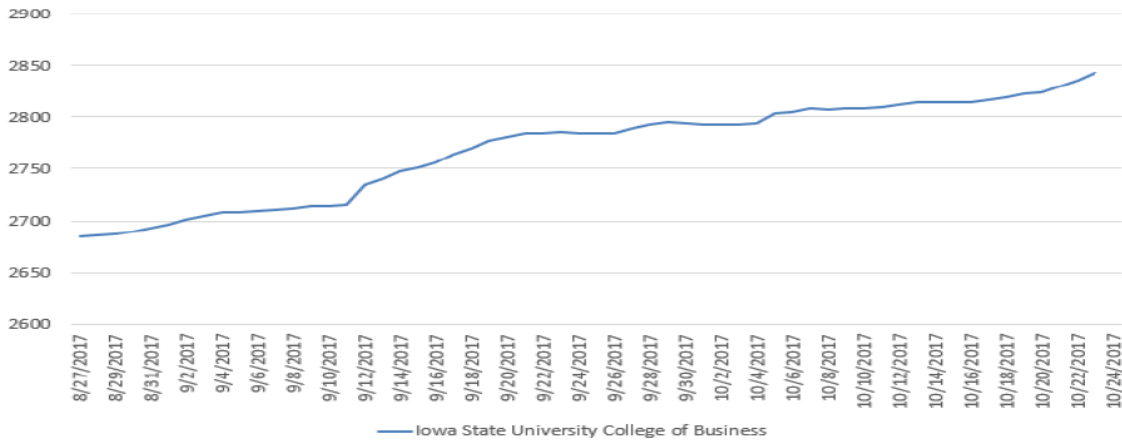


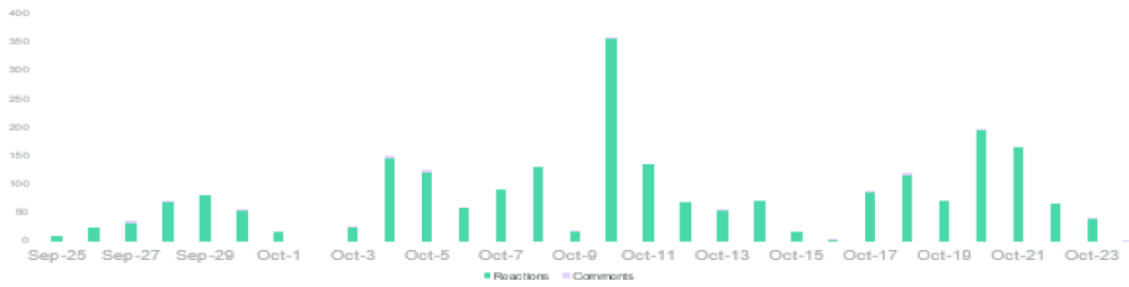
Figure 101

Engagement

Reactions, comments and shares on your posts.

Reactions, Comments, ...

2,388



Reactions

2,314

Comments

43

Shares

31

Total Engagement

2,388

Figure 102

Facebook Interaction Rate

08/27/2017 - 10/24/2017

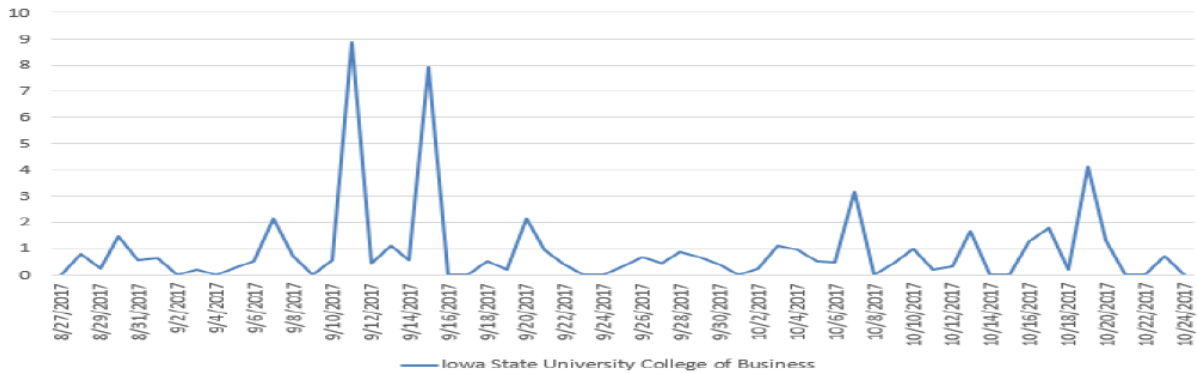


Figure 103

Facebook Fans Change Rate

08/27/2017 - 10/24/2017

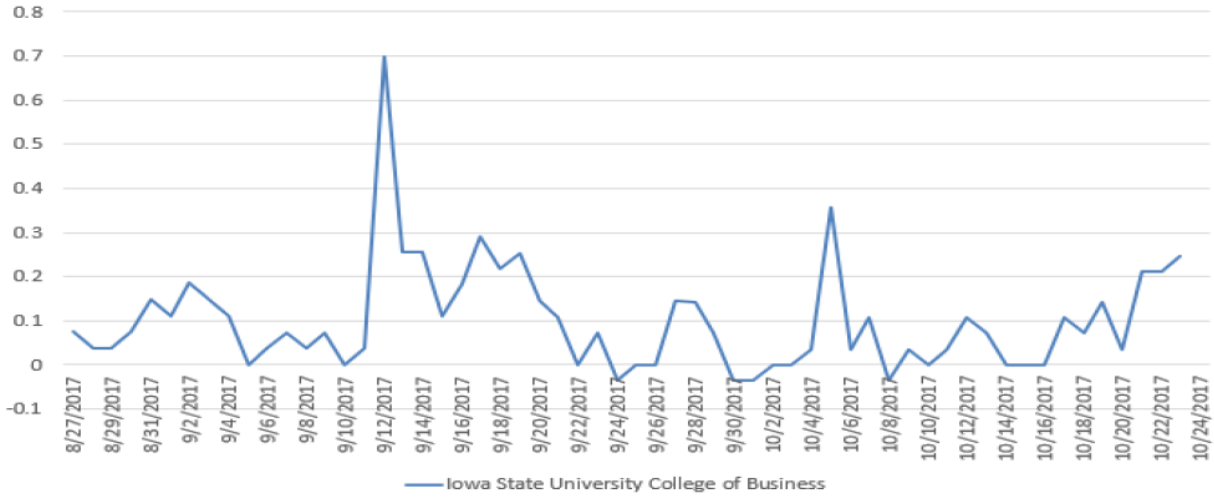


Figure 104

Awareness

Number of mentions and shares on your posts.

Mentions, Shares

42



Mentions

11

Shares

31

Awareness

42

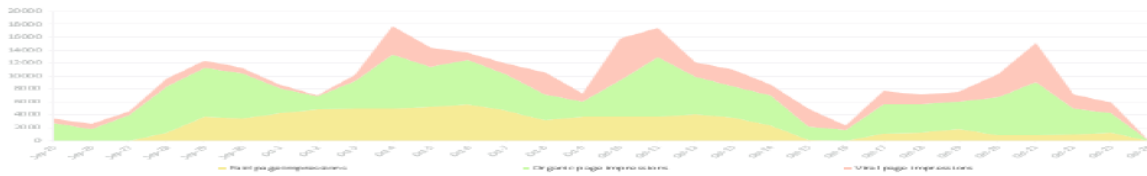
Figure 105

Page impressions

Number of paid, organic and viral impressions during the concerned period.

Impressions

278,688



Paid page impressions

75,421

Organic page impressions

141,939

Viral page impressions

60,500

Figure 106

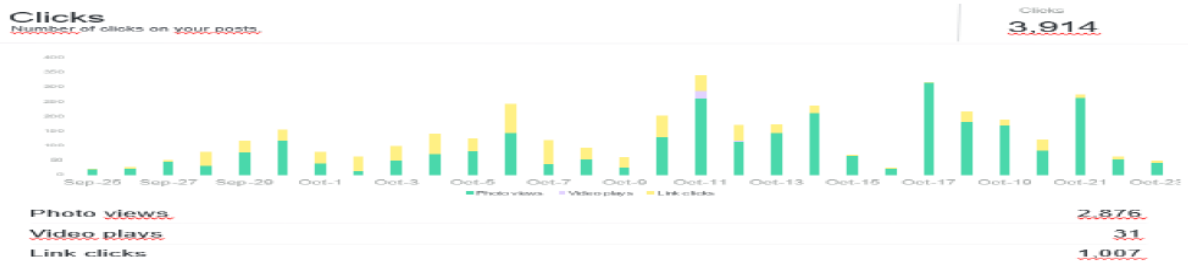


Figure 107

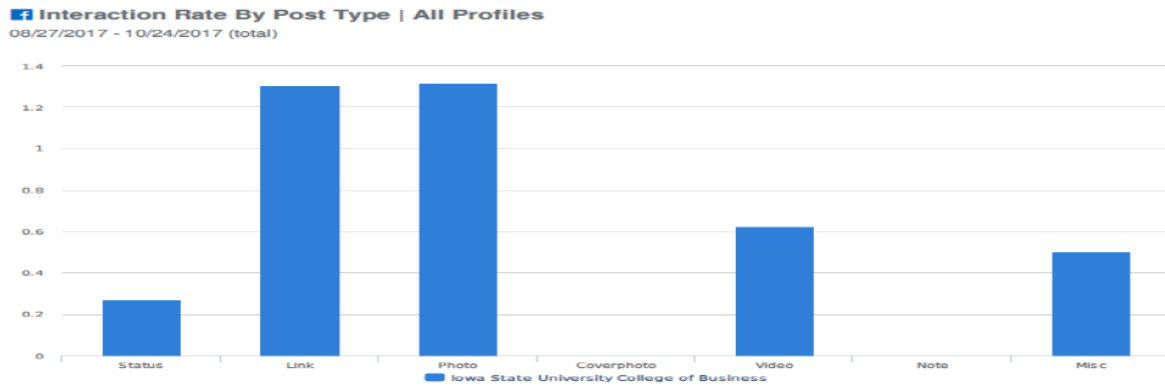


Figure 108

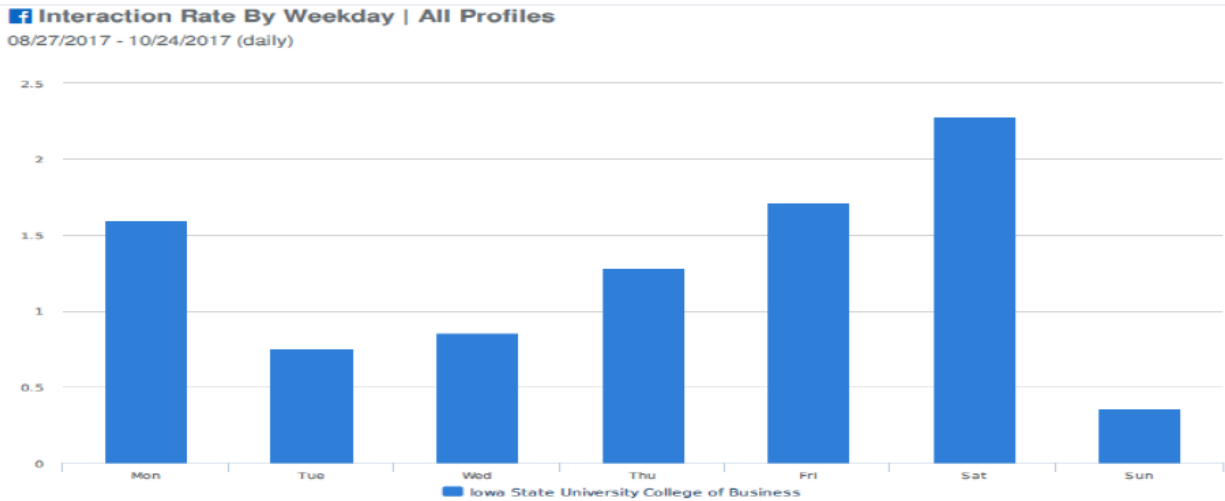


Figure 109

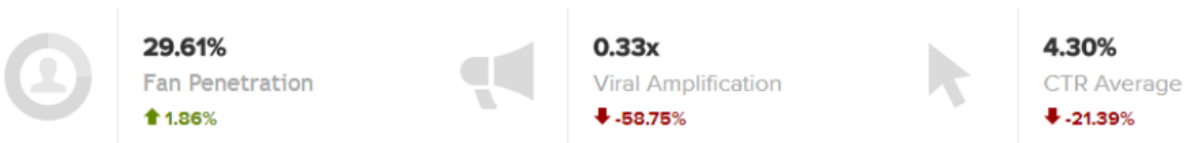


Figure 110

Date	Post	Fan Pntr	Viral Amp	CTR	Spam Sc	Stories	Reach
25 Oct 17	Did you know? Our student oras don't always stay on campus!	15.84 %	0.59 x	7.56 %	0.00 %	20	797
24 Oct 17	ENGAGING Yesterday we hosted high school women from all over the world!	4.87 %	0.53 x	22.33 %	0.00 %	15	215
24 Oct 17	ENGAGING It's Homecoming! We kicked off the week walking down the aisle!	33.56 %	0.33 x	11.58 %	0.00 %	37	1,256
24 Oct 17	Thank you to WHO TV Channel 13 News for visiting our Young Women in Business!	30.59 %	0.04 x	2.71 %	0.00 %	11	1,039
23 Oct 17	Link Post	49.05 %	0.37 x	8.87 %	0.00 %	24	1,630
23 Oct 17	Link Post	21.35 %	0.13 x	1.69 %	0.00 %	11	685
23 Oct 17	Our Young Women in Business visitors participated in a new Leadership Challenge!	28.90 %	0.39 x	8.37 %	0.00 %	20	1,141
23 Oct 17	Our Young Women in Business Conference is underway! The day is filled with networking, presentations, and more!	34.30 %	0.16 x	4.66 %	0.00 %	22	1,294
20 Oct 17	ENGAGING A teaser photo for two, or three... from today's business conference!	37.37 %	0.36 x	12.07 %	0.00 %	29	1,472
20 Oct 17	Link Post	39.41 %	0.01 x	3.02 %	0.00 %	8	1,288
20 Oct 17	More than 700 students, faculty, and staff joined us on campus for our Young Women in Business Conference!	36.73 %	0.03 x	8.90 %	0.00 %	19	1,214
20 Oct 17	Business Cv is ready to celebrate! Debbie and Jerrv Iv Colleas are the winners!	45.31 %	0.16 x	2.89 %	0.90 %	43	1,730
19 Oct 17	VIRAL PENETRATION IT'S OFFICIAL! On Thursday, the Board of Trustees approved the new name for our school!	61.71 %	1.81 x	5.09 %	0.00 %	329	7,103
19 Oct 17	Have family coming to town for Cyclone Family Weekend? The day is filled with fun activities, games, and more!	25.65 %	0.07 x	0.51 %	0.00 %	3	831
19 Oct 17	Registration for spring 2018? We're offering the following new business courses!	32.50 %	0.00 x	0.94 %	0.00 %	4	1,021
18 Oct 17	This year's Greater Iowa Credit Union lecture will feature Peter Dinklage!	22.83 %	0.00 x	0.62 %	0.00 %	2	689
18 Oct 17	Voting for our October teacher and staff member of the month!	34.47 %	0.03 x	2.76 %	0.00 %	9	1,066

Figure 111

17 Oct 17	PENETRATION	Congratulations to our new Associate Dean of	54.23 %	0.73 x	4.86 %	0.00 %	86	3,259
17 Oct 17		College of Business students, faculty, and staff. Help us celebra	31.76 %	0.01 x	1.34 %	0.00 %	11	1,036
16 Oct 17		High School Seniors: Have you completed your application to	25.41 %	0.16 x	0.65 %	0.00 %	6	1,010
16 Oct 17		Did you see our ad in the Des Moines Business Record on Frida	30.24 %	0.03 x	1.23 %	0.00 %	7	1,311
16 Oct 17	ENGAGING	Ever wonder how faculty spend their weekends?	45.24 %	0.97 x	10.45 %	0.19 %	87	2,851
13 Oct 17		DID YOU KNOW? Iowa State University alumni are the best! Ch	44.00 %	0.38 x	9.08 %	0.00 %	80	4,460
13 Oct 17		The College of Business hosted a reception for the ISU Labtop	23.92 %	0.02 x	1.14 %	0.00 %	13	1,364
12 Oct 17		Join us for our next Learn@Lunch free professional developme	14.01 %	0.29 x	1.02 %	0.00 %	5	654
12 Oct 17		**EXTENDED Deadline: October 17** Young Women in Business	18.95 %	0.03 x	2.21 %	0.00 %	7	591
12 Oct 17	ENGAGING	Business Learning Team (BLT) peer mentors held	26.15 %	0.15 x	11.50 %	0.00 %	16	881
11 Oct 17		Now taking applications! The Cystarters program offered by Iow	20.29 %	0.07 x	1.72 %	0.00 %	8	886
11 Oct 17		Are you a student who is undecided or thinking about changin	14.01 %	0.00 x	0.73 %	0.00 %	3	520
10 Oct 17		Major Fair Feature! Supply Chain Management: http://ow.ly/vL5	21.74 %	0.29 x	3.71 %	0.00 %	7	977
10 Oct 17	VIRAL ENGAGING	The rain held off for the conclusion of	47.25 %	1.65 x	10.71 %	0.27 %	88	3,880
10 Oct 17		Too cold to come outside? We're bringing Chills for the Bill\$ ve	49.05 %	0.16 x	5.09 %	0.00 %	27	2,867
10 Oct 17		Major Fair Feature! Management Information Systems: http://ow	20.75 %	0.00 x	2.30 %	0.00 %	3	1,107
10 Oct 17		Last chance to donate in our Chills for the Bill\$ challenge! Don	21.00 %	0.43 x	1.72 %	2.86 %	8	1,131
9 Oct 17		Major Fair Feature! Marketing: http://ow.ly/kfaT30fKJvV I chose	25.30 %	0.00 x	1.73 %	0.00 %	0	1,507

Figure 112

10 Oct 17		Last chance to donate in our Chills for the Bill\$ challenge! Don	21.00 %	0.43 x	1.72 %	2.86 %	8	1,131
9 Oct 17		Major Fair Feature! Marketing: http://ow.ly/kfaT30fKJvV I chose	25.30 %	0.00 x	1.73 %	0.00 %	0	1,507
9 Oct 17		It looks like Chill for the Bill\$ is going to live up to its name tom	21.21 %	0.77 x	2.14 %	0.00 %	11	1,243
9 Oct 17	VIRAL	Upcoming Deadline! Our Young Women in Business M	28.05 %	2.45 x	1.19 %	0.00 %	14	4,374
9 Oct 17		Major Fair Feature! Management: http://ow.ly/bEU030fKbVe I cho	33.13 %	0.62 x	8.77 %	0.00 %	24	2,060
7 Oct 17	VIRAL	Go Ovelones!	45.45 %	1.07 x	3.87 %	1.18 %	95	2,507
7 Oct 17	VIRAL ENGAGING	Major Fair Feature! International Business	29.36 %	2.29 x	15.47 %	0.10 %	68	3,032
6 Oct 17		Planning to stay home on this dreary Friday? Check out Season	37.69 %	0.07 x	2.70 %	0.00 %	12	1,194
6 Oct 17	VIRAL	Major Fair Feature! Finance: http://ow.ly/v7HU30fHok	35.92 %	1.12 x	6.81 %	0.00 %	25	2,270
6 Oct 17		Don't forget, former finance faculty member Michael Piwowar	16.97 %	0.00 x	0.23 %	0.00 %	0	527
5 Oct 17		Link Post	36.90 %	0.05 x	2.38 %	0.00 %	10	1,269
5 Oct 17		Major Fair Feature! Entrepreneurship: http://ow.ly/PGoo30fFDm	24.52 %	0.03 x	2.73 %	0.00 %	5	798
5 Oct 17		Coming soon to a mailbox near you...fall 2017 College of Busin	35.46 %	0.14 x	5.16 %	0.00 %	31	1,234
5 Oct 17	ENGAGING	SCIS Week continues! On Tuesday night we were	29.75 %	0.42 x	11.47 %	0.43 %	11	1,220
4 Oct 17		Major Fair Feature! Business Economics: http://ow.ly/liuF30fE6	23.54 %	0.00 x	2.74 %	0.00 %	3	724
4 Oct 17		It's dev two of our community college Passport Dev visits. Stop	12.03 %	0.03 x	1.55 %	0.00 %	3	356
4 Oct 17		Do you know what dev it is? #WintWednesdev! We have a limit	40.65 %	0.27 x	5.52 %	0.00 %	73	1,714
3 Oct 17		Alumni Feature: Alumna Beth Ford ('86 management), proud B	23.36 %	0.03 x	1.53 %	0.00 %	13	756
3 Oct 17	PENETRATION	Major Fair Feature! Accounting: http://ow.ly/8	52.01 %	0.78 x	6.62 %	0.36 %	81	4,283

Figure 113

Facebook Key Metrics Radar

08/27/2017 - 10/24/2017

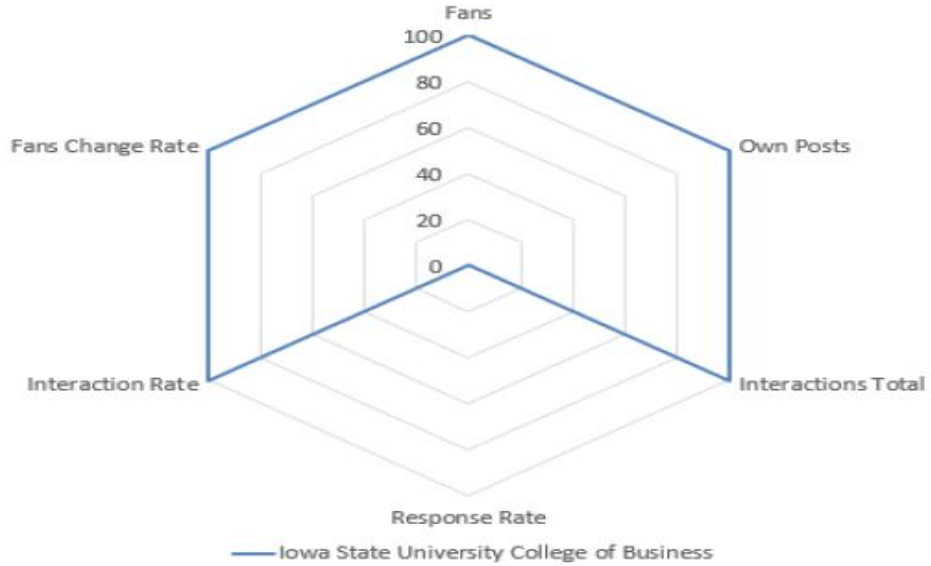


Figure 115

Key Influencers | All Profiles

08/27/2017 - 10/24/2017 (total)

Name	On Pages	Posts	Comments	Total
Peter Myers View interactions	Iowa State University College of Business (4)	0	4	4
Janette Larkin View interactions	Iowa State University College of Business (2)	0	2	2
Tara Fisher View interactions	Iowa State University College of Business (2)	0	2	2
Jules Magee View interactions	Iowa State University College of Business (2)	0	2	2
Tessykay Davis View interactions	Iowa State University College of Business (2)	0	2	2
Sheryl Montabon View interactions	Iowa State University College of Business (1)	0	1	1
Xena Jolly View interactions	Iowa State University College of Business (1)	0	1	1
Jen Handeland Snyder View interactions	Iowa State University College of Business (1)	0	1	1
Bailey Pease View interactions	Iowa State University College of Business (1)	0	1	1
Kristine Krausman Snyder View interactions	Iowa State University College of Business (1)	0	1	1

1 / 4

Figure 116

Name	On Pages	Posts	Comments	Total
 Lisa Shimkat View interactions	Iowa State University College of Business (1)	0	1	1
 Mary-Kate Lange View interactions	Iowa State University College of Business (1)	0	1	1
 Dan Zabier View interactions	Iowa State University College of Business (1)	0	1	1
 Deborah Martinez View interactions	Iowa State University College of Business (1)	0	1	1
 Benjamin Jeffrey Jones View interactions	Iowa State University College of Business (1)	0	1	1
 LaRae Pedersen View interactions	Iowa State University College of Business (1)	0	1	1

Figure 119

Twitter Key Metrics Table

08/27/2017 - 10/24/2017

Name	Tweets	Own Tweets	Retweeted Tweets	Replies to Users	All Retweets	Retweets on Own Tweets	Likes on Own Tweets	Replies on Own Tweets	Mentions
@ISU_CoB	181	135	34	12	280	280	968	0	19

Figure 120

Twitter Own and Retweeted Tweets Table - 1 of 5

08/27/2017 - 10/24/2017

Tweet	Retweeted Tweet?	Retweets	Likes	Replies
@ISU_CoB - 2017-10-24 11:10:05 ICYMI: Dean Spalding and members of @ISU_CoB student orgs handed out lots of free candy & #Cyclone spirit in Sunday's @ISUHomecoming parade! https://t.co/lZYgSgjbOH	No	3	11	0
@ISU_CoB - 2017-10-24 09:30:21 Thank you to @WHOhd for visiting our Young Women in Business Conference yesterday! Check out their video coverage below. @isu_cwib #ISUYWIB https://t.co/JDlq6a6NLD	No	3	4	0
@ISU_CoB - 2017-10-23 17:49:52 RT @IowaStateUNews: FULL STORY: Wendy Wintersteen named Iowa State University president https://t.co/DW5OVzjGd4 https://t.co/yKfvmvjFOG6	Yes	36	94	0
@ISU_CoB - 2017-10-23 17:31:56 RT @IowaRegents: It's official. Wendy Wintersteen is the #NextISUPres https://t.co/MUQoDtiyPz	Yes	254	527	0
@ISU_CoB - 2017-10-23 14:37:29 Check out the Leave Your Legacy group project our YWIB visitors participated in during lunch. Great work, ladies! #ISUYWIB https://t.co/xymY5BolyQ	No	3	10	0
@ISU_CoB - 2017-10-23 12:15:28 The @IowaRegents are expected to select the #NextISUPres later today. Who do you think will become @IowaStateU's 16th president?	No	0	2	0

Figure 121

08/27/2017 - 10/24/2017


Tweet	Retweeted Tweet?	Retweets	Likes	Replies
@ISU_CoB - 2017-10-23 12:13:44 RT @ISU_JPEC: Spots are limited, be sure to register today for the FREE Smart Start Workshop on Nov 4: https://t.co/JHD9ZoRynN https://t.co/...	Yes	2	1	0
@ISU_CoB - 2017-10-23 11:35:59 Our YWIB Conference is underway! The day started with a keynote from @ISU_CoB alumna, Sarah Lucke, who co-founded @isu_cwib as a student! https://t.co/AP52sHd2II	No	2	1	0
@ISU_CoB - 2017-10-23 11:05:59 More than 700 people joined us on Friday for food, music, and perfect weather to celebrate our new name!  album: https://t.co/R2wcNIVIT6 https://t.co/k5mKcL7Dzg	No	0	0	0
@ISU_CoB - 2017-10-23 09:46:27 Happy Homecoming Week, #Cyclones! Did you purchase a Food on Campus button? We're today's sponsors! Free @Fazoliz anyone? #SOUNDtheCYREN https://t.co/FhEjN4xxoP	No	1	2	0
@ISU_CoB - 2017-10-20 16:52:25 A teaser photo (or two, or three...) from today's big celebration! #FridayFeeling #CoBcelebration #IvyCollegeofBusiness https://t.co/99G585Uflv	No	2	6	0

Figure 122

08/27/2017 - 10/24/2017

Tweet	Retweeted Tweet?	Retweets	Likes	Replies
@ISU_CoB - 2017-10-20 16:05:44 Sliding into the weekend like... @TheMascotCy #CoBcelebration https://t.co/Xigvd0Lj14	No	1	6	0
@ISU_CoB - 2017-10-20 15:58:13 RT @rocketcurds: Hammocking: the official pastime of #CYCLONEnation https://t.co/ToyeZYJWmM	Yes	2	18	0
@ISU_CoB - 2017-10-20 13:02:18 RT @TylerRoyMorgan: Guess the first three people to use the photo booth? @ISU_CoB Ivy College of Business Celebration https://t.co/C9o5aMG...	Yes	1	6	0
@ISU_CoB - 2017-10-20 12:58:09 The celebration is on, and we're loving the music from @ISUDrumline! https://t.co/0ag9Tsn9os	No	2	16	0
@ISU_CoB - 2017-10-20 10:18:35 Business Cy is ready to celebrate! Ivy College of Business students, faculty, and staff: Join us on Curtiss Lawn today from 11:30 - 1:30! https://t.co/WzCzpwVnKq	No	3	18	0
@ISU_CoB - 2017-10-19 14:31:06 IT'S OFFICIAL! Minutes ago, the @IowaRegents officially approved the first named college at @IowaStateU! 🎉 https://t.co/ZLYY2eDOTB https://t.co/WhwLsbSGCx	No	26	74	0

Figure 123

Hashtag Detection | All Profiles

08/27/2017 - 10/24/2017 (daily)

Hashtag	Tweets	Likes per Tweet	Retweets per Tweet	Replies per Tweet	Total Interactions p...
#ISUBusinessWeek	16	3	1	0	5
#Cyclones	4	5	1	0	6
#CoBproud	4	2	0	0	3
#Cyclone	3	4	1	0	6
#ISUCareerFairs	3	12	3	0	15
#ISUYWIB	3	7	3	0	10
#CoBcelebration	3	4	1	0	5
#WednesdayWisdom	2	1	0	0	1
#ISUCareerFair	2	3	1	0	4
#CyclONEation	2	8	0	0	8
#TBT	1	4	1	0	5
#HelloSeptember	1	5	0	0	5
#LaborDayWeekend	1	5	0	0	5
#isubusinessweek	1	2	0	0	2
#JDDayISU	1	5	2	0	7

Figure 126

Hashtag	Tweets	Likes per Tweet	Retweets per Tweet	Replies per Tweet	Total Interactions p...
#JDJobs	1	5	2	0	7
#Iowastate	1	27	5	0	32
#CyHawkSeries	1	4	0	0	4
#ForeverTrueISU	1	9	4	0	13
#newcoverphoto	1	15	0	0	15
#HappyFriday	1	3	1	0	4
#proudsponsor	1	10	4	0	14
#sockgame	1	3	1	0	4
#oursocksarecoolerthanyours	1	3	1	0	4
#MotivationMonday	1	2	0	0	2
#23	1	3	1	0	4
#cobproud	1	7	0	0	7
#HBD	1	12	1	0	13
#FirstDayofFall	1	5	0	0	5
#Iawx	1	5	0	0	5
#CyclonesEverywhere	1	2	0	0	2
#entrepreneurs	1	5	1	0	6
#startups	1	5	1	0	6

Figure 127

Hashtag	Tweets	Likes per Tweet	Retweets per Tweet	Replies per Tweet	Total Interactions p...
#cyclONEation	1	4	0	0	4
#WinItWednesday	1	1	0	0	1
#giveaway	1	1	0	0	1
#FacesofISU	1	6	3	0	9
#myISUmentor	1	6	2	0	8
#FridayThe13th	1	8	4	0	12
#IMTDMM	1	3	0	0	3
#FridayFeeling	1	6	2	0	8
#IvyCollegeofBusiness	1	6	2	0	8
#SOUNDtheCYREN	1	2	1	0	3
#NextISUPres	1	2	0	0	2

Figure 128

Own Tweets By Weekday | All Profiles

08/27/2017 - 10/24/2017 (daily)

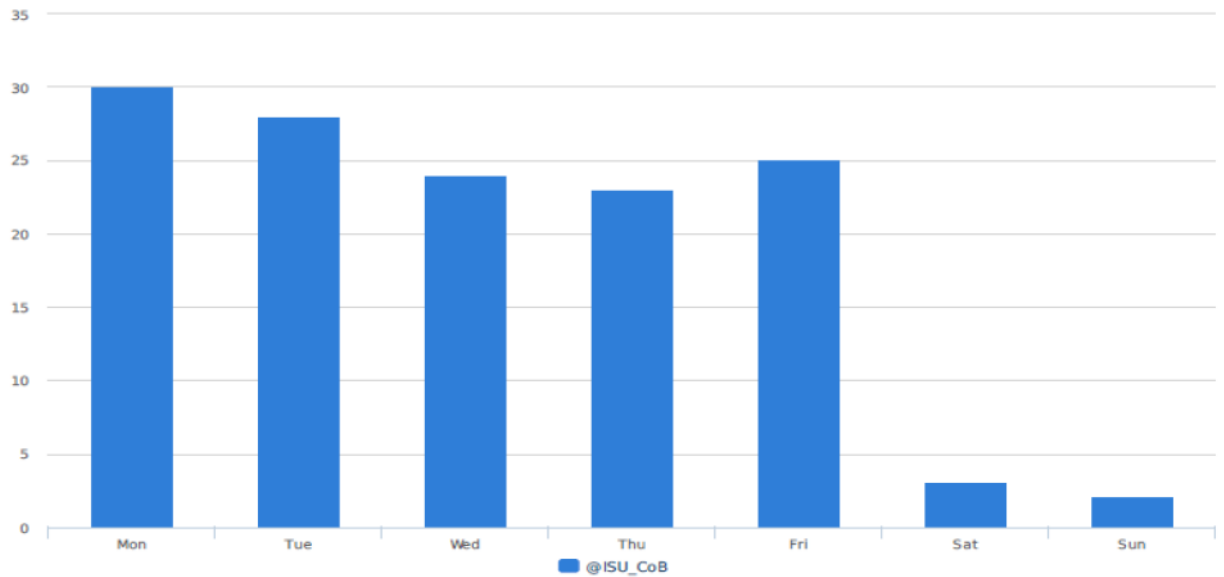


Figure 129

Tweets Change | All Profiles

08/27/2017 - 10/24/2017 (daily)

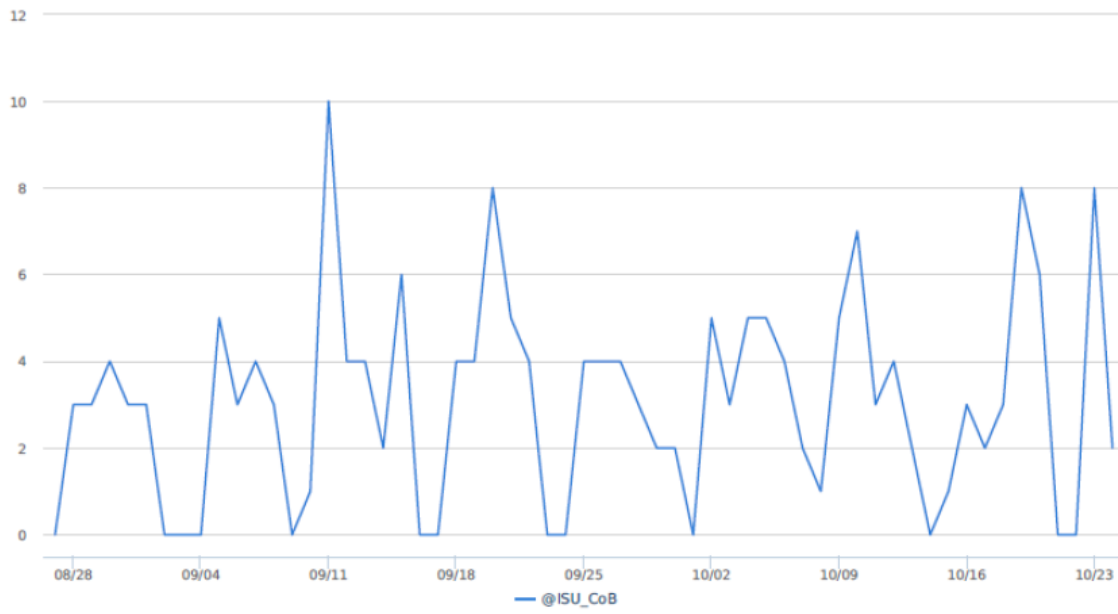


Figure 130