

SOCIAL LISTENING IN HIGHER ED: The College Admissions Journey





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Foreword

I'll show my cards early here.

I am an admirer and friend of Liz Gross, from whose mind sprung Campus Sonar (the firm that produced the helpful guide you're about to read).

Why should that matter?

Well, as a reader you should know that I have a favorable bias toward the work she and her growing team of bright colleagues at Campus Sonar produce. Furthermore, to you, my fellow higher ed professional reader, I can attest that Liz is "one of us." (And so is her team.)

She and her team live in the same space that we do, the place where students transition from one phase of their educational lives to another. It is a place where students are vulnerable, to be sure, and it is a place of promise.

And the Campus Sonar team, with their skill and research in social listening, can help the rest of us make sense not only of what students tell us to our faces, but what they show the rest of the world—through their online posts, rants, likes, and loves—when we're not looking.

At a time where students and families dodge communications from us with the speed and dexterity of Neo in *The Matrix*, adding social listening to your toolkit offers not only intelligence, but an additional dose of assurance and confidence as we make our way in a world where the signs we rely on for navigation have not only been moved, but rewritten in a language we may only partially comprehend.

Social listening can help you recalibrate your GPS so you can locate where your institution lives on the higher ed landscape.

Read on and learn how to navigate with confidence and panache.

Ken Anselment

Ken Anselment Vice President for Enrollment & Communication Lawrence University Appleton, Wisconsin



INTRODUCTION

Today's admissions landscape often feels like shooting an arrow at a target ... while riding an untamed horse through a field of landmines in the middle of the night. And it's a full moon. Experts <u>anticipate that the number of prospective college students will continue to decline</u> into the early 2030s.

FAFSA changes, "free" tuition, shifting demographics, NACAC updates, and even Google are changing the path forward for prospective students, their families, and the enrollment teams who support them. Before students even make it to campus for a visit, <u>67 percent have used search engines as their</u> first source of information. One Google search



and students have stats on cost, graduation, and acceptance rates, without needing to click twice. <u>Seventy-six percent of students self select to fill out an online inquiry form</u> for more information.

The approach to the college search has become stealth and savvy. Prospective students are armed with stats and spend more time researching <u>Reddit</u> and social media to get the real scoop about student life than ever before. Being able to show students things like value and campus support, including access to mental health resources, are more important than ever.

As students progress through the admissions journey and move toward a decision, they "use a complex mix of facts and feelings that don't always make sense together," according to Tim Jones, Chief Communications and Integrated Marketing Officer at Beloit College. Data fuels the college search process and can also supercharge the way our institutions stand out, assist, and add value to students throughout the admissions cycle. The magic ingredient is awareness, made possible through social listening.

Social listening gives us a unique and timely view of the values, thoughts, and feelings of our prospective students as they move through their college searches. The more we understand, the more we can adapt to meet their needs with compassion, empathy, and precision. In this report, we share research from over 124,873 conversations to bring you actionable insights that drive your admissions strategy forward.

We hope you find value in our insights and data. We'd love to hear your admissions stories and your feedback on our report. Tweet them to us at **#AdmissionsStories**.

SOCIAL LISTENING

As an admissions and enrollment professional, social listening can give you actionable insights about incoming students. Audience insights help interpret the conversation at each stage of the admissions journey— application, campus visit, and enrollment. They help you find opportunities to meet prospective students where they are so you can communicate the value of your institution in a way that resonates.

We used social listening to gather three years of online public conversation from prospective and admitted students to gain a better understanding of the questions, thoughts, and emotions running through students' minds.

The goal of our study is to help higher education professionals:

- Understand students' online conversation and behavior during the admissions process.
- Better connect and engage with targets during the admissions process.
- Our Understand how sentiment and student perspectives change during different stages of the admissions process.

Our analysis identified online mentions of the college admissions journey and the unique authors who contributed to our dataset. These authors are individuals, rather than organizations, who are online discussing the various stages and processes of the college admissions cycle. We used this historical snapshot of admissions conversation to segment and analyze the different stages of the admissions journey based on benchmarks such as sentiment, emotion, volume over time, and page type.

Institutions can use the insights from our study to develop specific strategies to target students and appeal to their interests during the admissions journey, subsequently increasing their yield with right-fit students.

SOCIAL LISTENING + ADMISSIONS CONVERSATION

Our analysis found 124,873 online mentions from 26,446 unique authors between July 1, 2016 and June 30, 2019. But this was just the beginning. We uncovered key insights for admissions, enrollment management, and marketing professionals that led us to ask questions our analysis helped us answer.

- How do students feel during different stages of the admissions journey?
- What questions do prospective and admitted students have during the admissions journey? How can institutions recognize and address these questions for their own programs?
- How does conversation change over time? What factors influence this cycle, and how can admissions offices use this to their advantage? For example, do parent mentions spike after the FAFSA goes live in October? Do student mentions increase before National Candidates Reply date?
- How does conversation volume change based on where students are in their college journey (application, admission, enrollment)? Can higher ed professionals change their marketing tactics based on these segments?
- Where is conversation taking place? How can this information be used to most effectively reach prospective students?

DEFINING OUR AUDIENCE

The first step in our research was to define how students fit into different segments in our data considering key stages in the admissions journey. We used keywords and phrases to refine our audience segments to encompass how students' attitudes change over time.

PROSPECTIVE

Students who have pre-college admissions conversations online, focusing on those planning to go to a college or university or discussing the idea of it.

ADMITTED

Students who have been admitted into one or multiple institutions and for the purposes of this report are reflecting on the admissions journey or preparing for their upcoming college experience. This category only includes students who've already been accepted or are already attending an institution.



GENERAL

Conversation that doesn't directly fit into a specified segment. This category avoids diluting the quality of the data in our prospective and admitted categories and builds a better distinction between specific and non-specific mentions.

AUTHOR



Reed Scherer is a Social Media Data Analyst at Campus Sonar. Reed studied economics at the University of Maryland, where he familiarized himself with how to conduct primary research and synthesize quantitative data to support an argument. Reed's passion for education led to his involvement in local youth organizations as well as becoming a tutor for underprivileged youth during college. Today, he works to monitor and develop social insights with the Campus Sonar team, striving to better understand how social listening can help our clients. After work, you can find him playing pickup basketball at the park or cooking one of his favorite meals at home.

CONTRIBUTORS

Reed Scherer performed the social media data analysis for our report. Steve App, Beth Miller, and Rebecca Stapley served as research strategists, and Amber Sandall was the methodology consultant and research reviewer. Steve App, Liz Gross, Bri Krantz, Beth Miller, and Rebecca Stapley served as reviewers. Michelle Mulder edited and coordinated the production of the report. We're incredibly thankful that Mikaela Ehly partnered with us on the report's design.

ABOUT CAMPUS SONAR

Your students and communities are online, engaging in conversation about your institution every single day. Prospective and admitted students ask questions, seek advice, and work out whether your institution is a good fit for them. Your alumni talk about their experiences with your institution and how their lives progress after they leave you. Your staff and faculty share and discuss their work. How do you find these conversations? Social listening, of course. At Campus Sonar, we find and analyze that online conversation, work with you to listen to and interpret it, and incorporate insights from that conversation into your campus strategy.

As a group of higher education loyalists and complete nerds, we care deeply about helping higher education professionals drive their campus strategy forward. We do this by working directly with those professionals to find online conversation about their campuses and providing strategic recommendations that help campus teams understand and protect their brand, monitor topics that require timely action, identify opportunities for meaningful audience engagement, measure campaign effectiveness, use social data to answer questions, and much more.

We're a specialized social listening agency for higher education—not a software company. While we really, really love data, we know you need more than just data points to make your greatest impact. You need the story the data is telling you, and that's what we provide.

What Are Prospective and Admitted Students Saying Online?

Spoiler alert: it depends. From an overarching perspective, our research underscores the fact that students experience various emotional and behavioral stages in their admissions journey. Their online conversation and behavior is demonstrated by what they say online and how their attitudes change over time as they progress through the journey.

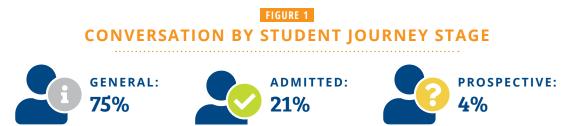
If you're the kind of reader who likes to know what they're getting into, here's a sneak peek at what you'll find in this section.

- How many students are talking online
- When students are talking online
- Where students are talking online
- What students are saying online

- > What students' emotions are
- What topics and hashtags students use
- > Who students are talking about and to

HOW MANY STUDENTS ARE TALKING?

We broke down all 124,873 mentions by each stage of students' admissions journey and confidently determined the stage of about 25 percent of the authors in our study (figure 1). The majority of mentions are general (75 percent), followed by admitted students (21 percent), and lastly prospective students (4 percent).



When looking at individual mentions, we saw that many more students share online after they've made decisions and commitments rather than sharing their thought process or journey of visiting and applying to institutions as prospective students. The low volume of prospective conversation is consistent with data found among other similar institutions according to our 2019 Online Conversation Benchmarks for Higher Education study. In this analysis, we found that among the institutions we benchmarked, prospective student conversation ranged from 0 to 6,438 mentions per institution and the admitted conversation range was larger with 0 to 29,292 per institution. And as we'll dig into later, *where* students share their experiences online is also impacted by what stage they're in.

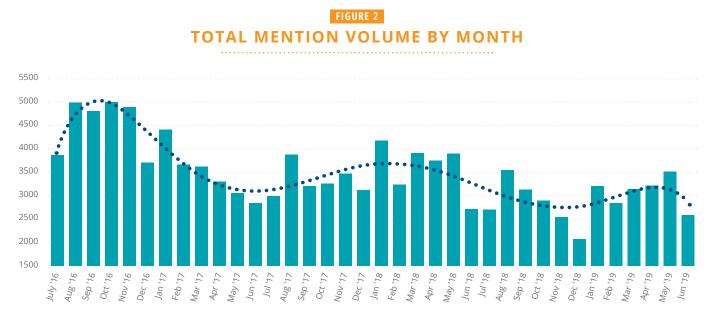
General mentions are the most difficult to define as they aren't specific enough to efficiently categorize as either prospective or admitted mentions. We love our analysts and want to keep them around, so we didn't ask them to manually categorize all 93,000 mentions, which is the only way to filter conversation enough to parse out additional details. Likely, most of these mentions vaguely fit in either prospective or admitted stages, or could be instances where students reply to threads and share opinions in response to questions from others (rather than sharing their own specific journey). So they're still important because they represent the non-specific segment of admissions data that helps us see the bigger picture.

WHEN ARE STUDENTS TALKING?

We had a feeling we knew when students talk online the most since we have a pretty good handle on busy times at institutions—for example, at the end of yield season or during recruitment. But we wanted to verify our hunch, so we looked at when students talk online over the course of a year (i.e., conversation volume over time).

CONVERSATION VOLUME OVER TIME

We mapped all mentions by month to paint a picture of the ebbs and flows of online conversation volume over time, and found that it changes both annually and seasonally. Recurring seasonal highs and lows coincide with a typical institution's annual admissions cycle (i.e., September through May); the lowest volume is consistently during the summer months when school is not in session and when many admitted students have made their college decisions. The moving trendline (figure 2) illustrates the peaks and valleys of online conversation over time. The seasonal differences in volume are due to the data we had access to at the time.



Mentions ••••• Moving Trend Line

Admissions professionals know their specific institution's cycle of applications, acceptances, and commitments. But it's important to keep in mind the pressured situation young student applicants may be in. According to the <u>2019 Niche College Admissions Report</u>, more than half of new, incoming freshmen applied to at least five different schools in 2019 and 49 percent were accepted to at least four different institutions. Students have an abundance of options, which can make the decision even more difficult. In today's higher education environment, enrollment success means understanding industry conditions as well as you know your own institution.

WHERE ARE STUDENTS TALKING?

So now that we know when students typically talk online, we can look at where they talk. Understanding where conversation happens can help institutions develop appropriate strategies for how they want to engage—or not engage—with students on different page types (e.g., Facebook, Instagram, Twitter, forums, etc.).

PAGE TYPES OVERALL

We categorized each mention by the page type where it was posted and then analyzed all publicly available conversation on Twitter, forums, Instagram, news sites, and blogs.

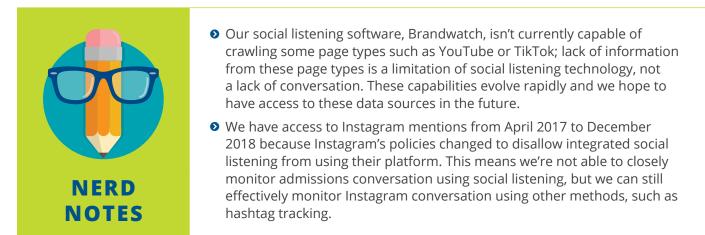


Figure 3 shows the breakdown of total conversation volume by page type and figure 4 shows the breakdown of conversation volume over time by page type.

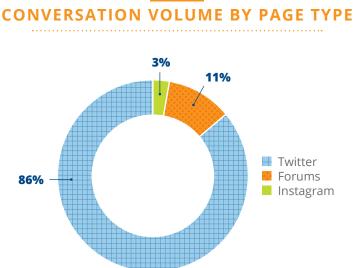
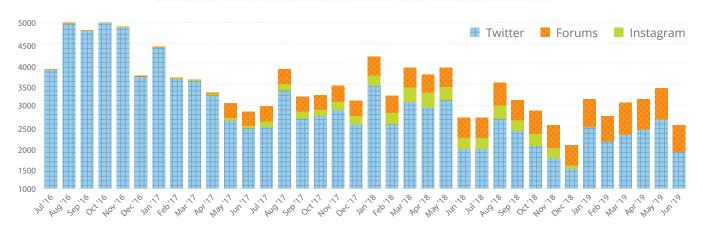


FIGURE 3

FIGURE 4 CONVERSATION VOLUME OVER TIME BY PAGE TYPE

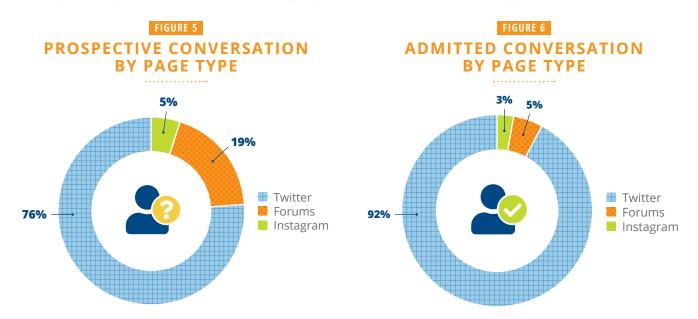


We found that conversation breakdown aligns with general online trends. Twitter is almost always our largest data source for social listening, and Instagram volume tends to be low due to restricted permissions. Forums have become increasingly popular over the last few years.

PAGE TYPES BY PROSPECTIVE AND ADMITTED STUDENTS

Looking at page type by students' admissions stage shows us that the general breakdown of where conversation happens is relatively similar across prospective (figure 5) and admitted (figure 6) students with one exception—forums have a more significant presence among prospective conversation.

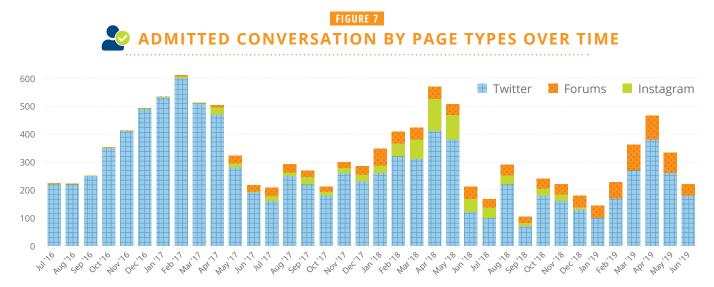
Why? Prospective students may be drawn to page types like forums to seek more in-depth information than is typically offered on those such as Twitter and Instagram. It may be easier to seek their peers' opinions on things like specific institutions of interest or ask questions about specific stages of the admissions journey. Online forums such as Reddit's r/ApplyingToCollege, a community with well over 100,000 members, are more commonly used by confused or overwhelmed prospective students and student applicants.



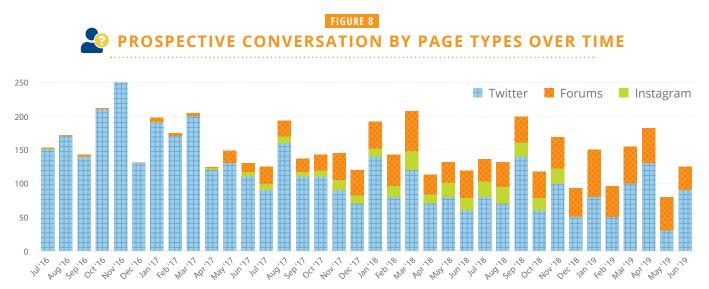
PAGE TYPES BY PROSPECTIVE AND ADMITTED STUDENTS OVER TIME

We also looked at page type by admissions stage over time and found that the timeline for admitted students' conversation online has a clearer pattern than that of prospective students.

The volume of admitted students' conversation closely mimics the admission cycle, and the peaks in conversation coincide with the months we typically see a greater volume of enrollment conversation (figure 7). The page types admitted students post on correspond with visibility and ease of sharing when they receive an acceptance letter or make their decision (e.g., sharing via Twitter or Instagram, which typically have shorter messages than forums).



We see a steady increase in conversation on forums over time, particularly with prospective students (<u>figure</u> 8). The presence of prospective students on forums such as Reddit's <u>r/ApplyingToCollege</u> has <u>exponentially</u> <u>increased each year</u>, representing more and more students interested in discussing the topic of applying to college with peers who can relate, empathize, and provide a unique perspective that parents or counselors can't always offer.



GEOGRAPHY

In addition to looking at where students talk online, we explored where students actually are in the country when they talk online. There are a couple of reasons geographic information is worth exploring. It can help determine:

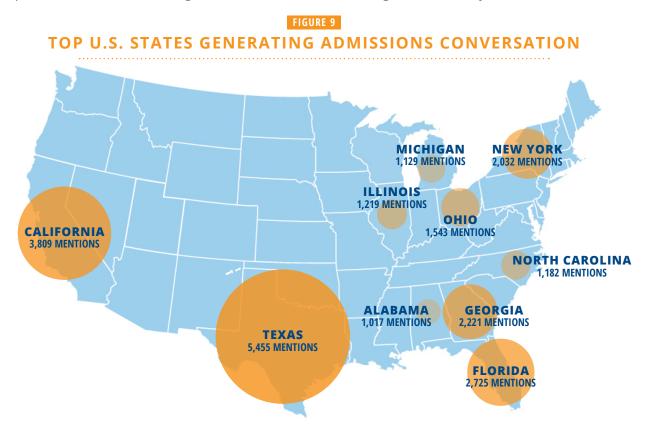
- If location-based advertising is worth the investment.
- Strategies to increase out-of-state applicants.
- Strategies to track competitors in high-volume states.





We looked at available geographic information when we could, but it's only available for select mentions from select page types. All of our geotagged mentions came from Twitter, depending on the privacy settings of the particular user. However, because our analysis included a high volume of geotagged mentions and Twitter is our largest data source, our breakdown is representative of our entire analysis.

We found that conversations originated primarily from the United States (87 percent). Within that, the states generating the most conversation (figure 9) have high populations (e.g., California with 40 million people), a large number of in-state universities (e.g., Pennsylvania has just under 400 higher education institutions), or one or multiple universities that drive significant online conversation (e.g., the University of Alabama).



WHAT ARE STUDENTS SAYING?

We've covered the when and where, now it's time to look at what students actually say online. And this is more than just the specific words or topics they use. We also looked at the sentiment and emotions of what students talk about to provide some context to their overall conversation and behavior as they progress through their admissions journey.

TOP TOPICS AND HASHTAGS

One of the key ways to find out what students talk about online is to analyze the top topics and hashtags they use throughout their admissions journey. We analyzed specific phrases and keywords that would likely provide insight or narrative into admissions conversation (all of the topics we analyzed are the top 30 items discussed by volume), excluding generic keywords such as *college, university,* or *happy* (despite them having high mention volume).

Students discuss many of the same topics and add common hashtags to their online mentions—especially student athletes. So much so that we broke the admissions conversation down further to admitted student conversation with no athletic mentions and admitted conversation with only athletics mentions (figure 10).

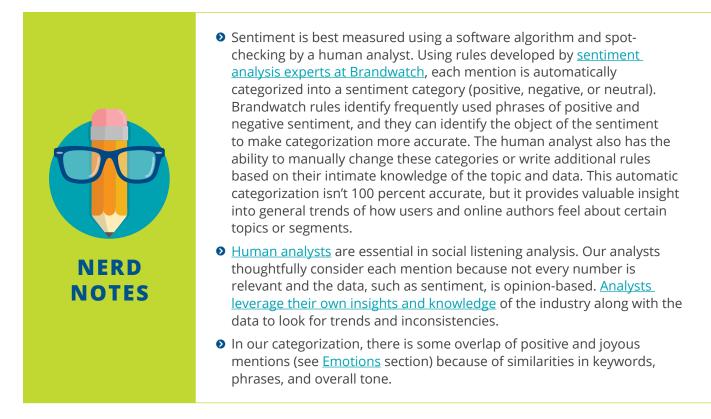
STAGE	TOP TOPICS	TOP HASHTAGS
Prospective	high school, applied to [x] university, visited [x] university, computer science, local community college, college of engineering, next year, senior year, financial aid, first time, 4 years	#university, #travel, #art, #college, #education, #student, #health, #motivation, #campus, #study, #universitylife
Admitted (No Athletic Mentions)	accepted into [x] university, studying at [x] university, excited to announce, committed to, next year, community college, happy to announce, proud to announce	#college, #FightOn, #GoBlue, #RollTide, #Godawgs, #Beardown, #BamaBound, #Classof2018, #IGotIntoUSC, #Classof2022, #Backtoschool, #Hookem, #accepted
Admitted (Athletic Mentions)	high school, received an offer, one day, next year, senior year, full time, play football, hard work, super excited, college basketball, next fall	#Fitness, #College, #AGTG (All glory to God), #blessed, #football, #basketball, #sports, #healthyliving, #gym, #motivation, #noexcuses

FIGURE 10

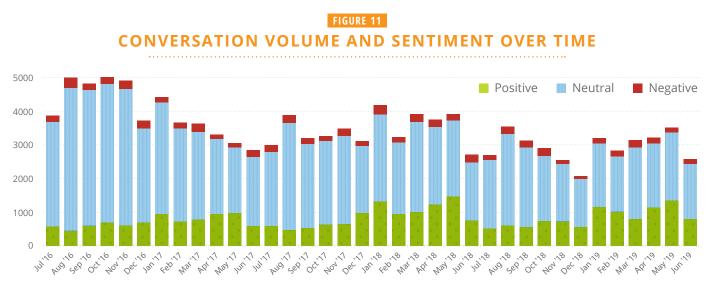
We found that the topics and hashtags common among prospective students have an aspirational tone, focused on goals and broad ideas of the college experience. The admitted student findings with athletics excluded are direct and precise, often containing topics and hashtags affiliated with particular universities and programs. The admitted student findings with only athletics includes specific sports, commitments to particular athletic programs, and hashtags that align with fitness or sports-related messaging.

SENTIMENT

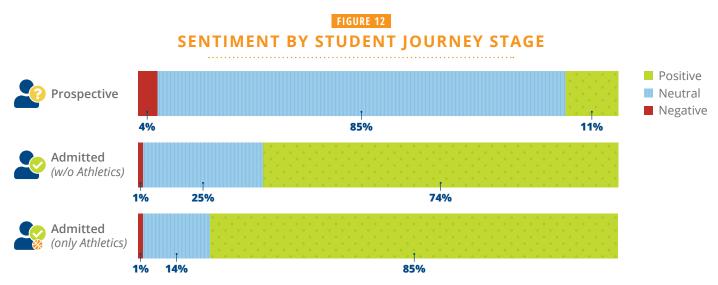
Sentiment is the emotional tone behind students' online conversation and is used to gain an understanding of the attitudes, opinions, and emotions students express. Understanding how students feel about the admissions journey can help admissions teams better understand their target audiences and develop outreach and engagement strategies to address the unique emotions and sentiment of the admissions journey. We segmented our dataset to compare topics, volume, and trends between positive and negative mentions.



We analyzed the ebbs and flows of positive and negative sentiment, correlating them with the seasonal trends of the typical college admissions cycle as seen in <u>figure 11</u>. The pattern is similar to how total mention volume over time coincides with the same process (<u>figure 2</u>). Positive sentiment, often driven by admitted student mentions, is greater each year from January to May—the same time many admissions decisions are released and students commit to universities. Many college admissions posts are tagged as positive mentions, as the authors celebrate their acceptance to their preferred institutions. Negative mentions are primarily driven by prospective student authors, and don't appear to rise or fall much during the year, potentially due to the constant and ongoing college recruitment process from junior year in high school and beyond.

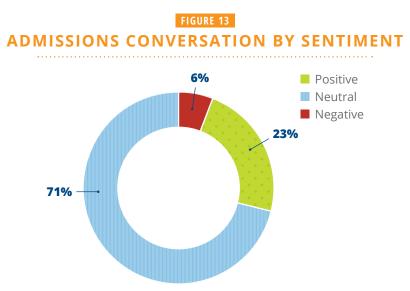


We also compared sentiment across admission stages of prospective, admitted without athletic, and admitted with only athletic mentions (figure 12). Prospective student online conversation has the greatest volume of negative and neutral mentions. Both admitted student stages were at least 74 percent positive, which correlates with the trends of joy-related mentions of <u>emotion conversation</u>.



When thinking about the type of content at each stage, the presence of more neutral or negative conversation among prospective student mentions (compared to either admitted stage) is consistent with their emotional journey. Prospective students are often younger than eighteen and might be more focused on the stresses and anxieties of the application process or have questions about what to expect and others' experiences. With mostly positive conversation, admitted students are more likely to share when they're ready to accept an offer to a particular institution or share positive news about acceptances; it's much less common to see a student post publicly online about a rejection.

Looking even closer at conversation related to admitted students, knowing that 21 percent of all conversation is from admitted students (figure 1), we found that three quarters of their conversation is positive (figure 13), which allows us to conclude that 16 percent of all conversation we looked at is positive and driven by admitted students. A separate seven percent of all conversation we looked at is positive and driven by a factor other than admitted students.



We also broke positive and negative mentions down by topic and hashtag (<u>figure 14</u>), combining the prospective and admitted student conversation and using the same methodology we used in the <u>general breakdown</u> <u>of topics and hashtags</u>. Positive online mentions relate to admitted students and the aspirational college experience. Negative mentions focus on the anxieties of the college experience, paired with evidence of the consequences of college-induced stress.

FIGURE 14 NFGATIVE POSITIVE **TOP TOPICS TOP HASHTAGS** TOP TOPICS **TOP HASHTAGS** attending [x] university, #love, #university, #college, [expletives], high school, #art, #anxiety, accepted, committed, visited #photography, #travel, financial aid, student #aesthetic, #sad, [x] university, excited, proud, #happy, #cute, #fitness, debt, student loans, bad #anorexia, #depression, received an offer, applied to #beautiful grades, full time job, #mentalhealth, #motivaton, college, fell in love community college #whatsyourstory

Another way we analyzed sentiment is by emoji use among positive and negative mentions. We found that emoji use is exponentially greater for positive mentions, with <u>figure 15</u> showing the top 10 emojis used in student conversation. According to social listening <u>research</u> from Brandwatch, 75 percent of all emojis published on Twitter are categorized in a positive context. This is consistent with our findings as the top 10 emojis from our dataset are positive or neutral.

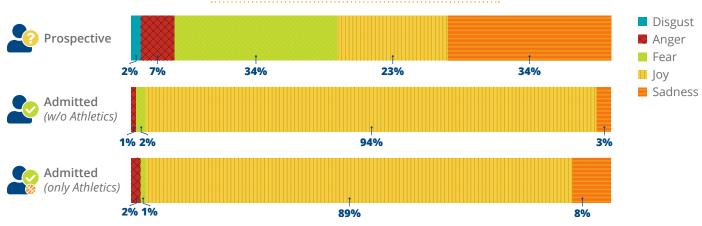


EMOTIONS

Analyzing the emotion of a particular stage reveals additional details about the type of mention and content that make up prospective and admitted student conversation.

As with sentiment, Brandwatch automatically categorizes each mention with an emotion—joy, fear, anger, surprise, disgust, sadness, or none. Figure 16 shows a visible difference in emotions between prospective and admitted student mentions, either without athletics or with only athletics.

FIGURE 16 EMOTION BY STUDENT JOURNEY STAGE



The emotions breakdown across stages is compelling and illustrates the fundamental nature of each stage.

- Prospective mentions have the most diverse emotional breakdown, with a healthy mix of sadness, joy, fear, and anger. This isn't particularly surprising given the difficult and sometimes overwhelming process of college applications, standardized testing, financial aid, and college commitment.
- We broke the admitted student mentions into two additional segments—without athletics and with only athletics. Both categories have an overwhelming degree of joyous mentions, aligning with the emotions one might expect students to feel as they receive and share college admissions news. We also found that high school students are more likely to share positive news of college admissions rather than negative or neutral news.



All English mentions collected in 2019 forward are automatically classified by emotion. The automatic classification is done by machine learning using a trained model to predict the emotion. The automatic coding in these graphs isn't 100 percent accurate and should only be used at-a-glance to spot changes and trends. Historical mentions (those collected prior to 2019 for this snapshot) are not always categorized by emotion, which explains why only a small percentage of total mentions are classified by emotion.

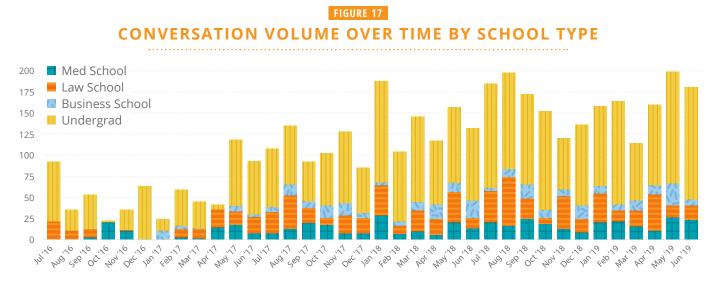
WHO ARE STUDENTS MENTIONING?

Finally, we looked at who was showing up in students' conversation across institutions. No, not individual people—sorry for those of you who are favorites on campus. We know all students aren't created equally; they have individual goals and career paths unique to them that influence things like what they study. We wanted to find out more about how those goals and career paths might influence their online conversation.

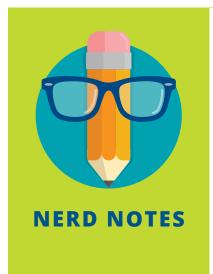
SCHOOL TYPES

We segmented our data by school type, which allowed us to identify trends, insights, and perspective on how the admissions journey differs depending on students' individual goals and career paths.

Our categories of school types included undergraduate, medical school, law school, and business school, and we analyzed the volume of conversation for each type over time (figure 17). Collectively, these categories only make up three percent of the total mention volume (4,194 mentions), and of that three percent, 20 percent reference a specific college or university (846 mentions).



The undergraduate school type has the greatest volume of mentions of the four categories, followed by law school, medical school, and business school. While there are not any initial trends or cycles, there are certain months and time periods with increased volume.



Our analysts built school type segments using keywords and phrases commonly associated with each category. For example, to categorize medical school mentions they narrowed the search down to mentions that included:

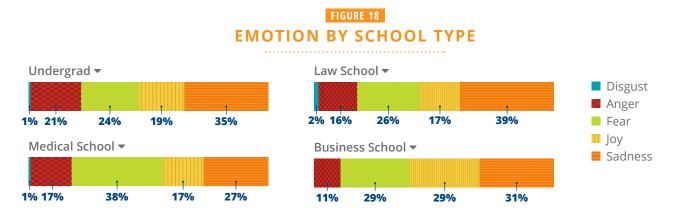
- General terms such as med school, medical school, or school of medicine.
- References to career aspirations, such as studying to be a doctor, surgeon, pediatrician, and other specific tracks.
- Terms specific to the medical school admissions journey such as MCAT.

The analysts used this same method to segment each school type category.

SCHOOL TYPES INCLUDING SENTIMENT AND EMOTION

We also compared school types by sentiment. This analysis offers insight into how students' online conversation changes depending on the type of school and/or career they're interested in (figure 18). This information offers insight for admissions teams in how addressing fears and anxieties and capitalizing on exciting or joyous mentions could help assuage fears, celebrate students, and build relationships.

For sentiment, we found that all of the school type categories are similar with about 18 percent positive and eight percent negative. The business school mentions vary slightly with 24 percent positive and only six percent negative. The negative sentiment stems from forums that discuss career path and broad life choices.



The breakdown for emotion is relatively similar across school types, with a few interesting exceptions.

- Medical school mentions have the greatest degree of fear at 38 percent. This likely stems from anxieties about the academic rigor associated with medical programs and the stress and serious nature of being a doctor or surgeon after graduation. This emotion is especially present in forums.
- Law school mentions have the greatest degree of sadness at 39 percent.
- Business school mentions have the greatest degree of joy at 29 percent. This likely stems from aspirational feelings and optimism for the future, particularly related to future careers.

SCHOOL TYPES INCLUDING TOP TOPICS AND HASHTAGS

Similarly to exploring general top topics and hashtags by admissions stage, we looked at top topics and hashtags by school type (figure 19). We analyzed specific phrases and keywords that would likely provide insight or narrative into conversation (all topics we analyzed are the top 30 items discussed by volume), excluding generic keywords such as *college, university*, or *happy* (despite them having high mention volume).

SCHOOL TYPE	тор торіся	TOP HASHTAGS
Undergraduate	degree, applied to [x] university, experience, undergraduate, state university, bachelor's, accepted to [x] university, program	#college, #love, #education, #graduation, #health, #realstories, #goals, #classof20xx, #degree
Medical School	medical school, MCAT, GPA, students, residency, pre-med, college of medicine, research, conference	#medicine, #medicalschool, #womeninmedicine, #mydreams, #medstudent, #blessed, #surgeon

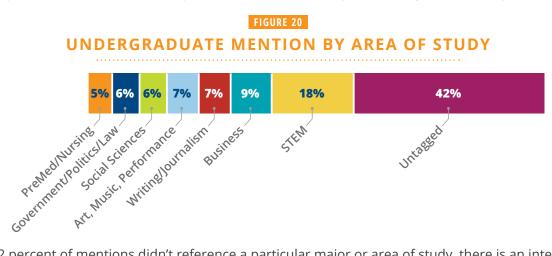
FIGURE 19

SCHOOL TYPE	TOP TOPICS	TOP HASHTAGS
Law School	law school, LSAT, attorney, accepted to [x] university, getting a job, experience, scholarship, prestigious, hard, support	#lawschool, #lawyer, #studygram, #lawstudent, #law, #thurgoodmarshall, #study
Business School	business school, program, GPA, MBA, marketing, accounting, management, finance, state university, applied to [x], future	#mba, #university, #realestate, #marketing, #learning, #bethechange, #technology

Overall, top topics and hashtags for each school type are representative of what one expects for each, from general experiences to career titles or functions. Some individual keywords stood out as terms that are more indicative of the differences between school types. Undergraduate mentions contain hashtags with aspirational terms. Law school mentions contain terms that indicate more professional and career-minded conversations.

UNDERGRADUATE AREAS OF FOCUS

We continued to segment undergraduate mentions into general areas of study to gain additional insight into the admissions journey (figure 20). Out of the entire undergraduate mentions, 6 percent are prospective student mentions, 11 percent are admitted student mentions (of which 60 percent reference a specific area of study), and 83 percent are general admissions mentions. Additionally, only 16 percent of undergraduate mentions are specific to a particular institution and 84 percent don't mention a specific college or university.



Although 42 percent of mentions didn't reference a particular major or area of study, there is an interesting breakdown outside of that group. The largest segment in this section is STEM (Science, Technology, Engineering, and Mathematics), with mentions including references to engineering, software development, and—most commonly—computer science. A large segment of mentions doesn't reference a specific area of study. Two percent of the entire dataset pertained to undergraduate mentions, and 58 percent of this segment is specific to a major or academic interest.

Understanding the areas of study students are interested in can help you develop a content strategy and create outreach content. With STEM students sharing the most online, STEM programs and colleges can provide messaging to engage students and help them share their admissions news. It might also be an opportunity for notable alumni or influencers in one of those fields to engage with or congratulate admitted students.

When recruiting, if you know students interested in particular fields tend to be more active on social channels, you have an opportunity to tailor your content to talk about your program's advantages, internship opportunities, career placement, and more.

Digging Into Twitter: Common Questions from Prospective and Admitted Students

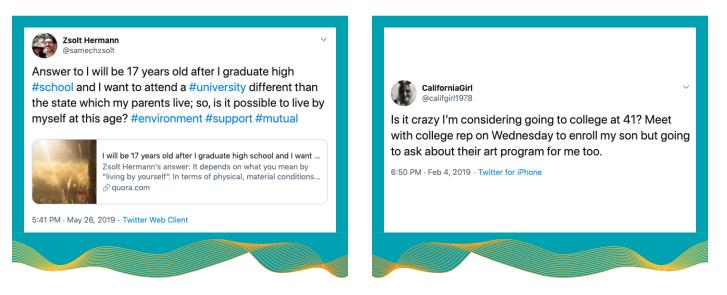
Twitter is the most accessible data source for social listening and one of the easiest platforms an admissions department can use to monitor conversation and engage prospective and admitted students. With more than 100,000 admissions mentions from Twitter, we wanted to identify common questions that might further help admissions professionals. Of the 109,000 tweets in our analysis, 5,000 are relevant student questions about the process or particular schools (4.6 percent of total Twitter volume).

Within the 5,000 mentions, 4,360 (90 percent) are general mentions, with 390 (6 percent) and 220 (4 percent) from prospective and admitted mentions, respectively. This offers a unique opportunity for admissions departments to hone in on specific students and engage them by answering their questions and guiding their journey. Meaningful personal engagement is difficult to come by with the many thousands of students who apply to college each year, but admissions departments that identify and answer questions have a huge advantage.

Some of the most common questions include general inquiries about whether to attend a college or not, admissions requirements, and expectations of admittance. More specific questions are about particular schools, programs, and majors. We've included some examples with insight into the value admissions teams might gain from listening and/or responding.

GENERAL QUESTIONS

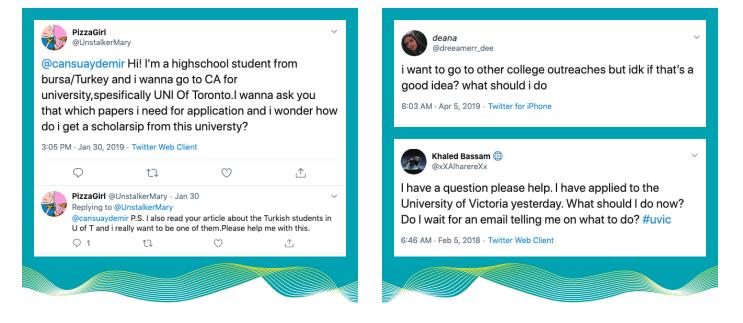
General questions focus on the admissions process, personal inquiries, and the college experience. These provide insight into the general admissions segment and are valuable online engagement opportunities.



QUESTIONS ABOUT THE ADMISSIONS PROCESS

Some questions focus on the admissions process, including questions around admissions requirements, standardized testing, applications, and the process in general. These questions expose shortcomings in the information currently available to students—it's not always clear to prospective students how they're meant to get more information and eventually apply to an institution.

While you can address these sorts of questions directly with the students who ask them, you should consider if they need to be addressed broadly and if there is the potential to improve the overall admissions process, further helping students have a successful (and maybe even enjoyable!) experience.



QUESTIONS ABOUT FINANCIAL AID

Financial aid inquiries focus on scholarship opportunities, federal aid, student loans, and general financial issues. This is an important topic in today's higher education discussion and is a common concern among prospective students, in particular surrounding their fears of taking on debt. When we look back to our <u>admissions conversation by sentiment</u> breakdown, the topics of financial aid, student debt, and student loans are most frequently tied to negative emotions. This knowledge can help you tailor your responses accordingly, so students feel you empathize with them.





If I wanna go to college out of state, is it cheaper to start in state for like the first year and then transfer?

7:32 AM · May 15, 2017 · Facebook



College or no College? This choice is legit the hardest shit I've ever had to make. I could go to a Tech school like ICTC for HVAC and make a comfortable 80,000 a year with no debt out of school, or I could go to college and have over 100.000 dollars in debt with better pay.

6:25 PM · Feb 1, 2019 · Twitter for iPhone

QUESTIONS ABOUT SCHOOLS, PROGRAMS, AND MAJORS

Some questions focus on students' decisions among various institutions and areas of study. They may be specific, referencing a particular university, or more vague in their search. These questions are inquiries based on opinion rather than fact, but they can be excellent engagement opportunities for an admissions department—especially ones with current students on staff who can share their own personal experiences. Key insight can be found in our <u>undergraduate mention breakdown by area of study analysis</u>. You can use this analysis to cross-reference the programs with the most mentions, programs you offer, and questions prospective students have so you can focus your content and provide the information your students want.



A Deeper Look at Online Admissions Conversation

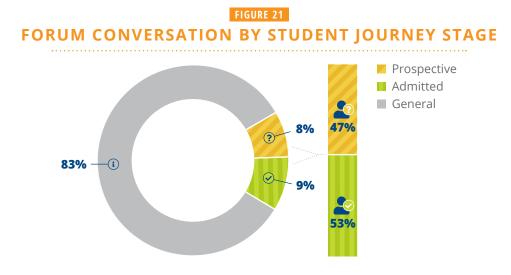
As we went through our analysis, we developed additional questions that prompted us to dig even further. We wanted to know how much of the conversation centered around specific institutions, what the forum conversation was like, and the impact of athletics.

INSTITUTION-SPECIFIC VS. GENERAL ADMISSIONS CONVERSATION

We analyzed mentions that referenced a specific institution, rather than college as a general topic. Twentyfour percent of mentions referenced one or multiple specific universities or higher education institutions. This segment garnered 63 percent positive sentiment and only two percent negative sentiment. The content of the mentions indicates that the majority of students who reference a specific institution only do so once they've been admitted, which explains the trend toward positive sentiment. Mentions that don't reference a specific institution are 10 percent positive sentiment and seven percent negative sentiment; these mentions are broader and more speculative and don't always have a specific emotional tone.

ONLINE ADMISSIONS CONVERSATION ON FORUMS

With the rise of online forums, we wanted to know more about the conversation on them. We analyzed forum conversation by admissions stage, but found low numbers of mentions that were specific to a stage—eight percent were prospective mentions and nine percent admitted mentions. Figure 21 shows that the majority of mentions (83 percent) were general, but the nature of Reddit threads in social listening is that sometimes individual comments in threads are counted as entirely separate mentions. This doesn't dilute the content we see in forum mentions, but it may classify more comments as general mentions.





The forum volume we have access to in Brandwatch was minimal until May 2017, when the total mention volume slowly increased. In May 2017, Brandwatch gained <u>additional access</u> to forum conversations and in December 2017, the top 8,000 subreddits were added to Brandwatch. This change significantly increased our analysts' ability to view forum mentions, which also increased the relative volume of forum mentions. Admissions mentions on forums peaked in March 2019, at around 150 mentions found per month. We expect social listening will find even more forum mentions moving forward with the November 2019 Brandwatch change that allows us access to every subreddit.

People who feel really strongly about a topic tend to congregate in niche spaces, such as forums. <u>Reddit</u> and other discussion forums are a <u>goldmine of content</u> that is authentic and relevant. You can find admissions-related content and questions students and their families have about applying, visiting, and attending your institution and competitor institutions. The conversations can help you engage with students, but also develop a content strategy specific to your prospective student audience that addresses their questions and concerns.

Reddit has a number of online communities exclusively devoted to college admissions topics, such as the general <u>r/ApplyingToCollege</u> admissions forum or <u>r/ChanceMe</u>, a forum dedicated to rating students' odds of acceptance to a particular school.

Reddit—Should you choose a major before applying to college? A prospective college student in <u>r/ApplyingToCollege</u> asked their peers for advice regarding how to select a major, and how this decision could affect their college experience, career plans, and outlook for the future.

Reddit—McGill University Prospective Students MegaThread

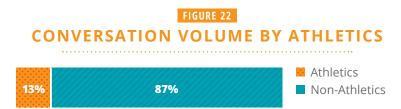
The community <u>r/McGill</u> is dedicated to students and alumni of McGill University in Montreal. The thread is a large discussion with more than 2,500 total comments. The replies consist of current students and prospective/admitted students answering each other's questions about student life, McGill compared to other universities, and whether or not to attend McGill.

ADMISSIONS AND ATHLETICS CONVERSATION

Another aspect of the admissions journey that stood out to our analysts is that student athletes have a very different journey. This is primarily due to the amount of recruiting, scholarship offers, and high number of schools prospective student athletes may consider.

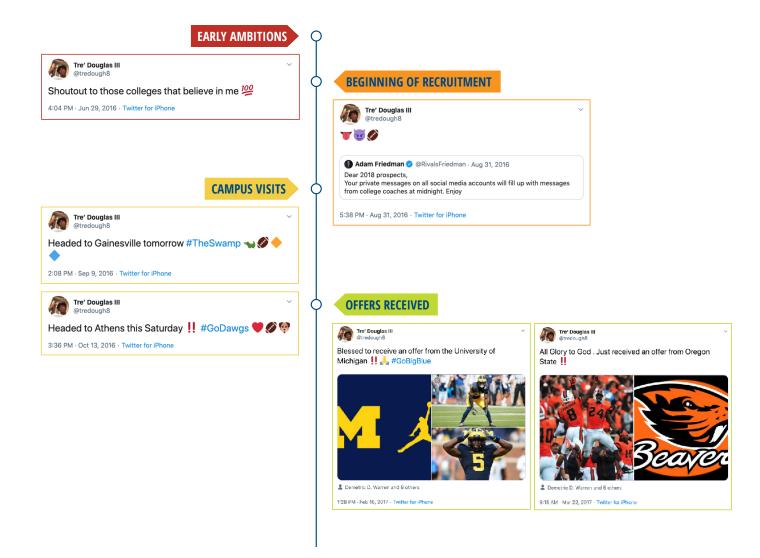
We segmented the admissions conversation by athletic and non-athletic mentions to gain additional insight. We found a unique perspective on the admissions journey because some athletes document their entire recruitment process online, particularly on Twitter. Athletes announce program visits and scholarship offers, share their thoughts and opinions, and eventually share their final decision as they narrow down their options. It's rare to find such a clear example of a student's thought process documented so thoroughly. Student athletes take great pride in the offers they receive and don't hesitate to share the news with their friends, family, and peers.

When we looked at the entire dataset, we found 13 percent of the admissions conversation mentioned athletics, leaving 87 percent that didn't mention athletics (<u>figure 22</u>).



Digging deeper we found that the authors in our dataset who had the greatest online following were generally athletes. Most often they were admitted student athletes who gained a minor degree of fame from their sport and were respected high school recruits or D1 athletic commits for major athletic programs.

Tre Douglas III is an example of a student athlete author. He was a prospective college applicant in 2018 and is currently a defensive back for Vanderbilt University. He received a large number of offers from top collegiate football programs and his series of posts share his thoughts as he narrowed down his options to make a decision. His posts also show the hundreds of friends and peers who engaged with him, sharing praise and feedback on his admissions journey.



NARROWING THE DECISION



TOP 7 . Always subject to change but this is where I feel God has led me . Please Respect My Decision.



2 Chad Simmons and 7 others 4:02 PM - Apr 22, 2017 - Twitter for iPhone



Tre' Douglas III @tredough8





8:32 PM - Apr 11, 2017 - Twitter for iPhone

Tre' Douglas III @tredough8

L Tre' Douglas III and 5 others

7:12 AM - Jun 22, 2017 - Twitter for iPhone

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COMMITTING TO VANDERBILT



Tre' Douglas III @tredouch8

L Chad Simmons and 4 others

12:28 PM - May 24, 2017 - Twitter for iPhone

It's Been A Long Road . God's Not Done With Me Yet ! Vanderbilt Commit #AnchorDown 🖞 🖞



the become to this day and for staying by yilde through this whole process. I ouid also like to thenk my triends and ammates who have been right next to the through this whole process and have ever switched up. Finally, I also want to and: the coaches who have given me an apportunity to play at the next level. With

12:17 PM - Aug 1, 2017 - Twitter for iPhone

24 Retweets 142 Likes



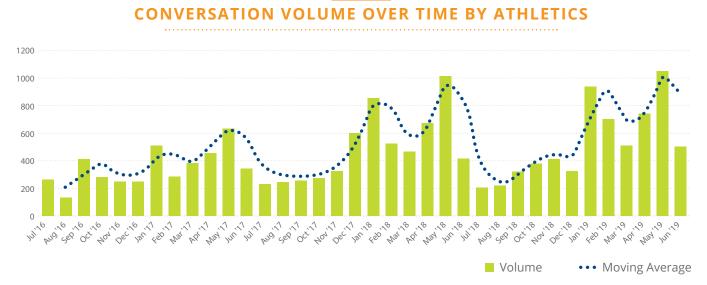
Tre' Douglas III @tredough8

It's only the beginning .. 1000% committed .



Similar to overall mention volume over time (figure 2), athletic mentions (figure 23) mimic the collegiate recruiting cycle Tre Douglas's social media content outlines. The majority of the athletic mentions are from students sharing news of scholarship offers, commitments, and letters of intent. We also see the seasonal swells as the online conversation parallels the recruiting cycle—volume increases in the winter, peaking in late spring when students commit to their university of choice.

FIGURE 23



While we did not see a significant difference in the demographic breakdown between prospective and admitted student mentions when we compared them to each other, student-athletes are the exception. The category is 91 percent male and nine percent female, which is a heavy demographic skew.



Our analysts note that not all Twitter mentions provide access to demographic data. The demographic data we used is based on individual privacy settings and the degree of personal information Twitter users disclose in their account setup.

Conclusions

For admissions and enrollment pros, identifying the stages of the journey students embark upon when making college decisions is relatively easy. We know students research their options, make decisions, and enter into newly admitted activities. And this knowledge guides how institutions create their website content and experiences, outreach plans, acceptance letters, campus visits, and more. But what of students' fears? What of the specific questions they ask in each step of their journey? What of the platforms they use to seek answers? What of their early campus experiences? Do these considerations factor into how institutions create the journey their potential and newly admitted students experience?

Prospective students express anxiety in the early stages of their admissions journeys. They're heavily in a research stage where they're searching for expected information like if a school has their major, what graduation rates are, or how to apply. But they're also looking to know they'll be supported and fit in. They want to know if there are mental health resources on campus, what a day-in-the-life of a student looks like, what to expect as a student athlete, what on-campus living is like, etc., and they want to get this information from actual students. Institutions should work to ease these anxieties and make information as easy to find for these secret shoppers as possible. Demystify the process, from campus culture to the actual application process using current student influencers and peers that will make it relatable. Consider where and how imperative information is communicated on your website or via your social accounts. Help them feel heard and address their anxieties.

Admitted students are excited about the huge decisions they're making! Give them an outlet to share that excitement and realize it's an opportunity to engage and celebrate along with them. It's important to understand the transition from that anxious, research-heavy prospect stage into the emotional, personal, and tangible sentiment of the admitted stage. Make the campus visit accessible and less overwhelming for students and families and bring visit information and experiences into online conversation where other students can see it. Consider how you communicate about early on-campus experiences across your owned media (e.g., website, admissions pages, social)—is information easy to find? Can it be simplified? Can your online conversation and owned media speak to your campus in a way that eases anxiety and creates connections for new students?

So when asked if these considerations factor into how institutions create the journey their potential and newly admitted students experience, the short answer is: they should. There's so much to gain from listening, and even more we can do with what we learn.



Methodology and Limitations

DATA COLLECTION

Campus Sonar leveraged Brandwatch, an enterprise-level social listening tool to collect publicly available online conversation from post-secondary students who were prospective or admitted to any higher education institution. Social listening tools like Brandwatch allow social media data analysts to write very specific search strings (Boolean queries) to find public online conversation about a brand or topic. The social listening query pulls public content from Twitter, Instagram, Reddit, forums, news sources, blogs, and other public sites. We wrote a query in Brandwatch using 135 unique terms and phrases, along with just as many Boolean operators (i.e., and, or, not) to be as specific as possible in terms of our targeted online conversation. We also limited our search to mentions on Twitter, Instagram, Reddit, or any other college-specific forum.

ANALYSIS APPROACH

We segmented the data collected using proprietary Boolean rules and categories. A rule in Brandwatch identifies a group of mentions within an already existing dataset. For example, the segment for prospective students searches the conversation brought in by the original query and categorizes mentions matching phrases such as *I visited the University of* or *I might apply to.*

While the primary research approach was to garner industry-wide insights into patterns and trends in the admissions journey annually (to help predict the type of mentions and the volume of mentions moving forward), the primary analytical approach compared trends in specific segments versus trends of larger groups. Clearly defining these segments and comparing certain metrics among them allowed us to illustrate a clearer picture of the amount of conversation, where it's occurring, and how institutions can cater their strategy to these segments.

We used the following categories to segment the data.

CATEGORY	DESCRIPTION	ANALYTICAL VALUE
Admissions Stage	Mentions categorized based on certain keywords, phrases, verb tenses, and personal pronouns to determine if the authors were prospective students or already admitted students. Prospective: Students who are looking to go to a college or university or are discussing the idea of it.	This is an important distinction to make when analyzing conversation among the stages of the admissions journey. It allows our analysts to separately examine the stages of the admissions journey, comparing the differences in various social listening metrics to draw conclusions and insights about online conversation.
	Admitted: Students who have been admitted into one or multiple institutions and are reflecting on the admissions process or preparing for their upcoming college experience.	
Athletic Affiliation	Mentions that relate to athletics; for example, discussing admissions related to an athletic scholarship, letter of intent, or playing for a collegiate athletic program.	A large volume of total mentions came from athletics, which is typical for most higher ed institutions. The ability to segment this topic provides a clearer picture of admissions conversation generated from non-student athletes. Athletic mentions are also distinct from non-athletic mentions because of the inherent differences in the recruitment process and timeline.
Program Type	We defined the top four relevant program types found in our dataset as Undergraduate, Medical, Law, Business, or none. We did this using keywords and key phrases related to the program type; for example, for the medical school category, we used an automated rule based on phrases such as <i>school of medicine,</i> <i>medical school, become a doctor, medical</i> <i>residency,</i> or <i>MCAT,</i> among others.	The ability to compare topics, sentiment, and emotion among the types of institutions gives important insight into how students might relay admissions conversation for graduate school versus undergraduate school, or how conversation may change in regards to traditionally more difficult programs.
Раде Туре	Each mention is defined by its page type of origin, including Twitter, Instagram, forums, news outlets, and blogs.	Online conversation is valuable in context with its page type. For example, Campus Sonar analysts view forum mentions differently than we view tweets, due to the types of content and information available to us; Twitter provides a great deal of information about their users, whereas forum comments are often entirely anonymous.
Specific vs. Non-Specific	Each mention is defined based on a reference to a specific college or university, or if it simply refers to college admissions generally.	Student authors may discuss the college experience differently if speaking in vague terms (no specific university mentioned) versus more specific terms (listing top options, or sharing acceptance news). This distinction, measured by our social listening metrics, adds value to our overall understanding of the process.

SOCIAL LISTENING LIMITATIONS

Social listening is an extremely useful tool to collect and analyze publicly-available online conversation quickly and in a cost-effective manner; however, like any form of research, it has some limitations.

- Social listening identifies only publicly-available online mentions. Our analysis does not include conversations from Facebook, LinkedIn, content behind a login (e.g., a paywall), or Twitter or Instagram users who set their accounts to private.
- **Historical Instagram data.** Instagram limited third-party use of its public data in December 2018. This study includes limited historical data from Instagram beginning in January 2019.
- **Historical Twitter data sampling.** We sampled Twitter data at 10 percent of the actual mention volume, and we estimated volume from the site at 100 percent within the resulting dataset.
- Location accuracy. Twitter and Instagram have precise geotagging that can be tagged to the city level. All other data sources can only be tagged to the country.

Because of the nature of forums such as Reddit (i.e., the large volume of text and sometimes unrelated opinions all on the same webpage), social listening typically collects a large volume of mentions that require significant cleaning by hand to ensure relevancy for each study. Because of this, some of the metrics we used to measure forum mentions don't align with the rest of the dataset. For example, the <u>emotion breakdown</u> for forums is 88 percent sadness, anger, and fear, with only 11 percent joy; this doesn't align with the emotion breakdown found in other segments, or the dataset as a whole. The rest of the data has a much greater degree of joy, as associated with college acceptances. For this study, we removed most irrelevant mentions so they don't affect the quality and accuracy of our data. This allowed us to gain valuable insight, such as a unique look at peer-to-peer interaction online.

CLEANING FOR ACCURACY

The most important step in social listening data collection, after the mentions are properly segmented, is to clean the data. This means that there aren't many stray mentions that are unrelated to our research topic. The dataset for this study brought in almost 130,000 mentions over three years; however, after data cleaning and a goal of 90 percent accuracy, we identified more than 4,000 irrelevant mentions that were removed from the dataset.

One example of irrelevant conversation revolved around a song that was released in June 2019 by rap artist NF. His song leads off with the lyrics *"I could go to college, get in debt like everybody else; Graduate and probably get a job that doesn't pay the bills."* Based on some of the key phrases in our search query, an individual who tweets these lyrics would match our criteria, and their tweet would be brought into our system. Through identifying patterns and using automated rules and manual cleaning, we removed mentions like this one to ensure global accuracy.

This is the true value of a Campus Sonar human analyst, supplemented by <u>machine learning and AI capabilities</u> built into Brandwatch. Our software is a robust social listening tool, but it has yet to fully grasp ensuring relevance and accuracy to the research question and goals. <u>Human analysts can dig deeper</u>, are better at adding context, and are capable of handling nuanced issues, segmenting data appropriately and effectively translating quantitative data into qualitative insights.

Admissions Report Glossary

ADMISSIONS STAGE

Where students are in the college admissions process—completing an application, visiting campus, or enrolling. For our analysis, we defined two primary stages: prospective and admitted students.

ADMITTED STUDENTS

Students who have been admitted into one or multiple institutions and for the purposes of this report are reflecting on the admissions journey or preparing for the upcoming college experience. This category only includes students who've already been accepted to or are already attending an institution.

ALGORITHM

A process or set of rules our social listening software follows in calculations or other problem-solving operations, such as segmenting sentiment or emotions.

BOOLEAN OPERATORS

The most common Boolean operators are AND, OR, and NOT, and they ensure conversation results are refined, accurate, and useful. Queries are constructed of Boolean operators.

BRANDWATCH

The world's leading social intelligence company with software solutions that help customers by analyzing their online conversation. The tool includes blogs, news sites, forums, videos, reviews, images, and social networks such as Twitter and Facebook. Users can search data by using text and image search, and use charting, categorization, sentiment analysis, and other features to provide further information and analysis. Brandwatch has access to more than 80 million sources.

CLEANING DATA

The process of finding and removing inaccurate or irrelevant mentions from a dataset.

CONVERSATION VOLUME

The amount of online conversation that occurs over a specific time period.

FORUMS

Online discussion sites where people converse in the form of posted messages. Forums differ from chat rooms in that messages are longer than one line of text and are temporarily archived. Reddit and support forums are examples.

GENERAL MENTIONS

Conversation that doesn't directly fit into a specified segment. This category avoids diluting the quality of the data in our prospective and admitted categories and builds a better distinction between specific and non-specific mentions.

GEOTAGGED MENTIONS

Social media posts or mentions that have geographical identification metadata added.

MACHINE LEARNING

A method of data analysis that automates analytical model building. It's a branch of artificial intelligence based on the idea that systems can learn from data, identify patterns, and make decisions with minimal human intervention.

MENTION

The part of a conversation that matches a social listening query and is captured by social listening software. Examples include a tweet, forum post, blog post, article comment, or Reddit post.

MOVING AVERAGE LINE

A calculation to analyze data points by creating a series of averages of different subsets of the full dataset. This is commonly used with time series data to smooth out short-term fluctuations and highlight longer-term trends or cycles.

MOVING AVERAGE TRENDLINE

A trendline smoothes out fluctuations in data to show a pattern or trend more clearly. It uses a specific number of data points, averages them, and uses the average value as a point in the trendline.

QUERY

A request for information from a social listening database or software. It defines the scope of the conversations you collect through social listening.

PAGE TYPE

The page a mention originated from, such as Twitter, Instagram, forums, news outlets, or blogs.

PROSPECTIVE STUDENTS

Students who have pre-college admissions conversations online, focusing on those planning to go to a college or university or discussing the idea of it.

SCHOOL TYPE

The type of institution or school, such as four-year public, community college, private, nonprofit, etc. It can also further identify a school of particular study on a campus, such as school of law or school of business.

SEGMENT

A division of the dataset into separate parts or sections, such as by admissions stage or school type.

SENTIMENT

The determination of online conversation that is positive, negative, or neutral. A caveat to this is that software can automatically determine sentiment but because there are nuances software can't determine (e.g., sarcasm), the best way to interpret it is through a human analyst's review.

SOCIAL LISTENING

The process of monitoring and analyzing online conversation for mentions of your brand, products/services, competitors, or other topics relative to your company.

SOCIAL MEDIA MONITORING

The process of finding online mentions sent directly to an organization's social media account.

TOP TOPICS

The words or phrases most often mentioned in online conversation (e.g., word clouds). They're a quantitative representation of qualitative data.

TOP HASHTAGS

The hashtags most often mentioned in online conversation (e.g., word clouds). They're a quantitative representation of qualitative data.

Resources

Agnew, P. (2018, January 9). *6 Facts About Emojis Found Using New Analysis*. Retrieved November 12, 2019, from <u>https://www.brandwatch.com/blog/6-facts-about-emojis-found-using-new-analysis/</u>

Bannister, K. (2018, February 26). *Sentiment Analysis: How Does It Work? Why Should We Use It?* Retrieved November 12, 2019, from <u>https://www.brandwatch.com/blog/understanding-sentiment-analysis/</u>

Gross, L. (2017, October 7). *What the Boolean! Are You Getting the Most Out of Your Social Listening?* Retrieved November 12, 2019, from <u>http://blog.campussonar.com/blog/what-the-boolean</u>

Healea, D., & Assistant Dean for Curriculum & Enrollment Services. (2018, October 4). *From Boom to Bust?: The Changing Landscape of Student Enrollment in Higher Education*. Retrieved November 12, 2019, from <u>https://www.naspa.org/blog/from-boom-to-bust-the-changing-landscape-of-student-enrollment-in-higher-education</u>

Higher Education Paid Search Advertising. Retrieved November 12, 2019, from <u>https://tsunela.com/paid-search-for-higher-education-companies/</u>

Jeppson, A. (2019, July 17). *Human Analysts Artificial Intelligence = Marketing Masterminds!!!* Retrieved November 12, 2019, from <u>https://blog.campussonar.com/blog/human-analysts-artificial-intelligence</u>

Jones, T. (2019, April 16). *How Does It Feel? Getting Your Brand Beyond Facts and Figures: Inside Higher Ed.* Retrieved November 12, 2019, from <u>https://www.insidehighered.com/blogs/call-action-marketing-and-communications-higher-education/how-does-it-feel-getting-your-brand</u>

Levine, B. (2018, August 14). *Brandwatch adds a Reddit 'mini-firehose' to its social data*. Retrieved November 12, 2019, from <u>https://martechtoday.com/brandwatch-adds-reddit-mini-firehose-social-data-199316</u>

r/ApplyingToCollege. Retrieved November 12, 2019, from https://www.reddit.com/r/ApplyingToCollege/

r/chanceme. Retrieved November 12, 2019, from https://www.reddit.com/r/chanceme/

r/mcgill. Retrieved November 12, 2019, from https://www.reddit.com/r/mcgill/

Ruffalo Noel Levitz & OmniUpdate. (2019). *2019 E-expectations trend report.* Cedar Rapids, Iowa: Ruffalo Noel Levitz. Retrieved November 12, 2019, from <u>https://www.ruffalonl.com/papers-research-higher-education-fundraising/e-expectations/</u>

Sandall, A. (2019, February 14). 2019 Online Conversation Benchmarks for Higher Education: A Campus Sonar Social Listening Study. Retrieved November 12, 2019, from <u>https://info.campussonar.com/benchmarks</u>

Sandall, A. (2019, January 23). *Six Reasons Why We <3 Human Analysts*. Retrieved November 12, 2019, from <u>http://blog.campussonar.com/blog/six-reasons-why-we-love-human-analysts</u>

Subreddit Stats. Retrieved November 12, 2019, from https://subredditstats.com/r/applyingtocollege

Trachta, A. (2019, September 5). *2019 College Admissions Report.* Retrieved November 12, 2019, from <u>https://www.niche.com/blog/2019-college-admissions-report/</u>

