STAKEHOLDER FEEDBACK REPORT ON ORGANIZATIONAL REVIEW FINAL REPORT TEXAS A&M UNIVERSITY AT GALVESTON

March 14, 2023
Executive Summary

Purpose: Texas A&M University (TAMU) contracted with DataWorks Partners to analyze responses to a university stakeholder survey, which was sent to students, faculty, staff, former students, members of the board of visitors, and affiliated industry stakeholders following release of the Texas A&M University at Galveston (TAMUG) Organizational Review Final Report. The purpose of the survey and analysis is to inform TAMU’s actions in response to the Organizational Review.

Survey Organization: The Findings and Recommendations section of the report was organized into 7 sub-sections, and TAMU’s survey was organized into those same divisions. Respondents were also asked about their “classification” (Current Student, Former Student, Faculty, Staff, Board of Visitors, Industry Partner/Affiliate) and their location (Galveston, College Station, other).

Survey Responses: There were 390 substantive responses to the request for feedback. All questions were optional, and surveys were included in this analysis as long as the respondent answered at least one of the seven opinion questions. Exhibits 1 and 2 summarize the breakdown of responses by group and survey questions.

The survey allowed respondents to submit unrestricted text input - in other words, as many words as they wanted to enter - organized however the respondent wished. The more than 117,000 words of feedback received translates into approximately 235 pages of single-spaced input to this effort from the TAMUG and wider communities. Exhibit 3 summarizes the volume of input from the 390 respondents.

Keywords/Topics:
Keywords and phrases were extracted from the hundreds of pages of text data using entity analysis and further consolidated into relevant topics. Some of the themes that emerged include the following, which are reflections of the Organizational Review content as well as stakeholders’ interests and priorities: institutional affiliation and Aggie identities; students; academic programs; and leadership and mission.

A detailed summary of the most frequently used substantive words and phrases from all the survey responses is shown in Exhibit 4. As would be expected, the topics most addressed by the respondents tied directly to the subject matter and specific language of the report recommendations.

Sentiment:
By survey group (see Exhibit 5) -
- The groups with the most positive sentiment distributions are Staff (77% NPS, and largest block of positive average sentiment scores) and Industry Affiliates (70% NPS and all non-negative average sentiment scores).
- The least positive distributions are Faculty (60% NPS) and Former Students (52% NPS). The remainder of the groups range from 63% to 69% NPS.

By respondent location (see Exhibit 6) -
- The respondents located at the Galveston campus have the most
positive distribution of sentiment scores, at 70% NPS compared to 60% and 59%, respectively, for those at College Station and those not reporting location.

By report Findings and Recommendations section (see Exhibit 7) -

- The set of recommendations about which respondents were most positive was Student Affairs (58% NPS), which address oversight of summer camps and other “minor programs” and with the balance between cultivating a specifically Galveston campus culture and belonging to a broader Texas A&M community.

- Three sets of report recommendations - Organizational Structure, Diversity, Equity, and Inclusion, and Aggie Student Experience - were all at about the same NPS (45%, 44%, and 44%, respectively) and similar distributions of positive and negative responses.

- And the two sets of recommendations with the lowest positivity, albeit both still positive, were the Sea Grant Mission (39% NPS) and Communications (35% NPS) sections.

Appendix 3 provides a detailed conceptual and methodological discussion of sentiment analysis generally and the method used in this analysis in particular.
Purpose

Texas A&M University (TAMU) contracted with DataWorks Partners to analyze responses to a university stakeholder survey, which was sent to students, faculty, staff, and former students by President Banks when the TAMU Organizational Review report was released. The purpose of the survey and analysis is to inform TAMU’s actions in response to the Organizational Review report. An example of an email from President Banks requesting community feedback is in Appendix 1.

Background

MGT Consulting was hired by the Texas A&M University System to conduct a high-level, comprehensive review of major functional areas at Texas A&M University. This review focused on the organizational structure of central offices at the executive level and administrative units at the college level. The MGT consultant team was charged with conducting interviews with a wide range of individuals in leadership positions, including faculty senate leadership, as well as providing the opportunity for input through surveys of faculty, staff, students, and former students. The consultant team was asked to identify changes that would restructure Texas A&M University in a significant way to increase effectiveness and transparency and to contribute to overall student success. MGT’s consulting report to TAMU is at https://tamug.edu/coo/pdf/TAMU%20Galveston%20Final%20Report.pdf.

Survey Overview

Through a stakeholder survey, TAMU leadership sought university input to help inform its response to the Organizational Review report. The survey was sent to students, faculty, staff, former students, the board of visitors, and industry affiliates on January 24th, and the survey was open for responses for one month, closing at the end of the day on February 24th. Multiple reminders were sent during that month to the various survey recipients to garner as much input as the community would give. The survey was structured according to the findings sections in the Organizational Review report, asking survey subjects to comment on each section of the report. Those sections are:

- Organizational Structure;
- Aggie Student Experience;
- Communications;
- Student Affairs;
- Diversity, Equity, and Inclusion;
- Academic Programs; and
- The Sea Grant Mission.

All survey responses were open-ended, meaning the respondents were free to write as little or as much as they pleased. The survey instrument is shown in Appendix 2.

In addition, the survey respondents were given the opportunity to provide their “Classification” (Current Student, Former Student, Faculty, Staff, Board of Visitors, Industry Partner/ Affiliate) and their “Campus location” (Galveston, College Station, Other).
Respondents

The raw survey data - the full text responses to each of the 7 survey sections - were exported from the Qualtrics platform for the survey period of January 24, 2023 to March 10, 2023. Once the data were filtered (removing spam responses and responses with no text), the resulting analytical dataset contained 390 valid responses with approximately 117,000 words. This is the equivalent of approximately 235 pages of single-spaced input from the TAMUG and wider community.¹ Exhibit 1 shows the distribution of those responses among the different stakeholder groups.

Exhibit 1: Survey Responses by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Respondents</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Students</td>
<td>79</td>
<td>20%</td>
</tr>
<tr>
<td>Former Students</td>
<td>42</td>
<td>11%</td>
</tr>
<tr>
<td>Faculty</td>
<td>121</td>
<td>31%</td>
</tr>
<tr>
<td>Staff</td>
<td>79</td>
<td>20%</td>
</tr>
<tr>
<td>Industry Partner</td>
<td>10</td>
<td>3%</td>
</tr>
<tr>
<td>Board of Visitors</td>
<td>16</td>
<td>4%</td>
</tr>
<tr>
<td>Not Reported</td>
<td>43</td>
<td>11%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>390</td>
<td>100%</td>
</tr>
</tbody>
</table>

¹ This is based on an estimate that a typical single-spaced page with 1" margins is approximately 500 words.

Survey Sections–Respondent Focus

Exhibit 2 shows a summary of each stakeholder group’s responses broken down by sections of the report to which they directed their responses.

Current Students, Former Students, and Staff responded more to the Aggie Student Experience section of the report than any other section, followed by Academic Programs for the Current Students, Communications for the Former Students, and Organizational Structure for Staff respondents. Faculty respondents most often remarked on the Student Affairs section, followed by Academic Programs and then the Aggie Student Experience. Industry Affiliates were most likely to respond to Organizational Structure, followed closely by the Sea Grant Mission and Aggie Student Experience sections. Board of Visitors respondents responded most to the Student Affairs, Diversity, Equity, and Inclusion, and Aggie Student Experience questions, followed closely by Organizational Structure and Communications. However, a caveat to these comparisons - in particular with regard to the small numbers of Industry Affiliates and Board of Visitors respondents - is that some of the differences in response rates among the sections are relatively small and arguably are differences of little or no practical significance. And overall there was a fairly robust response within groups to each of the report sections.
Looking further at the selectivity of respondents in choosing which questions to respond to as well as how detailed a response to provide, Exhibit 3 shows the variation among respondents in terms of the number of words in their survey responses. Note, these word counts represent the sum of all words in a given survey, so, for example, if a respondent answered five questions in the survey, this count would sum all words included in all of those five item responses.

This chart suggests that the bulk of respondents were either succinct in their answers or selective in answering only a subset of the questions. Yet, many respondents provided fairly voluminous input and appeared to spend considerable time answering the survey questions.
Location of Respondents

The survey asked about the location of the respondent and offered “Galveston,” “College Station,” and “Other” as options. The modal response (most frequent) was Galveston, which accounted for 41% of the respondents. 27% of respondents indicated College Station, and 2% Other. 30% of respondents did not answer that question.

Keywords/Topics

Methodology. In addition to simply computing a frequency of appearance for each word appearing in the body of the responses, keywords and phrases were extracted from the text data using a natural language processing (NLP) technique referred to as entity analysis. Entity analysis inspects the text for entities (nouns, basically) and returns information about those entities (e.g., number of mentions).

Results. Below, Exhibit 4 lists the top 50 most frequently used substantive and relevant entities, and the table shows the number of mentions of each of those across all survey responses.
**Exhibit 4: Most Common Substantive and Relevant* Entities Mentioned by Respondents**

<table>
<thead>
<tr>
<th>Topics</th>
<th># of Mentions</th>
<th>Topics, cont.</th>
<th># of Mentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galveston</td>
<td>1,433</td>
<td>resources</td>
<td>213</td>
</tr>
<tr>
<td>campus</td>
<td>1,356</td>
<td>experience</td>
<td>190</td>
</tr>
<tr>
<td>College Station</td>
<td>1,083</td>
<td>work</td>
<td>186</td>
</tr>
<tr>
<td>students</td>
<td>975</td>
<td>academic</td>
<td>183</td>
</tr>
<tr>
<td>faculty</td>
<td>574</td>
<td>studies</td>
<td>174</td>
</tr>
<tr>
<td>department</td>
<td>492</td>
<td>moving</td>
<td>152</td>
</tr>
<tr>
<td>sea</td>
<td>441</td>
<td>sciences</td>
<td>140</td>
</tr>
<tr>
<td>programs</td>
<td>370</td>
<td>campuses</td>
<td>137</td>
</tr>
<tr>
<td>oceanography</td>
<td>365</td>
<td>degree</td>
<td>136</td>
</tr>
<tr>
<td>program</td>
<td>361</td>
<td>Aggies</td>
<td>134</td>
</tr>
<tr>
<td>grant</td>
<td>358</td>
<td>people</td>
<td>134</td>
</tr>
<tr>
<td>TAMUG</td>
<td>341</td>
<td>leadership</td>
<td>131</td>
</tr>
<tr>
<td>staff</td>
<td>322</td>
<td>financial</td>
<td>130</td>
</tr>
<tr>
<td>Texas A&amp;M</td>
<td>322</td>
<td>communication</td>
<td>129</td>
</tr>
<tr>
<td>student</td>
<td>286</td>
<td>student affairs</td>
<td>123</td>
</tr>
<tr>
<td>research</td>
<td>275</td>
<td>Aggie</td>
<td>113</td>
</tr>
<tr>
<td>maritime</td>
<td>270</td>
<td>major</td>
<td>112</td>
</tr>
<tr>
<td>marine</td>
<td>262</td>
<td>recruitment</td>
<td>109</td>
</tr>
<tr>
<td>Departments</td>
<td>249</td>
<td>mission</td>
<td>108</td>
</tr>
<tr>
<td>university</td>
<td>249</td>
<td>ocean</td>
<td>107</td>
</tr>
<tr>
<td>report</td>
<td>247</td>
<td>science</td>
<td>104</td>
</tr>
<tr>
<td>support</td>
<td>231</td>
<td>recommendation</td>
<td>103</td>
</tr>
<tr>
<td>engineering</td>
<td>225</td>
<td>MARB</td>
<td>100</td>
</tr>
<tr>
<td>TAMU</td>
<td>216</td>
<td>opportunities</td>
<td>100</td>
</tr>
</tbody>
</table>

*Relevance determination was a subjective process. For example, words like “car” or “store” might have some relevant meaning in the context of a sentence, but alone it is unlikely to provide TAMU with insight into stakeholder opinions and thus would be excluded here.*
The most frequently expressed topics are a reflection of the report subject areas and recommendations, certainly. And these topics - as well as the detailed responses of the 390 people who participated in the survey - also reflect some key areas of interest and values of the TAMU/TAMUG community.

Institutional affiliation and Aggie identities. Mentions of “TAMUG,” “TAMU,” “Texas A&M,” “campus,” “Aggie,” “Aggies,” “Galveston,” and “College Station” combined dwarf other topics or thematic grouping of topics. Additional respondent focus (in full-text response) on the coastal campus culture, the merchant marine program, and the other factors exemplify their perceptions of TAMUG as a special place. Numerous responses discussing either the desired unity of all Aggies or, conversely, some of the frictions between the campuses in academic, administrative, and student life areas all further emphasize the ways the report resonates with the community vis-a-vis this theme of specific campus and/or collective Aggie identity.

Students are a top priority. Not surprisingly, the combination of “students,” “student,” and “student affairs” are near the top of the list of topics mentioned. Of course, the MGT report addresses specific and explicitly student-related issues such as student affairs and the student experience, as well as issues implicitly about the students’ educational, workforce, and social outcomes, such as diversity and inclusion and academic and merchant mariner programs. The importance to the community of the university’s student-focused mission is reflected and echoed in the survey responses, not just of student and alumni respondents but also of faculty, staff, industry partners, and board members.

Academic programs are a central concern. Proposed changes in organizational structure, particularly with regard to academic offerings and organization, generate a lot of questions and feedback. General organizational entities like “department” and “program” as well as specific divisions and programs about which recommendations were made (e.g., marine biology, engineering, computer science, oceanography, sciences) reflect the significance of stakeholders’ interest in potential changes.

Leadership and mission. Perhaps somewhat unexpectedly, mentions of leadership and mission, while both on the top 50 list in Exhibit 3, were in the bottom quarter of that list. In prior analysis, pertaining to a 2021 MGT review of Texas A&M, leadership, management, and mission were more prominent among keywords in survey feedback.

Sentiment

Methodology. Sentiment analysis is a natural language processing (NLP) analytical technique applied to text data to determine whether the individual generating that text - in our case, the survey respondent writing in response to the university’s open-ended questions - has a positive, neutral, or negative opinion (sentiment). The sentiment score may also be indicative of the respondent’s attitude toward the issue addressed in that question.
It is often applied by businesses to gauge customer needs or satisfaction and has become increasingly prevalent as a tool for analyzing social media data.

There are numerous sentiment analysis methodologies. For this study, the VADER (Valence Aware Dictionary for sEntiment Reasoning) methodology was used. Appendix 3 provides more discussion of sentiment analysis and of the VADER methodology in particular.

Results. Sentiment scores are presented below as distributions (percentage of a category that is positive, neutral, or negative) and in terms of a composite metric generally referred to as the net promoter score (percent positive minus percent negative). The following three exhibits illustrate that distribution, showing the percentage of respondents who were scored as positive (in green), neutral (in yellow), or negative (in red), as well as a blue bar indicating the NPS value.

Exhibit 5 aggregates the sentiment scores according to the different groups surveyed. The groups with the most positive sentiment distributions are Staff (77% NPS and largest block of positive average sentiment scores) and Industry Affiliates (70% NPS and all non-negative average sentiment scores). The least positive distributions, albeit still majority positive, are Faculty (60% NPS) and Former Students (52% NPS). The remainder of the groups range from 63% to 69% NPS.
Exhibit 6 aggregates the sentiment scores according to the campus or other location of the respondents (Galveston, College Station, Other, or Not Reported). The most positive distribution of responses was the Other group, however given the small number of respondents in this group (2% of the total), not much can be learned from that distribution. Of particular interest in these results is the ten point higher NPS of those at the Galveston campus - with larger positive and neutral percentages and a smaller negative percentage - and those at College Station or in the Not Reported group. Depending on the make-up of the Not Reported group, this difference could suggest a significantly higher opinion of the overall set of recommendations by those associated with the Galveston campus, or it could be the result of Galveston-affiliated respondents with negative attitudes being less likely to disclose their campus location. A random sampling of a few dozen of the Not Reported group suggests that, at least for those sampled, most are affiliated with Galveston, based on explicit acknowledgement of such in their responses or inferred from the familiarity of their discussion about TAMUG.
Exhibit 7 aggregates the sentiment scores by each of the seven questions, each question addressing one of the seven sets of recommendations made in the Organizational Review report. The results show that the set of recommendations about which respondents were most positive was Student Affairs (58% NPS), which address oversight of summer camps and other “minor programs” and with the balance between cultivating a specifically Galveston campus culture and belonging to a broader Texas A&M community. Three sets of report recommendations - Organizational Structure, Diversity, Equity, and Inclusion, and Aggie Student Experience - were all at about the same NPS (45%, 44%, and 44%, respectively) and similar distributions of positive and negative responses. And the two sets of recommendations with the lowest positivity, albeit both still positive, were the Sea Grant Mission (39% NPS) and Communications (35% NPS) sections.

Exhibit 7: Sentiment Score Distribution and Net Promoter Score by Survey Question

<table>
<thead>
<tr>
<th>Question</th>
<th>NPS</th>
<th>Positive</th>
<th>Neutral</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Affairs</td>
<td>58%</td>
<td>58%</td>
<td>12%</td>
<td>30%</td>
</tr>
<tr>
<td>Sea Grant Mission</td>
<td>39%</td>
<td>38%</td>
<td>33%</td>
<td>28%</td>
</tr>
<tr>
<td>Organizational Structure</td>
<td>44%</td>
<td>45%</td>
<td>16%</td>
<td>39%</td>
</tr>
<tr>
<td>Diversity, Equity and Inclusion</td>
<td>45%</td>
<td>45%</td>
<td>11%</td>
<td>44%</td>
</tr>
<tr>
<td>Communications</td>
<td>35%</td>
<td>35%</td>
<td>25%</td>
<td>39%</td>
</tr>
<tr>
<td>Aggie Student Experience</td>
<td>44%</td>
<td>44%</td>
<td>16%</td>
<td>40%</td>
</tr>
</tbody>
</table>
Appendix 1: Email from President Banks

Faculty, staff and students:

As you may know, a high-level, comprehensive review of major functional areas, including the organizational structure of Texas A&M Galveston, was recently completed.

My office recently received the final report, which outlines the consultant findings and recommendations for our consideration. As I review the findings, I have asked the Texas A&M Galveston community to provide me their thoughts and feedback on the report. If you are connected in any way with the Galveston campus and would like to provide your input, please feel free to also give me your thoughts on the recommendations included within the report.

This feedback process is a critical step and will help determine which recommendations are accepted, rejected, modified or require further study. After thorough review of input received, I anticipate sharing my response to the report in March. I will then work with the Galveston campus administration to develop an implementation timeline, oversight committee and working groups.

The report has been posted online. I invite you to review the findings and recommendations and submit your thoughts using the posted with the report.

Read the Report

Please note, your responses to the survey can be anonymous. The survey does ask for your classification and campus location, but these fields are not required to submit responses. This information is intended to provide a sense of respondent representation.

You may submit your feedback online through February 24, 2023. We are utilizing an external firm to analyze input received to ensure a thorough and unbiased evaluation.

I want to emphasize the importance of providing your insight and sharing feedback. All perspectives are important, welcome and wanted.

I look forward to your participation as we move forward.

Thank you,

M. Katherine Banks
President, Texas A&M University
Appendix 2: Survey Instrument

This report draws on data from the following survey, developed and distributed by the Office of Marketing and Communications.

*****

Howdy and thank you for taking the time to provide your feedback related to the organizational review of Texas A&M University at Galveston. Your feedback is critical to our process and is greatly appreciated.

Your responses are confidential. As you begin this survey, please note each field is optional, and you are able to save your responses and return to the survey at a later time. Once you have advanced through the survey, there are optional fields that provide respondent information. These fields are not required for your feedback to be submitted and are intended to provide a sense of respondent representation.

Please provide any feedback, comments, concerns or questions in the fields provided for each set of recommendations.

Organizational Structure
- Continue to refer to the campus leader as Vice President, Chief Operating Officer, and Maritime Academy Superintendent to continue to align with the organizational structure of Texas A&M Health.
- Create a Chief of Staff position to assist with and lead the day-to-day operations of the Galveston Campus.
- Reorganize the Galveston leadership to align with College Station centralization and clarify roles.
- Reorganize Human Resources as part of the larger reorganization at College Station and conduct a compensation and classification study to ensure salary and position alignment with College Station, to address competitive salaries of other higher education institutions in the Galveston area, and to be well positioned to address necessary succession planning given that numerous leaders have served the campus for more than 30 years.
- Technology Services should report to the AVP for Operations and align with the new model in College Station.
- Develop onboarding to support the engagement of new employees.

Aggie Student Experience
- Financial aid should be managed by College Station with an Associate Director placed in Galveston to provide day-to-day local support and authority.
● Recruitment should be centralized through College Station where there is a coordinated and dedicated effort to recruit for Galveston.
● College Station and Galveston need to work to recruit students to Galveston who best fit the mission and purpose of the Engineering programs offered in Galveston, which can make for a better student experience and higher retention.
● Elevate and develop the competitive opportunity to attend Galveston as a distinctly different Aggie Student Experience. Identify and recruit those students with a specific interest in attending the Galveston campus to reduce enrollment swirling back to College Station.

Communications
● Centralize Marketing and Communications efforts in Galveston to align the mission, brand, and communications efforts at College Station.
● Address lack of internal communication at various levels of leadership.
● As centralization progresses, communicate processes and expectations to ensure accountability for compliance and alignment to College Station.
● There is a lack of communication and joint decision-making from College Station to the internal Galveston campus.
● Promote that Aggies are Aggies regardless of where they are, sharing similar values, hearts, souls, and amazing experiences. Aggies benefit from a variety of unique experiences at different campuses, centers and other locations in College Station, Galveston, Qatar, McAllen, Dallas, or anywhere in the world and beyond, which should also be shared.

Student Affairs
● Ensure management of all summer camps and other camps, as well as minor programs are under the oversight of Student Affairs.
● Programs should balance being part of the Texas A&M College Station traditions but should also have a focus on building community, mattering, and belonging opportunities for students that is specific to life in Galveston, given this is a campus-based on place.
Diversity, Equity, and Inclusion
- Tell the story of successful women and minority students to showcase their diverse participation in maritime programs.
- Revamp the SILE website to direct students, faculty, and staff towards services and resources located at the Galveston campus instead of linking to College Station services/resources that are not accessible in proximity.

Academic Programs
- Clearly link related sea grant academic programs between Galveston and College Station.
- Combine the Marine Biology and Marine and Coastal Environmental Sciences departments.

The Sea Grant Mission
- Emphasize the priority of the sea grant mission activities existing in Galveston by moving the sea grant headquarters and the Oceanography department to the Galveston Campus.

Thank you for your time spent taking this survey to provide feedback on the organizational review of the Texas A&M University campus at Galveston.

Your response has been recorded.

The following fields are not required to be completed. This information is intended to provide a sense of respondent representation.

Classification
- [ ] Faculty
- [ ] Staff
- [ ] Current student
- [ ] Former student
- [ ] Board of Visitors member
- [ ] Industry partner/affiliate
Campus location (for current faculty, staff and students):

☐ College Station
☐ Galveston
☐ Other: _____________ (allow fill in the blank for remote/branch campuses)
Appendix 3: Methodological Notes regarding Sentiment Analysis

Sentiment analysis is a natural language processing (NLP) technique applied to text data to determine whether the individual generating that text - in our case, the survey respondent writing in response to the university’s open-ended questions - has a positive, neutral, or negative attitude (sentiment) toward the issue addressed in that question. It is often applied by businesses to gauge customer needs or satisfaction.

There are numerous sentiment analysis methodologies. For this study, VADER (Valence Aware Dictionary for sEntiment Reasoning) was used. It is a lexicon and rule-based sentiment analysis tool in which the topics (words, phrases) are assigned positive or negative scores, as well as an intensity of positivity or negativity, based on a predefined lexicon. It is a method that has been shown to be particularly effective in analyzing social media and open-ended survey responses.²

For the analysis of the TAMUG open-ended survey responses, we started with the spaCy library in Python to process sentences and define a set of key words and phrases. The words/phrases are tagged in a sentence based on an internal statistical/ML model that has been shown to be accurate when English text is grammatically correct. Using that software library, an initial list is created that maps hundreds of key words and phrases into “topics,” which will be the basis for the sentiment analysis.

At this point in the data preparation process, there is a manual and iterative interaction with the list of key words and phrases. A visual quality check of the initial list (approximately 800 key words and phrases) combined with a sampling of the full-text responses in the underlying dataset informs edits to the phrase-topic crosswalk. For example, the terms “Galveston” and “TAMUG” are initially mapped to separate topics, and the manual adjustments include combining these and other relevant variations into a single topic, renamed “TAMUG/Galveston.”

Drawing on this revised topic list, the program finds a sentence that contains a given word/phrase. It uses an algorithm from the spaCy library to construct a dependency tree of the sentence, and from the dependency tree it defines the role of the word/phrase in question - i.e., subject, object, part of another phrase, etc. If it is a subject or object, the phrase is extracted with its modifiers from the sentence (e.g., not just “student” but “a first-generation student in engineering”) and leverages the VADER dictionary to compute a sentiment score for that subset of a sentence. This compound sentiment score is the sum of the valence (direction and intensity) score of each word in the lexicon. Its value is between -1 (most extreme negative

² For more about VADER and comparison to other methods, see Hutto, C., & Gilbert, E. (2014). VADER: A Parsimonious Rule-Based Model for Sentiment Analysis of Social Media Text. Proceedings of the International AAAI Conference on Web and Social Media, 8(1), 216-225. https://doi.org/10.1609/icwsm.v8i1.14550
sentiment) and +1 (most extreme positive sentiment).

To make sense of these fine-grained compound sentiment scores, every scored word, phrase, and sentence is aggregated across whatever dimensions of the survey analysis is of interest. So, for example, the distribution of sentiments across all scored phrases for responses from Galveston-located respondents is displayed in Figure 6.

In addition to the use of the VADER lexicon and the additional manual step of editing the phrase-topic crosswalk - both of these bring a degree of subjectivity into the analysis - there is also subjectivity in the presentation of the sentiment score distributions. A common rule of thumb in presenting such results is to consider any sentiment score above 0.05 to be positive and any score below -0.05 to be negative. Some authors have broadened that range to -0.5 to 0.5. For this analysis, we use a range of -0.1 to 0.1.

Also worth noting here is that while most studies use a neutral range that is symmetric around zero (-0.05 to 0.05, -0.1 to 0.1, etc.), there are some that suggest positive bias in social media or survey responses warrants an asymmetric range, such as -.01 to 0.25. The purpose of this asymmetry is to account for the positive bias, though the decision about the degree of asymmetry is more art than science. Still, this observation seems potentially relevant to this TAMU survey in that all sentiment score aggregations show a majority of respondents in the positive range, and all sub-groups generate positive NPS and positive average sentiment scores. An asymmetric range, rather than the symmetric -0.1 to 0.1 used here, could yield some neutral or negative aggregate results.

Regardless of the definitional choices of what constitutes “positive” or “negative” sentiment, comparisons of such scores are more meaningful when done among related groups rather than evaluated in absolute terms. For example, it is more meaningful to talk about how the relative positivity appears for students compared to faculty rather than simply highlighting the magnitude of student sentiment scores.

Another way to summarize respondent sentiment is through a single computed value most often called the net promoter score, or NPS. This is simply the percentage of the population with positive sentiment scores minus the percentage with negative sentiment scores. And so, regardless of the particular choices regarding the positive and negative thresholds, it is possible to talk about one group’s NPS compared to another (e.g., “current and former students had an NPS of at 40-45% overall compared to staff, who had an overall NPS of 55%.”) Such a statement would point to substantially more positive view on the part of staff than of students, and even a different decision about the thresholds (e.g., -0.25 to 0.25) would yield the same differential between students and staff, in that hypothetical example.