

Client Satisfaction Report

Part 3 of 3: Analysis of Customer Sat Comments

July 2019

Overview

This report analyzes the occurrences of positive and negative vocabulary words in the comments field of the TSG customer satisfaction surveys.

While an examination of the words used by responders is not completely precise, it can provide some useful insight into how responders are thinking and what troubles (or delights) them most. For example, the word "help" could be construed as positive or negative (e.g., "was a big help" vs. "no help at all") but a manual review of all the comments suggests that it is always used in a positive context, and therefore was made a "positive" word. Totaling the number of occurrences of positives and negatives and looking at various ratios can provide some sense of how happy responders are (and with what).

In contrast, it is also possible to generate (automatically) a word cloud of *all* the words used in the comments (excluding common words such as "a", "the", "in" and so forth). This provides a high level (and different) view which provides some additional insights like the name of a help desk person who has been particularly helpful and therefore called out (e.g., "Sean"). However, word clouds do not differentiate between positive and negative, and some words (like "Service Desk") are left in that are less useful in trying to establish an overall tone.

Working with the comments confirmed the value of constructing a specific vocabulary to run against the comment fields.

This report includes graphs to help visualize the relative number of occurrences per comment, and to compare the various proportions / ratios of positives and negatives. The graphs and charts provide some insight into trends, but with only three surveys to work with, these trends have to be looked on as tentative.

Approach

Positive / negative vocabulary words were selected by reading through the comments manually, examining the context, and selecting those that would, in as many cases as possible, be unambiguous. The code reads each comment, and tabulates the number of occurrences of each word on the list - cumulatively, and by individual survey.

Graphs then chart the total positive and negative occurrences, and compares these totals in various ways to establish a sense of tone, and then compares positive and negative totals with each other to see if both are going up, down, or trending differently.

As a side note, the word "Enterprise" (referring to the business application) appears to be rather negatively perceived by survey responders, and was given its own entry in the negative vocabulary list.

Findings

With only three surveys taken to date, it is difficult to be certain about trends, but it *appears* that the following conclusions could be reached:

- The number of comments is increasing with each survey
- The number of positive vocabulary occurrences is increasing with each survey
- The number of positive vocabulary occurrences is increasing faster than the increase in comments
- The number of negative vocabulary occurrences is decreasing with each survey, but slowly
- The number of negative vocabulary occurrences is noticeably less than the number of positive occurrences

In short, the positives are going up and the negatives are going down. This could be a fact, but also could be coincidental.

Cumulative View

This section looks at the cumulative picture and summarizes the statistics and vocabulary occurrences (positive and negative) across all surveys to date.

The Top 10 Postive and Negative words are shown below. See the Appendix for a complete list of word occurrences and counts.

Top 10 Positive Words

	Word	Count	Type
1	help	24	P
2	great	9	P
3	responsive	6	P
4	friendly	4	P
5	appreciate	3	P
6	knowledgeable	3	P
7	patient	3	P
8	professional	3	P
9	willing	3	P
10	courteous	2	P

Top 10 Negative Words

	Word	Count	Type
1	Enterprise	5	N
2	problems	4	N
3	challenge	3	N
4	issues	3	N
5	didn't	2	N
6	doesn't	2	N
7	negatively	2	N
8	really need	2	N
9	slow	2	N
10	unnecessarily	2	N

Summary Statistics for All Surveys	
Number of survey responses	: 129
Number of survey comments	: 50
Comments to responses ratio	: 0.3875969
Number of positive words	: 111
Positive words to comments ratio:	2.22
Number of negative words	: 64
Negative words to comments ratio:	1.28

A second appendix includes a word cloud version of the entire comments set.

Individual Survey View

This section looks at the positive and negative vocabulary tabulations by individual surveys. Explanations of the various statistics are given below.

Results for 01-F18	
Number of responses	: 37
Number of comments	: 12
Comments to responses ratio	: 0.32
Number of positive words	: 18
Positive words to comments ratio	: 1.5
Number of negative words	: 22
Negative words to comments ratio	: 1.83
Results for 02-W19	
Number of responses	: 35
Number of comments	: 18
Comments to responses ratio	: 0.51
Number of positive words	: 40
Positive words to comments ratio	: 2.22
Number of negative words	: 21
Negative words to comments ratio	: 1.17
Results for 03-S19	
Number of responses	: 57
Number of comments	: 22
Comments to responses ratio	: 0.39
Number of positive words	: 53
Positive words to comments ratio	: 2.41
Number of negative words	: 21
Negative words to comments ratio	: 0.95

Overall Summary of Individual Survey Statistics

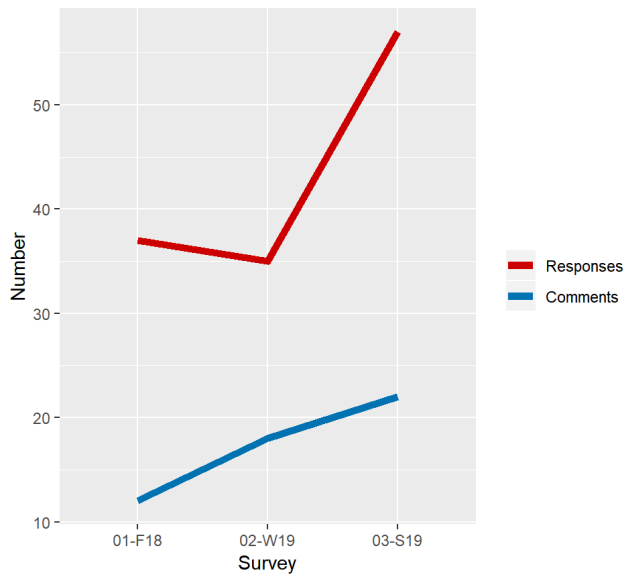
Translation of field names:

- num_resp = number of responses
- num_comments = the number of comments in the survey
- c_to_r_ratio = the number of comments divided by the number of responses
- num_pos_words = the number of positive words found in the survey
- pw_to_c_ratio = the number of positive words divided by the number of comments
- num_neg_words = the number of negative words found in the survey
- nw_to_c_ratio = the number of negative words divided by the number of comments

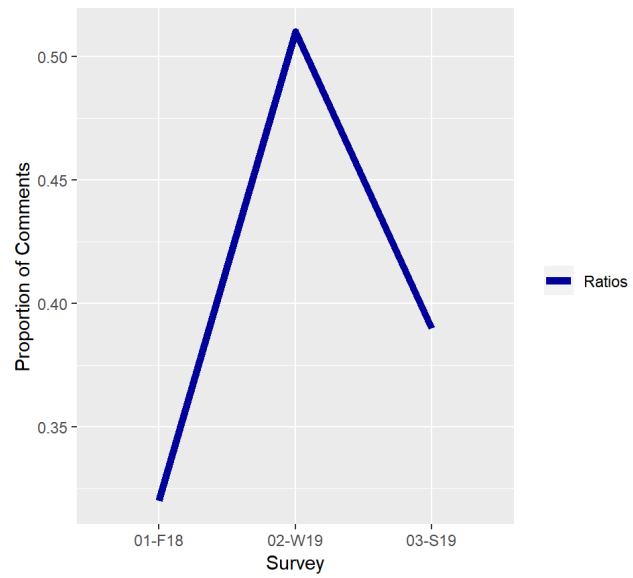
Survey	num_resps	num_comments	c_to_r_ratio	num_pos_words	pw_to_c_ratio	num_neg_words	nw_to_c_ratio
01-F18	37	12	0.32	18	1.50	22	1.83
02-W19	35	18	0.51	40	2.22	21	1.17
03-S19	57	22	0.39	53	2.41	21	0.95

Graphical representations of the summary statistics by Survey are shown below.

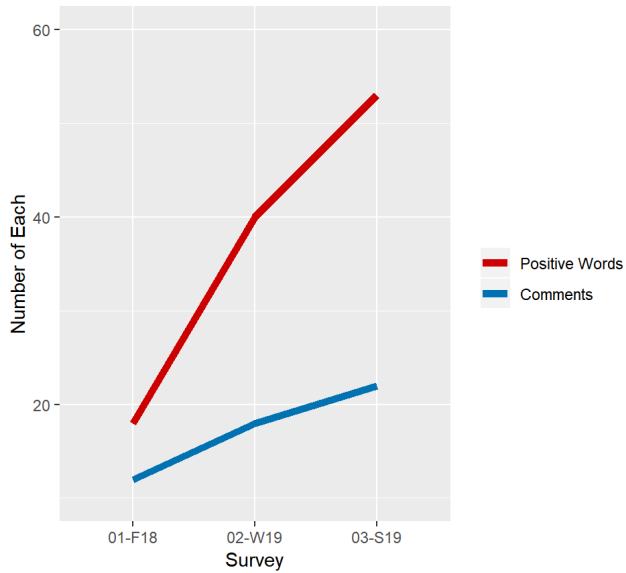
Count of Comments and Responses
Numbers of each by Survey



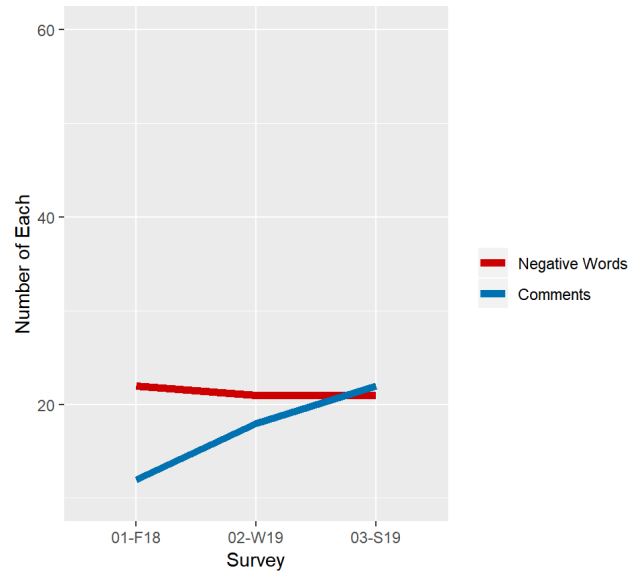
Ratio of Comments to Responses
Ratio By Survey



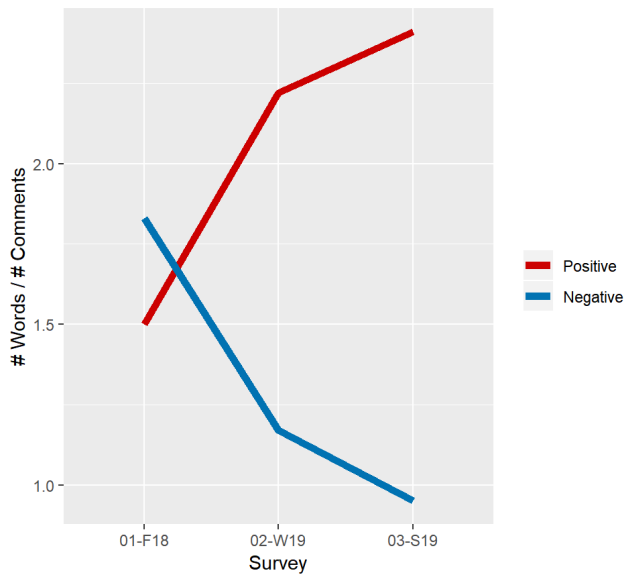
Positive Words Compared to Comments
Number of each by Survey



Negative Words Compared to Comments
Number of each by Survey



Ratios of Positive & Negative Words to Comments
Ratio Comparisons by Survey



Appendix - Summary of Positive Vocabularly Words

Positive Vocabulary word counts / occurrences

Word	Count	Type
help	24	P
great	9	P
responsive	6	P
friendly	4	P
appreciate	3	P
knowledgeable	3	P
patient	3	P
professional	3	P
willing	3	P
courteous	2	P
devoted	2	P
effective	2	P
excellent	2	P
gracious	2	P
highlight	2	P
kind	2	P
love	2	P
love working with	2	P
outstanding	2	P
pleasant	2	P
prompt	2	P
skilled	2	P
very good	2	P
willing to help	2	P
above and beyond	1	P
awesome	1	P
capable	1	P
cheerfully	1	P

Word	Count	Type
empathetic	1	P
excellent attitude	1	P
exceptional	1	P
extra mile	1	P
fantastic	1	P
follow-through	1	P
generous	1	P
goes out of their way	1	P
graciously	1	P
joyful	1	P
loving	1	P
perseverance	1	P
pleasure	1	P
quick to respond	1	P
satisfied	1	P
shining star	1	P
solution-oriented	1	P
thorough	1	P
warm	1	P

Appendix - Summary of Negative Vocabularly Words

Negative Vocabulary word counts / occurrences

Word	Count	Type
Enterprise	5	N
problems	4	N
challenge	3	N
issues	3	N
didn't	2	N
doesn't	2	N
negatively	2	N
really need	2	N
slow	2	N
unnecessarily	2	N
again and again	1	N
appears	1	N
back and forth	1	N
bandwidth	1	N
could conduct	1	N
could have gotten	1	N
create excessive	1	N
did not know what they were doing	1	N
difficuly	1	N
disconnect	1	N
ended up	1	N
excessively	1	N
get up to speed	1	N
glitchy	1	N
hard time	1	N
haven't been able to	1	N
impacted	1	N
inconvenienced	1	N

Word	Count	Type
inexperience	1	N
inferior	1	N
little vague	1	N
many days	1	N
need to get better	1	N
not consistently	1	N
not yet	1	N
on hold	1	N
problematic	1	N
should strive	1	N
take too long	1	N
taken months	1	N
takes many days	1	N
too busy	1	N
unhelpful	1	N
unresolved	1	N
vague	1	N
well-intentioned	1	N
would have been nice	1	N

Appendix - A Word Cloud Version of All Comments

This word cloud was created using one of the available tools on the internet (in this case, <https://wordart.com> (<https://wordart.com>)) and then feeding the entire comments set into the application. Common words were automatically removed (in, the, a, at, etc.).



Word Cloud of All Survey Comments