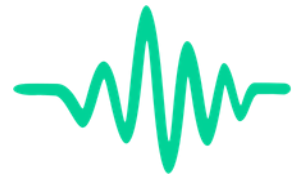


PHONIC



The Hidden Value In Voice

Improving Surveys with Voice

ABSTRACT

The goal of this study is to determine the efficacy of voice-based surveys. This study compared two almost identical surveys: one with traditional open text responses and one where respondents answered with voice (N=200). The audio responses were found to be significantly longer, more descriptive, and more complex.

INTRO TO AUDIO SURVEYS

Audio surveys are a great way to collect high quality, authentic feedback. Voice data possesses the same virtues as unstructured text, however it also unlocks an entire world of voice and tonal analysis for researchers. These techniques, previously reserved for interviews and qualitative research, can provide additional insight and context into quantitative research.



OBJECTIVES & METHODOLOGY

This study explored the differences between text and audio responses in three different ways: length, descriptiveness and complexity. The voice responses were transcribed to perform this analysis.



UTTERANCE LENGTH

The number of words in a given response



DESCRIPTIVE LANGUAGE

The total number of adjectives and adverbs in a given response.



LEXICAL COMPLEXITY

The complexity of a response, measured by Flesch-Kincaid grade level.

The surveys were completed by 200 unique respondents, randomly assigned to either voice or audio. The respondents consisted of a general population sample from the United States, Canada and the United Kingdom. Each survey consisted of the same 10 questions, with 6 questions requiring an open-ended (unstructured) audio/text response.

QUANTITATIVE RESULTS

Results from this study indicate a statistically significant increase in descriptive language, utterance length and lexical complexity in the audio responses as compared to the text. Audio responses are on average 2.8x greater in length and use approximately 1.5x more descriptive words per response. The average grade level of a text response was 4.3 compared to 7.9 for the audio responses.



+181%

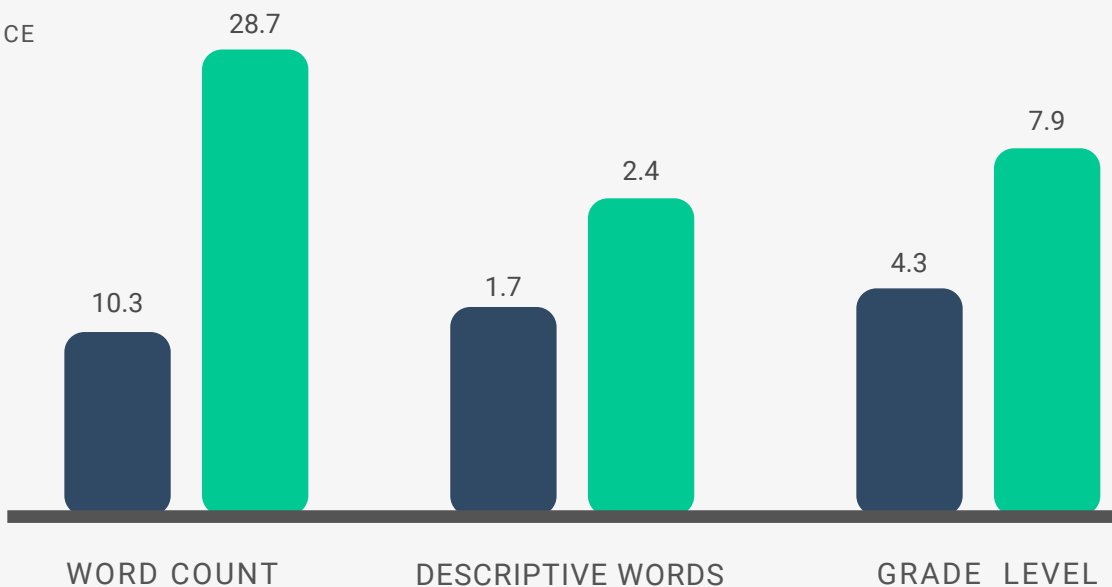
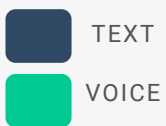
Increase in utterance length

+46%

Increase in descriptive language

+93%

Increase in lexical complexity



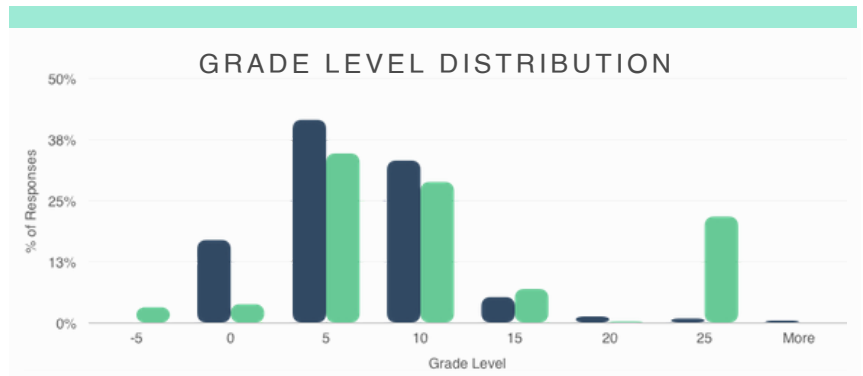
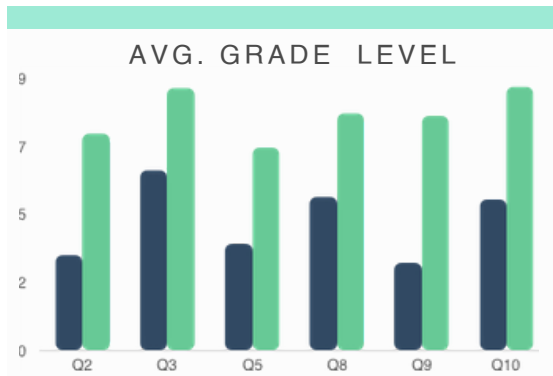
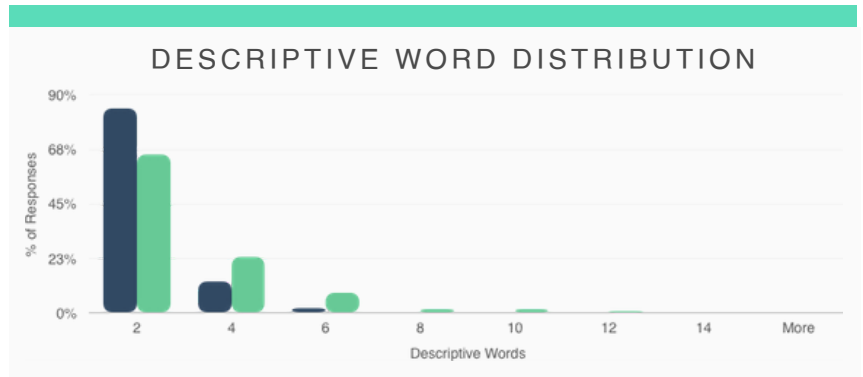
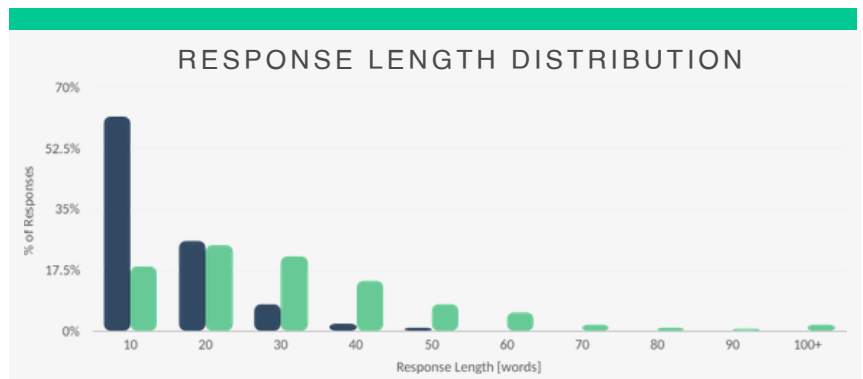
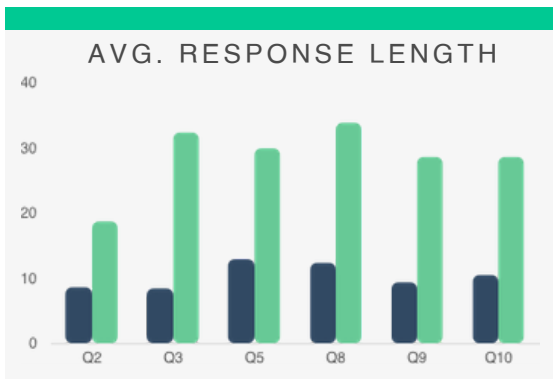
Average Across All Questions

QUANTITATIVE RESULTS

Quantitative measurements varied minimally among the six unstructured responses. Less than 5% of text responses were longer than 30 words, whereas 35% of voice responses were at least this length.

The distribution of text response lengths exponentially decreased, but the audio response lengths are more accurately modelled by a lognormal distribution, suggesting there is a typical audio response length. For this survey, this mode was 25 words.

TEXT VOICE



QUALITATIVE ANALYSIS

Aside from the measurable quantitative differences, the voice responses differed from text in other important ways.

Respondents were enthusiastic, shared personal anecdotes, jokes and otherwise engaged authentically with the survey questions. These are desirable qualities for researchers because they provide additional context and a mechanism to evaluate response authenticity, but are atypical among professional panels.

- Increased detail
- Anecdotes and personal experiences
- Personality and spunk
- Profanity and slang
- Better formed sentences

Example Question

Does the following granola bar package look like something you would pick off a shelf? Why or why not?

Response Quality	Text Response	Voice Response
Low	Yes, looks good.	Yes, because I like the look of the bars and I do like the brand.
Median	Yes, I believe I have already purchased these and they look great.	This is something I would pick off the shelf because I like this brand. But also it says that there's no genetically engineered ingredients. It has super grains in it and the picture and the flavor is attractive to me.
High	I probably wouldn't, since I don't feel like gluten-free foods are necessary for myself. I am also not a huge fan of dark chocolate. I might consider it if they are on sale, though, as I like the idea of chewy with a crunch.	I think I would pick this off of a shelf because I know kind makes good bars. Almond butter and dark chocolate sounds like a flavor I would enjoy. And it's saying gluten free, no genetically modified ingredients, five super greens. So it all sounds really good. I would definitely look at the pricing to see if the price is right and possibly try these if my own granola bars are not in stock.

CONCLUSION

This study demonstrates that both the quantity and quality of information offered via voice responses far surpasses what users are willing to type. The efficacy of voice surveys is supported by a substantial increase in descriptive language, utterance length and lexical complexity. These results are not unprecedented: they are a predictable consequence of using a lower-friction input mode, and this study begins to quantify the degree to which survey friction compromises data quality. When answering open-ended questions, speaking aloud comes more naturally than typing and people are more willing to elaborate on their thoughts and opinions to a degree not seen in text responses.

These results are not limited to a single survey optimized for voice: they are representative of any voice response, on any platform, to any sufficiently open-ended question. What's more, the disparities between voice and text responses are likely to grow over time as the general public becomes more comfortable with voice as an input mode and technical hurdles (browser support, microphone quality, transcription accuracy, etc.) become less common.

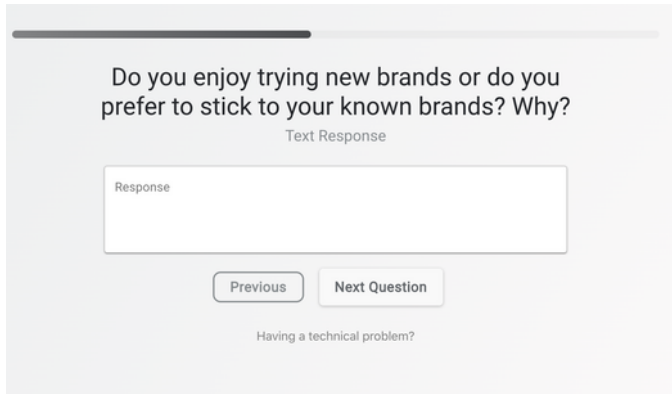
These findings are significant not only because they open the door for researchers to get more, higher quality data. It is the *insight* that can be gleaned from this data that makes these results noteworthy. The massive increase in response quality is indicative of more engaged participants and more authentic responses. More research is required to investigate the degree to which this perceived increase in authenticity corresponds to an increase in research accuracy, however the initial data is extremely promising.

Circumstances do not always allow for researchers to find highly motivated and affordable panels, however Phonic provides researchers the ability to collect the highest quality feedback possible from any source. This is one of the most significant developments in the fight against survey fatigue in recent years.



APPENDIX

Example Survey Questions



Do you enjoy trying new brands or do you prefer to stick to your known brands? Why?

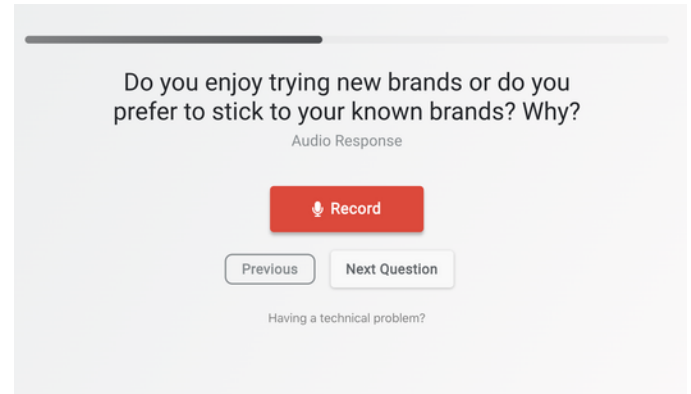
Text Response

Response

Previous Next Question

Having a technical problem?

Example Text Question



Do you enjoy trying new brands or do you prefer to stick to your known brands? Why?

Audio Response

Record

Previous Next Question

Having a technical problem?

Example Audio Question

Links To Archived Surveys

[Link to Text Survey](#)

[Link to Audio Survey](#)

Question List

Purpose of Questionnaire: This survey emulates a typical piece of market research that a consumer goods company might conduct. It was not conducted on behalf of any granola bar company.

- Q1. How often do you eat granola bars? [SELECTION]
- Q2. Why do you typically purchase granola bars? [AUDIO/TEXT]
- Q3. Which factors are most important to you when purchasing granola bars? Why? (ex. Brand, Flavor, Nutrition/Ingredients, Packaging, Price/Promotions) [AUDIO/TEXT]
- Q4. What are your current favourite brands of granola bars? [SELECTION]
- Q5. Do you enjoy trying new brands or do you prefer to stick to your known brands? Why? [AUDIO/TEXT]
- Q6. Which flavour of granola bar are you most likely to purchase? [SELECTION]
- Q7. How much are you likely to spend on a package of 12 granola bars? [SELECTION]
- Q8. Based on the two images, which box of granola bar are you most likely to purchase? Why? [AUDIO/TEXT]
- Q9. Does the following granola bar package look like something you would pick off a shelf? Why or why not? [AUDIO/TEXT]
- Q10. Does the following advertisement align with your values? Why or why not? [AUDIO/TEXT]

APPENDIX

Full Question Data Table

	Descriptive Words		Word Count		Grade Level	
	TEXT	VOICE	TEXT	VOICE	TEXT	VOICE
Why do you typically purchase granola bars?	1.83	2.11	8.52	18.74	3.17	7.19
Which factors are most important to you when purchasing granola bars? Why? (ex. Brand, Flavor, Nutrition/Ingredients, Packaging, Price/Promotions)	1.79	3.06	8.48	32.23	5.99	8.72
Do you enjoy trying new brands or do you prefer to stick to your known brands? Why?	1.75	2.41	12.89	29.94	3.53	6.74
Based on the two images, which box of granola bar are you most likely to purchase? Why?	1.87	2.73	12.41	33.81	5.08	7.88
Does the following granola bar package look like something you would pick off a shelf? Why or why not?	1.51	2.44	9.42	28.59	2.91	7.78
Does the following advertisement align with your values? Why or why not?	1.29	1.82	10.53	28.51	5.02	8.76