

Core Insights

The Essential
Guide to Analyzing
Open-Ended Questions



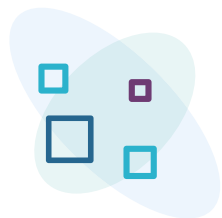
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Deeper Consumer Insights & Analytical Confidence

Introduction

There are few, scalable substitutes for the nuance and detail that open-ended questions (a.k.a. “open ends”) deliver as part of research studies and customer feedback. They help present a more complete picture of consumer attitudes, preferences and feelings, all without the bias of a priori answer options. In some cases, they’re critical to the research mission itself, as in unaided brand awareness and recall, or analysis of consumer reviews and comments.

Insights from open ends help:



Complete the picture.

Open-ended questions allow respondents to provide feedback that might not be possible using the close-ended questions alone, or give rationale or detail around a particular response, like a rating.



Discover unexpected findings. Open ends generate surprising or unexpected findings that weren’t considered in the programming of the study.



Reveal emotional reaction. Open-ended text is a source of emotional reaction by consumers, providing the opportunity to understand not just what a customer is saying, but how they feel about it.



Add color and narrative. Perhaps foremost, open ends provide a source of consumer narrative, supported by the adage: “fact tell, but stories sell.”



Unfortunately many research and CX teams don't fully-utilize open ends as a source of statistically significant insights, often relegating their use to a few verbatim quotes to spice up their report, confirming findings derived from the closed-ended, quantitative questions alone. The biggest risk of this approach of course is missing critical, “core” insights that are locked in the unstructured text data of open ends.

For example, a leading food company would have missed how consumers *really* feel about their retail shopping experience without analysis of open ends. A restaurant chain would have missed how their guests are responding to new menu items without open ends. A leading moving and storage provider would have missed why customers gave the rating they did. And a media & entertainment brand would have missed how viewers feel about their new program without open ends.





To put it simply, we believe that open-ended text is under-utilized as a source of core consumer and market insights.

Our mission at Canvs AI is to help researchers, insights and customer experience professionals unlock the full value of open ends as a means to better understand consumer attitudes, preferences and feelings across a range of research types.

With that mission in mind, we've developed this eBook as a guide to consider both the types of insights that can be generated from open ends and their application across common research and CX use cases. We believe that with the right approach, the unstructured, unfiltered text data of open ends can help insights professionals and the organizations they serve better understand their customers, audiences and markets. In working with insights teams analyzing many thousands of surveys and millions of open ends, we have a unique perspective on the value that open ends deliver. We'll look at how open ends can be analyzed generally and then how this analysis can be applied across six insights and customer experience use cases.

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Analyzing Open-Ended Text

At first glance, analyzing text might seem as simple as answering:

“What did the respondent (or customer) say?”

And that is exactly what we want to understand, but it's often far from simple! Humans are amazingly expressive (even in surveys), developing seemingly infinite and varied ways of saying things and imbuing those expressions with nuance and emotion along the way.

Three (3) vectors of analysis can help organize our thinking around the informational value of open ends: **Thematic, Emotion and Correlation analysis.**



Thematic analysis

Thematic analysis is the result of parsing the ideas or things that are expressed in the text and presenting those ideas in a structured way. Questions that generally ask the respondent for “what” are typically analyzed for themes.

For example, “What was the main idea?” or “What brands come to mind?” But questions like “Describe your perfect burger,” might generate topics like “juicy” “medium-rare” and “bacon” among many others (and in various combinations). While a topical analysis may suffice for some questions, such as brand recall, thematic analysis is frequently organized hierarchically, grouping the responses into categories. Our “perfect burger” question generates responses that can be categorized into themes like “ingredients”, “flavor profile” and “texture.”





Emotion analysis

Emotion analysis is an extrapolation of how the respondent “feels” based on how they have expressed themselves. Questions that ask the respondent for “how” or “why” are often ideal for emotion analysis, such as “How do you feel about your current economic situation?” Naturally, some subjects and/or open-ended questions are more likely than others to elicit an emotional response. Even our “Describe your perfect burger” question is likely to generate significant emotional responses (given our general love of burgers)!

While emotion analysis is often expressed in terms of overall positive or negative sentiment, more granular emotion classification will reveal more nuance in the level of emotional intensity or identification of feelings that don’t fit the positive/negative paradigm, such as “nostalgia.”





Correlation analysis

Correlation analysis actually isn't analysis of the open-ended text itself, but rather the ability to identify connections between information from the open ends and closed ends, such as respondent demographics. We include this here because typical approaches to incorporating open-ended responses into the research process often don't lend themselves to discovery of these connections.

Going back to our "perfect burger" question, you may identify a correlation between mentions of the topics "cheddar" and "bacon" and the emotion of "love," indicating a heightened emotional engagement with certain flavor profiles vs. others. Or, you may identify that women are more likely to identify texture in their description of the perfect burger vs. men.

With this analysis framework in mind, we hope it's clear that open-ended text represents a rich and valuable source of (relatively) unfiltered, unbiased consumer feedback!

Open Ends in Research Context

Let's take a look at how open-ended questions and responses are used across various research types, including [samples of typical open-ended questions](#) and – more importantly – the “questions” that open ends answer within the context of each research type.

Specifically we'll look at the use of open ends in:



**Consumer
behavior research**



**Brand and
awareness studies**



**Product
research**



**Customer experience/
NPS surveys**



**Ad and
creative testing**



**Product reviews and
other “non-survey” analysis**

Consumer Behavior

Consumer behavior research seeks to understand consumer attitudes and preferences for a particular topic, product or service category. Generally this research is designed to inform business decisions or strategies, but could also be deployed to inform journalism and public policy. Examples might include examining consumer attitudes towards business and leisure travel, opinions about curb-side pickup in the grocery category or how inflation is impacting back-to-school shopping.



What questions can the open end answer?

The “questions” open ends can answer in consumer behavior studies are driven significantly by the objective and subject of the overall study. When consumer behavior studies capture consumer trends and preferences, the use of open ends can reduce the bias of a priori answer choices. With this in mind, open ends are used to create a more complete picture of consumer habits and better understand sentiment around certain subject areas that might be valuable in shaping go-to-market and creative strategies.

Sample Consumer Behavior Open-Ended Questions

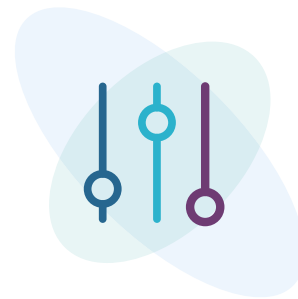
- What do you consider when choosing what hotel to book for a vacation?
- Think of your favorite restaurant. How would you describe it?
- Describe your perfect sandwich.
- What are your thoughts or feelings on holiday travel this year?
- What’s the most important issue facing the country?

Application of Analysis



Thematic Analysis

Thematic analysis in consumer behavior studies allows researchers to identify the top ideas expressed about the subject, as well as to group and quantify respondents that express similar themes, whether those themes are emotional, topical, or broad categories.



Emotion Analysis

Utilizing nuanced emotion measurement (vs. general sentiment) can help identify the level of emotional intensity around a subject. Some questions, such as “How do you feel about inflation?” are designed specifically to unlock emotion measurement.



Correlation Analysis

Correlation analysis is often used to identify meaningful differences among sub-segments of the sample (eg. demographic cross-tab analysis).



Key takeaways

Open-ended questions are key to discovering (or confirming) changes in consumer attitudes, and understanding the “why” when a consumer’s actions change. Consumer behavior studies often inform core product development, brand, and market strategies, and open-ended questions help both brand managers and creatives understand the mind (and heart) of the consumer.



Case in Point

A consumer technology brand wanted to understand consumer understanding of the metaverse. Given the newness of the subject area, the use of open ends was critical in surfacing both a structured analysis of current perceptions, but also key emotional information.

Brand Studies

Brand and awareness surveys are utilized to understand both the “mindshare” that a brand commands vs. competitors within a category, as well as the perceived attributes and consumer attitudes associated with the brand. Brand and awareness studies may also utilize either pre/post surveys (survey of a sample to test the impact or effectiveness of a message, ad or campaign) or tracking studies (an ongoing survey that typically generates monthly waves of data to compare over time).



What questions can the open end answer?

Brand studies typically include either or both unaided awareness and aided association questions.

Unaided awareness questions provide a trackable metric, understanding what percentage of respondents are aware of a brand, product, or campaign top of mind, without assistance. Association questions ask for a respondents thoughts or feelings about a given, prompted brand or product.

Sample Brand Study Open Ends

- “What brands of toothpaste do you know?”
- “What movies or tv shows have you heard about recently?”
- “What smart-home-devices are top of mind?”.
- When you think of [BRAND X], what comes to mind first?
- What thoughts or feelings come to mind when you think of [BRAND X]?
- What three words would you use to describe [BRAND X]?

Application of Analysis



Thematic Analysis

Naturally, in Unaided questions thematic analysis is used first and foremost to identify the specific brands mentioned. In association questions, thematic analysis will identify the attributes driving emotional response. Researchers can track KPIs of awareness overall using unaided awareness questions, or breakthrough of certain messages based on a campaign (association of ‘family’ with a bank brand, for example).



Emotion Analysis

While Unaided Awareness questions are, by design, non-emotional, Brand Association questions can elicit extreme and nuanced emotions. Researchers can use this approach to understand what attributes and themes drive “annoying” versus “hate”, or “enjoy” versus “love.” Additionally, overall emotional response can be measured to establish a benchmark that can be tracked over time.



Correlation Analysis

Beyond demographic and brand-specific cross-tabs, correlation analysis can be used to identify the emotional resonance of common brand associations, or understand how a brand is resonating across demographic segments.

Key takeaways

Open ends are not only a critical tool for measuring unaided awareness, recall and attributes, they can reveal powerful information about how consumers emotionally relate to brands and brand experiences.



Case in Point

A consumer financial services provider runs a monthly brand tracking study to understand the impact of their campaigns on awareness and perception.

They include the questions: “When you think of your personal banking, what brands come to mind?” and “What are your thoughts and feelings about the brand?” The first, unaided awareness question is straightforward, allowing the brand to measure the percentage of consumers who included their company in the list. The open-ended nature of the question allows the company to reduce the influence of reinforcing brand mentions in the survey itself. The brand perception question allows respondents to indicate their views of the brand in an unfiltered way. The firm analyzes the open-ended responses to categorize them into key categories that are tracked over time, such as “trustworthy,” “community,” and “service.”

Customer Satisfaction & Experience Surveys (aka NPS surveys)

Perhaps no survey has become as ubiquitous as the NPS survey. First developed in 2003 by Fred Reicheld and Bain & Company, and popularized in the book “The Ultimate Question,” the Net Promoter Score (NPS) survey asks simply, “How likely are you to recommend this product or service to a friend or colleague?” Then, an important open-ended follow up: “Why?” While “NPS” may be the brand leader,, there are certainly non-NPS customer satisfaction / experience surveys in wide use. And while the NPS survey design is notable for its brevity and simplicity (it was developed in part as a reaction to lengthy customer satisfaction surveys), all customer satisfaction surveys are likely to include follow up questions generally intended to provide the organization with more specific information regarding the customer experience (overall experience, satisfaction with the product, satisfaction with the service, satisfaction with the facilities, etc.).

What questions can the open end answer?

Open-ended questions in customer satisfaction surveys generally seek to provide detail regarding the customer’s experience with the product or service. One can think of the open end as providing the “Why” to the customer’s rating.

Sample Customer Satisfaction/NPS Open Ends

GENERAL

- What is the primary reason for your score?
- Why did you provide that rating?
- What is one thing we could do to make you happier?
- What most influenced your recommendation?

RATING SPECIFIC

- What was missing or disappointing in your experience?
- What could we do to improve the product or service?
- How do you benefit from using our product/service?
- How are customer experience open ends analyzed?

Application of Analysis



Thematic Analysis

Thematic analysis is used to identify and categorize specific aspects of customers' experience that naturally arise in the comments. These can be both positives (essentially, what do people like most) and negatives (what are people unhappy or complaining about).



Emotion Analysis

Emotional analysis can provide color to your NPS scores. Identifying what topics & themes drive emotions, and can provide actionable feedback for teams hoping to improve their NPS scores.



Correlation Analysis

Perhaps the most compelling use of correlation analysis in customer satisfaction research is the use of open ends to identify potential root causes of customer satisfaction/dissatisfaction. Essentially “what topics are more likely to be mentioned by promoters/detractors” in the NPS lexicon. Additionally, correlating emotional engagement with specific elements of the experience can also be useful.

Key Takeaways

In our consumer-centric culture, customer experience/satisfaction surveys, including NPS, have become ubiquitous. The open-ended questions in these surveys provide vital, and valuable insights into why customers gave your product or service a certain rating or score, and creates an actionable feedback loop between you and your customers. Effectively utilizing these responses in this way can also help reduce the need for detailed, follow-up closed-ended questions because drivers to positive and negative reviews will surface in the open ends. As a result, you may be able to reduce survey length and thereby boost response and complete rates.



Case in Point

A quick-serve restaurant uses customer surveys to understand why customers make the dining decisions they do. The open ends allow the company to identify and monitor customer satisfaction drivers over time, as well as capture the emotional reaction to the restaurant experience and new menu offerings.

Product Feedback

Product feedback is a broad category of surveys in which users are asked to describe their experience, attitudes, preferences with a product that they have interacted with in some way.

This can be a physical product like a granola bar or a TV remote or a car, or it can be a digital product like an application, and there are opportunities to connect with users via open ended text at almost every stage of the product lifecycle - from discovery to concept testing to post-launch. Product Feedback datasets might be used to go “beyond liking”- it’s great to know what your users like and dislike, but it’s even more valuable to uncover the nuanced emotions underneath the positives and negatives (beautiful, funny, weird, curious, nostalgic, sad...). Additionally, open-ends can provide tangible and quick feedback that can help product leaders make decisions.



What questions can the open end answer?

There are two common types of open-ended product feedback questions. First, questions that prompt a respondent to answer what they liked, disliked, found confusing, or remembered - can be used to identify topics or attributes.

Second, questions that ask broader “why” or “how do you feel” questions help us understand the nuanced emotions consumers express when interacting with our products, and make strategic decisions to improve our products, add value, and grow.

Sample Product Research Open Ends

- What was your favorite part about [...]?
- What did you like least about [...]?
- What are your thoughts and feelings about [...]?
- How would you describe the beverage?
- What do you think is missing?

Application of Analysis



Thematic Analysis

Thematic analysis in product research is used to identify the attributes perceived and valued by the respondent. Feedback captured as part of sensory lab setting may be looking for the impact of certain product choices or formulations within the open-ended responses. Attributes are often summarized into thematic categories, such as “taste” and “texture” in food research, often referred to as codes (the attributes) and nets (the broader themes).



Emotion Analysis

Emotion analysis in product research can unlock powerful consumer feelings around the category and product. These can include general positive and negative sentiment, as well as more nuanced (and less binary) feelings, like “sentimental.”



Correlation Analysis

Beyond looking at demographic cross-tabs, correlation analysis can be used in product research to connect attributes with emotional engagement. For example, respondents who’s responses indicate “Love” may be more likely than others to identify a specific product attribute (eg. rich, Corinthian leather).



Key Takeaways

In today's rapidly changing markets, brands are increasingly taking an agile approach to product development and require accelerated feedback loops. Using open-ended questions effectively can approximate the qualitative data derived from focus group and in-depth interviews, while delivering statistically significant findings.



Case in Point

A “modern food company” with a large presence in the yogurt category partnered with one of their quick-serve restaurant partners on menu innovation research. Respondents were asked to describe their “dream smoothie” using an open-ended question. The open end allowed for respondents to be creative and for the food brand to generate unbiased feedback.

The result was identification of two major smoothie flavor themes: fruit-forward and functional additives (i.e. protein, etc.). They were also able to identify emotional signatures around certain flavor combinations.

Ad & Creative Testing

Ad and creative testing is used to identify the impact and resonance of particulate ads or creative variations. Researchers generally test for aspects of purchase interest/intent, brand and message recall, and emotional resonance and engagement. Research indicates that emotional engagement drives brand loyalty, so this last point is of particular importance.



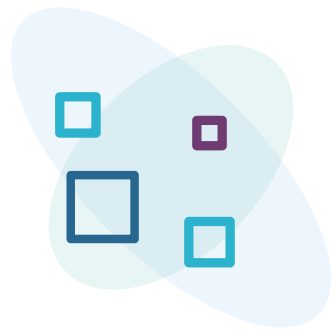
What questions can the open end answer?

Regardless of the stage of development, open-ended questions can provide actionable feedback that can be shared with agency or in-house content or communication teams. Is the message getting across? Are the jokes landing? Anything rubbing people the wrong way? Researchers may also use open-ends to determine which ad to select, or to benchmark ad success.

Sample Ad & Creative Test Open Ends

- What are your initial thoughts and feelings after watching the ad?
- What is the main message of the ad?
- What is the name of the company?
- What would you expect, based on the trailer you watched?

Application of Analysis



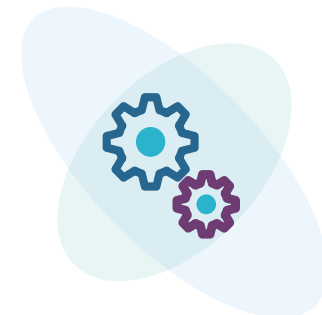
Thematic Analysis

In ad and creative testing, thematic analysis is used to measure message effectiveness and recall without pre-selected options that might bias the response. Additionally, specific creative elements can be identified (“what did you like best about...”).



Emotion Analysis

Analysis of open ends in creative testing is likely to start with sentiment. How did the viewer feel about the ad or show? In many cases, researchers measure overall emotional reaction (% of comments with emotion) and specific emotional reactions (love, hates, funny, etc.). Over time, benchmarks can be developed to measure emotional reaction against norms.



Correlation Analysis

One of the most compelling uses of correlation analysis is the ability to identify the topical drivers of emotional reaction (i.e. correlation of topics and emotions). Additionally, demographic cross-tabs are critical in a field where cultural relevance is a primary success factor.



Key Takeaways

Effective use of open ends in ad and creative testing allows researchers to measure and compare ad performance against emotional reaction benchmarks, as well as to identify the topics that are associated with specific emotional reactions. Open ends can also help researchers assess message effectiveness without the bias of pre-selected choices. Using open-ended questions effectively can approximate the qualitative data derived from focus group and in-depth interviews, while delivering statistically significant findings.



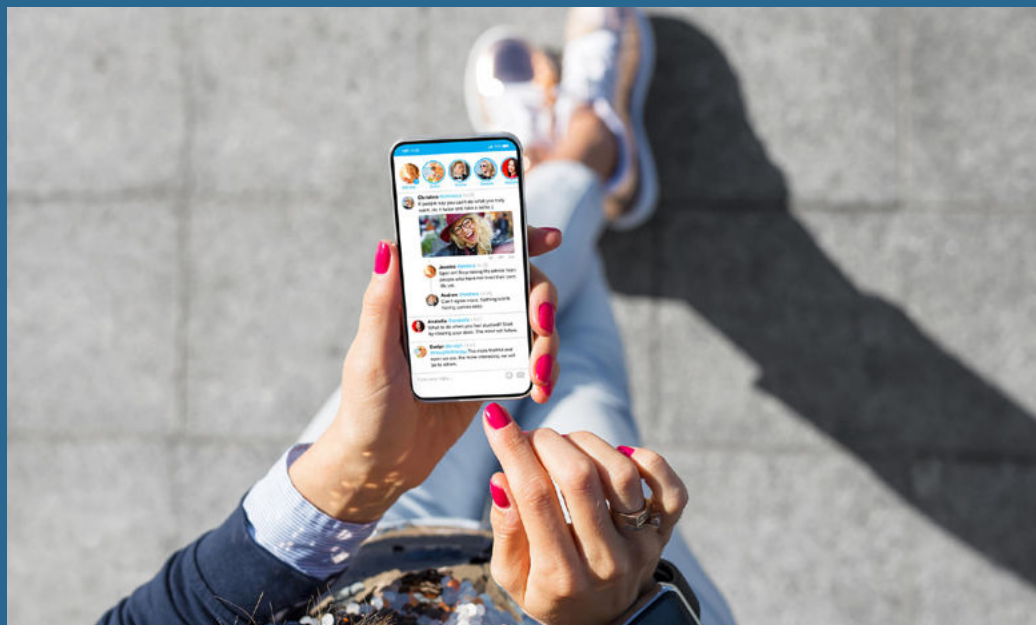
Case in Point

With an understanding that emotional resonance drives brand performance, a top-five brand consulting firm asked respondents how they felt about specific creatives. By analyzing the emotional reaction within responses to this open-ended question, the firm was able to identify creatives with the most emotional impact (while delivering on message recall objectives).



Product Reviews, Social Media & Non-Survey Verbatims

Surveys, of course, aren't the only source of open-ended text feedback from consumers that can be valuable for insights teams; online product reviews, product feedback forms and social media comments are among the most prevalent. They are also the most “free form” in that there is no survey context for the comments, presenting both an opportunity to capture “in the wild” customer feedback and a challenge in terms of analysis. Among those challenges is the potential for sample bias towards the most vocal segments of the user base.



What questions can the open end answer?

Given the open nature of non-survey verbatim comments, the uses may vary.

They can be used to understand overall experience, identify potential product defects or new product ideas. In the context of owned social media channels, analysis of comments on social posts can provide early reads on content effectiveness.

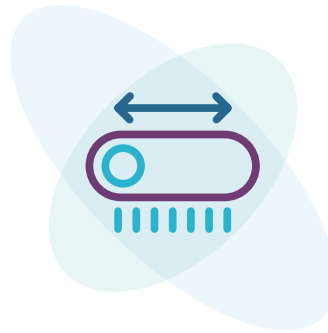
Application of Analysis



Thematic Analysis

Thematic analysis can be used to identify specific topics and broader themes emerging from non-survey sources of open-ended text.

Given the wide range of potential comments, researchers are more likely to focus on the top themes vs. exhaustive, long-tail analysis.



Emotion Analysis

Non-survey open ends can be mined as a source of unfiltered consumer sentiment. As with ad testing, overall emotional engagement can be benchmarked to identify meaningfully elevated (or depressed) emotional reactions.



Correlation Analysis

Without access to weighted demographics for cross-tab analysis, correlation analysis will typically focus within the text itself in terms of how consumers feel and what's driving those feelings.

Key Takeaways

There are seemingly unlimited volumes of consumer open-ended text that can be mined for valuable business insights. These sources provide an unvarnished view into the consumer mind, but may be biased towards the loudest voices.



Case in Point

A major consumer goods company wanted an unfiltered view of how consumers were reacting to an updated detergent product formulation. By analyzing the review comments on the product's Amazon listing, they were able to quickly gain an understanding of overall reaction as well as the product attributes driving customers' comments.

Summary

We hope this eBook may help further open you up to the potential benefits of open-ended questions and analysis, and provide inspiration and guidance on how to further utilize them in your insights and CX work. But what about the challenge of analyzing open-ended questions at scale? This is often what holds organizations back from fully realizing the insights value hidden in open-ended text.

Open ends require significant time and resources to decipher and categorize, and that process is prone to human bias, if not error. As a result, many insights organizations analyze only a fraction of the open ends they receive, or may just cherry-pick for verbatims that seem to support the qualitative themes of the research, or worse yet, may use open ends only as a data quality tool.

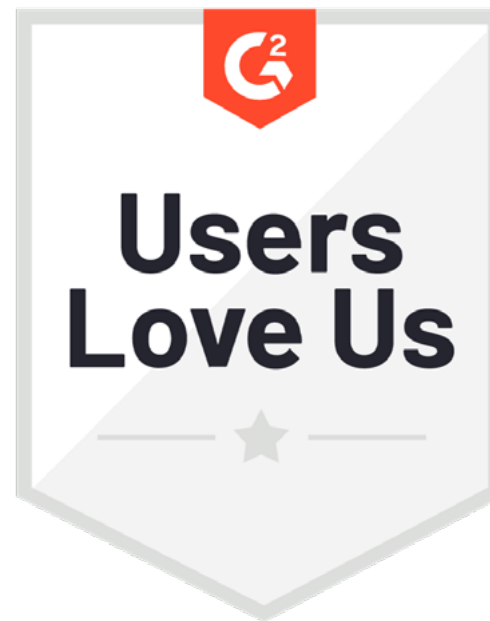
However, new advances in artificial intelligence (AI) and machine learning (ML), and cloud computing have dramatically opened the aperture of use cases for advanced text analytics. As a result, researchers have new tools to bring automation to the challenge of analyzing open-ended responses, allowing qualitative analysis to be done at nearly quantitative scale. This also expands the potential use cases for open-ended questions. Ask yourself: “what if we could completely and accurately code our open ends in seconds?” Would you be tempted to include a few more open-ended questions in your next survey? At the very least, we’d bet you wouldn’t let those open ends go to waste.

About Canvs AI

Ok, maybe we're biased, but we love open ends...

Canvs AI is the easiest, fastest and most accurate insights platform for analyzing unstructured text data. That data can come from virtually any source, including surveys, reviews, chats and social media comments. Our artificial intelligence (AI) engine for natural language processing (NLP) was trained on the “unnatural” language of social media and represents an ontology of over a trillion terms.

This advanced analytical technology has been “productized” in the form of an insights platform built for market research and consumer insights professionals called Canvs MRX. Canvs is used by some of the world’s most admired brands, research agencies, and media & entertainment companies to accelerate time-to-insights, reduce cost, and deepen understanding of consumers. We’d love to show you the power of Canvs first hand. Please get in touch at sales@canvs.ai or canvs.ai/demo.





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Get Started

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