Title A: Key Data Analysis Explained

Subtitle A: Everything you need to know about data analysis.

Title B: Your Guide to Data Analysis Methods

Subtitle B: How to ask the right business questions at the right time.

Title C: A Modern Business Guide to Data Analysis Methods

Subtitle C: How to drill down into the best data for your business goals.

In our data-rich age, understanding how to analyze and extract true meaning from the digital insights available to our business is one of the primary drivers of success.

Despite the colossal volume of data we create every day, a mere 0.5% is actually analyzed and used for discovery, improvement, and intelligence. While that may not seem like much, considering the amount of digital information we have at our fingertips, half a percent still accounts for a huge amount of data.

With so much data and so little time, knowing how to collect, curate, organize, and make sense of all of this potentially business-boosting information can be a minefield – but data analysis is the solution.

To help you understand the potential of data analysis and how you can use it to enhance your business practices, we will answer a host of important analytical questions. Not only will we explore data analysis methods and data analysis techniques as well as different techniques for data analysis, but we'll also look at different types of data analysis while demonstrating how to do data analysis in the real world with an 11-step blueprint for success.

Let's get started by looking at a selection of valuable big data-related facts.

Big data analysis: key facts & figures

Big data is invaluable to today's businesses, and by using different methods for data analysis, it's possible to view your data in a way that can help you turn insight into positive action.

To inspire your efforts and put the importance of big data into context, here are some insights that you should know – facts that will help shape your big data analysis techniques.

- By 2020, around [1.7 megabytes](#) of new information will be generated every second for every single person on the planet.

- A [10% boost](#) in data accessibility will result in more than $65 million extra net income for your average Fortune 1000 company.

- [90%](#) of the world's big data was created in the past three years.

- According to Accenture, [79%](#) of notable business executives agree that companies that fail to embrace big data will lose their competitive position and could face extinction. Moreover, 83% of business execs have implemented Big Data projects to gain a competitive edge.

What is a data analysis method?

Before we delve into big data analysis techniques, data analysis methods, or the different techniques for data analysis, it's essential to establish the meaning of this most priceless of insight-driven business concepts. Without further ado, let's ask the question – what is data analysis?

According to the BusinessDictionary, here's an official definition of data analysis:

"The process of evaluating data using analytical and logical reasoning to examine each component of the data provided. This form of analysis is just one of the many steps that must be completed when conducting a research experiment. Data from various sources is gathered, reviewed, and then analyzed to form some sort of finding or conclusion."

At their core, data analysis methods focus on strategic approaches to taking raw data, mining for insights that are relevant to your business's primary aims or goals, and drilling down into this wealth of information to transform metrics, facts, and figures into initiatives that benefit improvement or growth.

There are various methods for data analysis, largely based on two core areas: *quantitative data analysis methods and data analysis methods in qualitative research.*

To explain the key differences between qualitative and quantitative data, here's a video for your viewing pleasure:

https://youtu.be/EcKrT_IegoU

Gaining a better understanding of data analysis methods in quantitative research as well as qualitative insights will give your information analyzing efforts a more clearly defined direction, so it's worth taking the time to allow this particular knowledge to sink in.

The top 10 data analysis methods for modern businesses

Now that we've answered the question, 'what is data analysis?', considered the different types of data analysis methods (data analysis methods in quantitative research as well as qualitative data), it's time to dig deeper into how to do data analysis by working through these ten essential elements.

Collaborate

Before you begin to analyze your data or drill down into any analysis techniques, it's crucial to sit down collaboratively with all key stakeholders within your organization, decide on your primary campaign or strategic goals, and gain a fundamental understanding of the types of insights that will best benefit your progress or provide you with the level of vision you need to evolve your organization.

Establish your questions

Once you've outlined your core objectives, you should consider which questions will need answering to help you achieve your mission. This is one of the most important data analytics techniques as it will shape the very foundations of your success.

To help you ask the right things and ensure your data works for you, here's our [comprehensive guide to data-driven analytics questions](#).

Harvest your data

After giving your data analytics methodology real direction and knowing which questions need answering to extract optimum value from the information available to your organization, you should decide on your most valuable data sources and start collecting your insights – the most fundamental of all data analysis techniques.

Set your KPIs

Once you've set your data sources, started to gather the raw data you consider to offer potential value, and established clearcut questions you want your insights to answer, you need to set a host of key performance indicators (KPIs) that will help you track, measure, and shape your progress in a number of key areas.

KPIs are critical to both data analysis methods in qualitative research and data analysis methods in quantitative research. This is one of the primary methods of analyzing data you certainly shouldn't overlook.

To help you set the best possible KPIs for your initiatives and activities, explore our collection of [key performance indicator examples](#).

Omit useless data

Having bestowed your data analysis methods and techniques with true purpose and defined your mission, you should explore the raw data you've collected from all sources and use your KPIs as a reference for chopping out any information you deem to be useless.

Trimming the informational fat is one of the most crucial methods of data analysis as it will allow you to focus your analytical efforts and squeeze every drop of value from the remaining 'lean' information.

Any stats, facts, figures, or metrics that don't align with your business goals or fit with your KPIs should be eliminated from the equation.

Conduct statistical analysis

One of the most pivotal methods of data analysis or types of data analysis methods is statistical analysis.

Statistical data analysis methods focus on aspects including cluster, cohort, regression, factor, and neural networks and will ultimately give your data analysis methodology a more logical direction.

Here is a quick glossary of these vital statistical analysis terms for your reference:

Cluster: The action of grouping a set of elements in a way that said elements are more similar (in a particular sense) to each other than to those in other groups - hence the term 'cluster.'

Cohort: a subset of behavioral analytics that takes insights from a given data set (e.g., a web application

or CMS) and instead of looking at everything as one wider unit, each element is broken down into related groups.

Regression: A definitive set of statistical processes centred on estimating the relationships among particular variables to gain a deeper understanding of particular trends or patterns.

Factor: A statistical practice utilized to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called 'factors.' The aim here is to uncover independent latent variables.

Neural networks: A neural network is a form of machine learning which is far too comprehensive to summarize - but this explanation will help paint you a fairly comprehensive picture.

To understand statistical data analysis methods in greater detail (and get a tighter grip on data analysis techniques), here's a tutorial you should watch:

https://youtu.be/RiJYbxH77eQ

Build a data management roadmap

While, at this point, this particular step is optional (you will have already gained a wealth of insight and formed a fairly sound strategy by now), creating a data management roadmap will help your data analysis methods and techniques become successful on a more sustainable basis. These roadmaps, if developed properly, are also built so they can be tweaked and scaled over time.

Invest ample time in developing a roadmap that will help you store, manage, and handle your data internally, and you will make your analysis techniques all the more fluid and functional – one of the most powerful types of data analysis methods available today.

Integrate technology

There are many ways to analyze data, but one of the most vital aspects of analytical success in a

business context is integrating the right technology.

Robust data analysis platforms will not only allow you to pull critical data from your most valuable sources while working with dynamic KPIs that will offer you actionable insights; it will also present the information in a digestible, visual, interactive format from one central dashboard. A data analytics methodology you can count on.

By integrating the right technology for your statistical method data analysis and core data analytics methodology, you'll avoid fragmenting your insights, saving you time and effort while allowing you to enjoy the maximum value from your business's most valuable insights.

For a look at the power of software for the purpose of data analysis and to enhance your methods of analyzing data, glance over our selection of [dashboards and templates](#).

Answer your questions

By considering each of the above efforts, working with the right technology, and fostering a cohesive internal culture where everyone buys into the different ways to analyze data as well as the power of digital intelligence, you will swiftly start to answer to your most burning business questions. Arguably, the best way to make your data analysis concepts accessible across the organization is through data visualization.

Visualize your data

[Data visualization](#) is a powerful tool as it lets you tell a story with your metrics, allowing users across the business to extract meaningful insights that aid business evolution – and it covers all the different ways to analyze data.

The purpose of data analysis is to make your entire organization more informed and intelligent, and with the right platform or dashboard, this is simpler than you think, as demonstrated by our [web analytics dashboard](#).

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Primary KPIs:

- Bounce Rate
- Average Sessions Duration
- Goal Conversion Rates
- Landing Page Conversion Rates

Delving deeper than the user data served up by Google Analytics (GA) alone, this visual, dynamic, and interactive dashboard displays the behavior of your users and site visitors, presenting a wealth of metrics based on KPIs that explore session duration, page bounce rates, landing page conversion rates, and goal conversion rates.

This centralized mix of information provides a real insight into how people interact with your website, content, and offerings, helping you to identify weaknesses, capitalize on strengths, and make improvements that can benefit the business exponentially.

Data analysis concepts may come in many forms, but fundamentally, any solid data analysis methodology will help to make your business more streamlined, cohesive, insightful, and successful than ever before.

Good data analytics techniques result in enhanced business intelligence (BI). To help you understand this notion in more detail, read our exploration of BI reporting.

SOURCES:

https://www.datapine.com/blog/best-data-visualizations/

https://www.datasciencecentral.com/profiles/blogs/15-astonishing-tweetable-facts-about-analyticsgo

https://www.datapine.com/blog/best-data-visualizations/

https://inform.tmforum.org/features-and-analysis/2016/08/6-step-roadmap-good-data-governance/