

Original Article

An investigation into the vital role of data analytics in business

Ramesh R H

Associate Professor, Department of Commerce, Government First Grade College, India.

Email: rameshhanumanthappakolhi@gmail.com

Manuscript ID:

JRD -2026-180426

ISSN: 2230-9578

Volume 18

Issue 4

Pp 178-181

April- 2026

Submitted: 21 Mar. 2026

Revised: 31 Mar. 2026

Accepted: 16 Apr. 2026

Published: 31 April. 2026

Abstract

In an international increasingly more driven by way of records, records literacy is as vital as literacy itself, especially within the commercial enterprise sector. Consequently, every organization wishes to build a basis of records analytics literacy inside their staff. This indicates establishments want extra individuals who understand analytics and the blessings they can provide. Via building analytics literacy, an business enterprise can convert its statistics into actionable insights that power decision-making and moves. This, in flip, can decorate commercial enterprise approaches and foster greater innovation. To build analytics literacy, enterprise specialists want to apprehend the various styles of analytics they may be probable to stumble upon. Consequently, the motive of this paper is to have a look at the attention and readiness of business experts regarding the importance of analytics in everyday business. Do they truly understand what analyses are? Can they distinguish among the special forms of analytics and realize when and how to use/perform/interpret them? Are they acquainted with analytical equipment and methods of carrying out analyses? Furthermore, do they grasp the overall system of performing analyses—from accumulating statistics to summarizing and providing outcomes successfully—as a foundation for placing techniques and growing unique actions or approaches to attain desired consequences? The effects from a survey carried out with several business experts throughout unique industries at the previously referred to subjects are used for the functions of this paper.

Keywords: Analytics, Data, Commercial Enterprise ,Insights, Equipment, Visualization

Introduction

Statistics literacy is the ability to study, write, and efficiently communicate with records. Analytics literacy can be similarly defined because the capability to examine, write, and communicate with analytics. The 2 are carefully related due to the fact information is the uncooked cloth of analytics. Most businesses are collecting information all of the time—but, in its raw form, this information doesn't simply suggest whatever. It's what you do with the records that counts Irrespective of what industry you're running in, it's essential to recognize what has happened inside the beyond, what's happening now, and to anticipate what might appear in the destiny. The answer lies in records analytics. Information analytics is the technique of creating experience of statistics. The procedure starts off evolved with accumulating statistics, finding patterns, after which the usage of the ones patterns to make predictions. These predictions can be used to set dreams or make choices. In income, for instance, you can need to apply data analytics to expect how a lot of a specific product you will sell subsequent month. Understanding that quantity enables you place desires on your team and plan stock. The forms of insights you get from your statistics rely upon the type of analysis you perform. In records analytics and information science, there are four foremost styles of statistics evaluation: descriptive, diagnostic, predictive, and prescriptive. For undertaking these forms of analyses, appropriate gear and techniques must be implemented. That is also depends through form of industry wherein the analyses must be done These studies, based totally at the survey performed with business experts from numerous industries, found out that maximum members understand the significance of facts analytics in enterprise operations. But, a sizeable variety of respondents battle to differentiate forms of analyses. There also are gaps in know-how about analytical gear and different troubles.



Quick Response Code:



Website:

<https://jrdvrb.org/>

DOI:

10.5281/zenodo.20362592



Creative Commons (CC BY-NC-SA 4.0)

This is an open access journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International](https://creativecommons.org/licenses/by-nc-sa/4.0/) Public License, which allows others to remix, tweak, and build upon the work noncommercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Address for correspondence:

Ramesh R H. Associate Professor, Department of Commerce, Government First Grade College, Indi.

How to cite this article:

Ramesh R H, (2026). An investigation into the vital role of data analytics in business. *Journal of Research & Development*, 18(4), 178–181. <https://doi.org/10.5281/zenodo.20362592>

This observes targets to underscore the importance of those components in data analytics. It seeks to enhance the understanding of enterprise experts regarding data analytics and enhance their performance via addressing these understanding gaps.

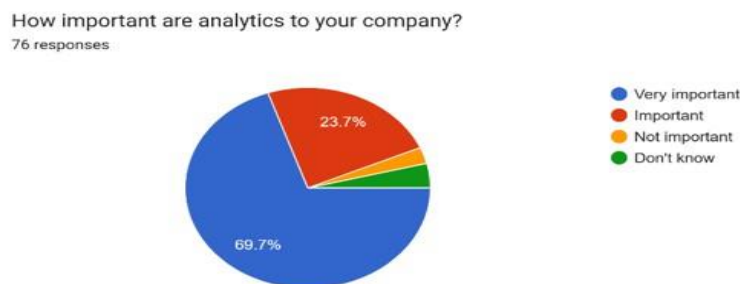
Substances and techniques

The poll, which included 15 questions addressing different facets of data analytics, was sent to corporate specialists and other people from a few different businesses. The questions aimed to evaluate the know-how and recognition of organizations regarding analytics, starting with the significance of analytics, their engagement with analytics, and their know-how of various forms of analytics. Moreover, the survey tested familiarity with analytical tools, information seize structures, methods of providing effects (such as visualizations and storytelling), and life inside agencies. Maximum of the questions had been a couple of-desire or checkboxes, with a few requiring brief factors to accumulate reviews on relevant subjects. The amassed pattern includes responses from 76 employees throughout each the non-public and public sectors, commonly specialists from Telecommunications, production, education, and Public management. Various roles from distinctive areas are blanketed, with the most dominant being in HR, IT, Finance, and Consultancy. A summary of the outcomes is furnished within the next phase.

Outcomes

76% of respondents said they perform analyses in their work, and the majority said analytics are vital in their occupations (Figure 1).

Figure 1



Source: Author

"To forecast the future of company actions" was the most commonly selected response to the question regarding the reason behind the analyses they perform (Figure 2).

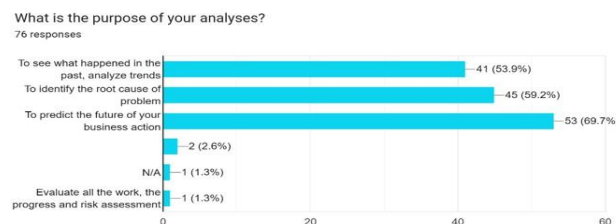
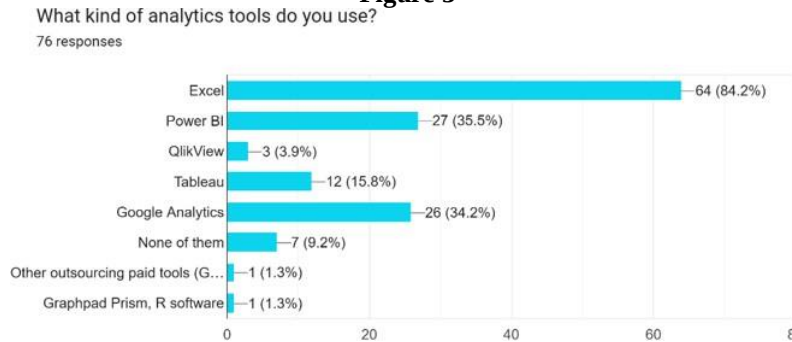


Figure 2

Source: Author

The Reactions Were "What Kind Of Analyses Perform?" and "Can you distinguish between quantitative and qualitative analysis?" are two short answer questions that are extremely intriguing and call for more research. When asked "what kind of analyses do you perform?" the majority of answers resemble job descriptions. "Training requirements analysis," "KPI performance," "financial analysis," "cost-benefit analysis," business cases, market analysis, work duties, working circumstances, etc. are a few instances of the answers that have been given. Descriptive, prescriptive, and diagnostic analysis types were only mentioned in 5 out of 62 respondents. "Excel" was the most often selected response to the question concerning the most popular tool for performing analyses (Figure 3). It is interesting to note that, despite their extensive use, more than 30% of respondents had never heard of pivot tables, an Excel function for data analysis and summarization.

Figure 3



In terms of respondents' knowledge of the business analyst position, 25% said they were unfamiliar with it, while another 25% said their organization does not have a business analyst position. As was to be expected given that the majority of respondents were from the construction and telecommunications sectors, half of the participants were employed by large corporations.

Discussions

1. Despite the fact that the majority of participants stated that analytics are crucial for their organizations and that the majority of them do analyses for work-related goals, the remaining responses indicate that respondents' comprehension of how to conduct and interpret analyses is lacking.
2. There is undoubtedly a gap in knowledge regarding analyses and their objectives, as well as in the use of analysis tools, data collecting methods, visualization formats, and their connection to narrative.
3. Even though the majority of participants stated that they use analyses to predict the future, it was anticipated that the remaining responses about the meaning of analyses, their differences, and the instruments they employ would also reflect this.
4. In terms of tools, it was reasonable to assume that knowledge of pivot tables and Excel's built-in capabilities to be on par with Excel's usage as the most popular tool among survey participants. However, that was untrue.
5. Understanding the analysis's goal is crucial to ensuring a successful and efficient analytical process. It is critical to understand your goals and how they will affect your decision-making.
6. Professionals in today's corporate world need to understand the four different forms of analytics, each of which has a distinct function and approach.

Characteristic Analysis

The most fundamental kind, which responds to the query, "WHAT happened?" This kind of investigation sheds light on previous occurrences and presents a thorough picture of how they transpired. Visualization stores are used in descriptive analytics to display data in an understandable manner and provide hindsight. Understanding historical occurrences, reporting metrics, spotting patterns and trends, giving information for corporate decisions, benchmarking, auditing, and regulatory compliance are its main applications. Excel, Tableau, Power BI, QlikView, SAS, Google Analytics, and others are frequently used tools for descriptive analytics. It is extensively utilized in the retail, healthcare, and financial sectors, among others. Diagnostic analytics, which provides an explanation for what occurred. Businesses may better understand what happened, why it happened, and how to stop it from happening again with the help of this kind of study. It goes deeper to find the fundamental causes of events and offers insights into the underlying motivations. It is sometimes referred to as root cause analysis. Tableau, Power BI, Qlikview, SAS, and KNIME are among the frequently used tools for diagnostic analytics. Retail, marketing, finance, operations, healthcare, and cybersecurity are among the industries where it is especially helpful. Techniques like machine learning and artificial intelligence are used to glean valuable insights from massive data sets. The following two categories of analytics can be carried out thanks to these sophisticated methods. Predictive analytics provides a solution to the query, "What is next?" It determines future results or patterns using the data that is already available. This approach is frequently used by businesses when creating new goods or services since it generates foresight by revealing future consumer desires based on historical behavior. Python, Tableau, Hadoop, Rapid Miner, and KNIME are frequently used tools for predictive analytics. It is extensively used in many different industries, such as manufacturing, telecommunications, energy, retail, banking, transportation and logistics, and cybersecurity. One sophisticated type of analytics that provides answers to the questions "WHAT SHOULD be done?" and "WHAT CAN WE DO to make it happen?" is called prescriptive analytics. By utilizing historical patterns and data to support future actions, it goes beyond predictive analytics. Rapid Miner, Alteryx, IBM Decision Optimization, and SAS Optimization are often used tools for this kind of analysis. Applications for prescriptive analytics are numerous and span a number of industries, including manufacturing, supply chain management, retail, finance, energy and utilities, transportation and logistics, and telecommunications. Knowing the goal of analysis also helps you decide what kind of analysis to do, how to do it, and where to utilize it. Forbes lists the following as the best analytical tools for 2024: Looker for data exploration; Zoho Analytics for robust insights; Domo for streamlining workflows; Google Analytics for web traffic insight; SAP

Analytics Cloud for enterprise performance management; Microsoft Power BI for data visualization; Tableau for business intelligence (BI); and Qlik Sense for machine learning (ML).

The following are some typical applications where analytics are very helpful for a variety of purposes

Marketing & Sales: Analytics improves sales effectiveness and helps marketing managers make more accurate decisions. It aids in campaign optimization and sales strategy improvement.

Operations and Supply Chain Management: Predictive maintenance, inventory control, performance assessment, supplier selection, and site optimization all use analytics.

Human Resources: 84% of HR executives believe that analytics can help with talent management. Over the next two years, many businesses intend to expand their analytics budgets.

Customer service: Beyond merely monitoring metrics, businesses can have a deeper understanding of customer behavior, preferences, and satisfaction by utilizing data analytics and artificial intelligence.

Finance: By spotting odd trends, analytics help with pricing strategy optimization, fraud reduction, cash flow forecasting, budget management, and revenue forecasting.

Lastly, it is critical to inform decision-makers of the results. Effective interpretation and presentation of the results follow the conclusion drawn from the analysis. This entails using storytelling to give leaders or executives information so they can make wise judgments. Data storytelling is the process of clearly presenting insights from data by fusing narrative with graphics. Visualization, which is typically presented through presentations or reports, uses graphs, tables, maps, and other forms to make results easily comprehensible and to tell a coherent story. A message based on the facts of the analysis should be conveyed through the storytelling. Two important factors need to be taken into account while creating a narrative: the audience and the analysis's goal. It is crucial to comprehend the goals of the study and the expectations of the audience. To keep the audience interested and focused, the story must be suited to them and in line with the objective.

Conclusion

It is obvious that doing analysis takes a lot of planning and work. Being an analyst is a responsibility that requires a great deal of expertise and knowledge. Skilled analysts can make sense of chaos and have a thorough understanding of how things operate. As a result, it is critical to comprehend the analytics process in its entirety, know what is required for effective analysis, and choose the right kinds and techniques to use. Remaining competitive and attaining long-term success now depend on incorporating data analytics into company operations. Businesses may increase revenue growth, manage risks, improve customer experiences, streamline processes, and make better decisions by utilizing data analytics. Therefore, any company looking to succeed in the data-driven market of today must invest in data analytics capabilities. In light of this, companies may fully utilize their data by making strategic investments in analytics tools and staff training, which will promote innovation and enable well-informed decision-making. Investing in the right analytical tools can enable staff members to solve issues and find insights more quickly. Employees may make better decisions now and in the future by putting advanced analytics into practice, including user-friendly AI technologies like predictive analytics. Additionally, this calls for funding workforce development initiatives such as third-party programs and internal training.

References

1. Dika-Krluku, N. (2024). Importance of data analytics in business, *SCIENCE International journal*, 3(3), 111-115
2. Amadebai, E. (2021, February 28). The 4 types of analytics explained (with examples). *Analytics for Decisions*.
3. Baumeier, H. (2021, October 5). Data literacy: Why is it needed? *Camelot Management Consultants*.
4. *Datavisualization: Definition, benefits, and examples*. (2022, November 21). Coursera.
5. Haan, K. (2022, May 17). The best data analytic tool of 2024. *Forbes Advisor*; *Forbes*.
6. Hassan, M. (2024a, March 25). Descriptive analytics - methods, tools and examples. *Research Method*.
7. Hassan, M. (2024b, March 26). Diagnostic analytics - methods, tools and examples. *Research Method*.
8. Murguia, J. (2022, March 10). 5 ways to grow business value through analytics. *Forbes*.
9. Stevens, E. (2021, January 28). The 4 types of data analysis [ultimate guide]. *Career Foundry*.
10. Velázquez, A. (2021, April 16). Data analysis: Definition, types and examples. *QuestionPro*.
11. Vivek, J. (2022, May 30). How is data analytics used in business? *Zuci Systems*; *Zuci Systems Inc.*