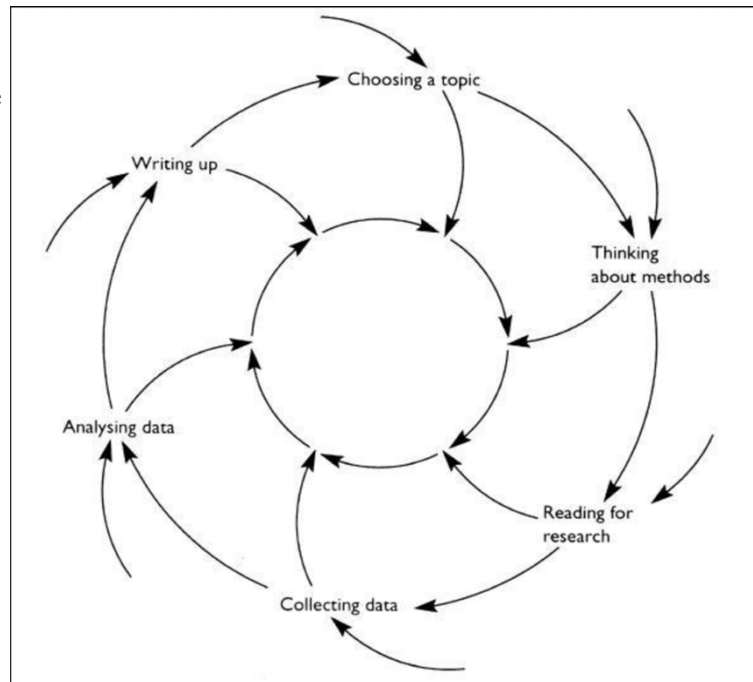


HOW TO DO A RESEARCH

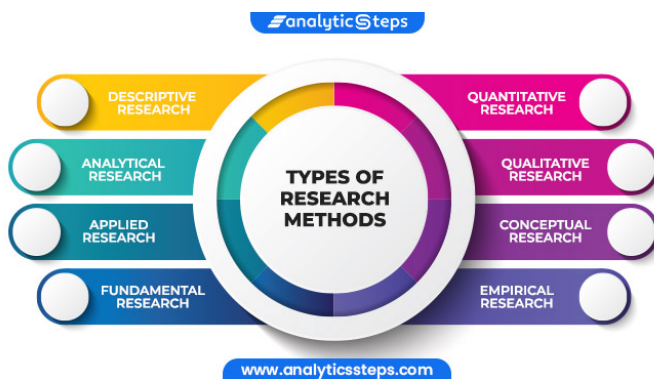
1- Choosing a Topic

Before starting to research, we need to find a proper research topic. So how can we choose the right topic? We can follow the steps below;

- Choose a broad topic that the target audience is interested in
- Research your topic a little bit
- Keep in mind who you're trying to reach
- Ask the right questions
- Examine the research questions
- Brainstorm the possible outcomes



2- Thinking About Methods



Descriptive Research

Descriptive Research is a form of research that incorporates surveys as well as different varieties of fact-finding investigations. This form of research is focused on describing the prevailing state of affairs as they are. Descriptive Research is also termed as Ex post facto research.

This research form emphasizes on factual reporting, the researcher cannot control the involved variables and can only report the details as they took place or as they are taking place.

Researchers mainly make use of a descriptive research approach for purposes such as when the research is aimed at deciphering characteristics, frequencies or trends.

Analytical Research

Analytical Research is a form of research where the researcher has to make do with the data and factual information available at their behest and interpret this information to undertake an acute evaluation of the data.

This form of research is often undertaken by researchers to uncover some evidence that supports their present research and which makes it more authentic. It is also undertaken for concocting fresh ideas relating to the topic on which the research is based.

From conducting meta analysis, literary research or scientific trials and learning public opinion, there are many methods through which this research is done.

Applied Research

When a business or say, the society is faced with an issue that needs an immediate solution or resolution, Applied Research is the research type that comes to the rescue.

We primarily make use of Applied Research when it comes to resolving the issues plaguing our daily lives, impacting our work, health or welfare. This research type is undertaken to uncover solutions for issues relating to varying sectors like education, engineering, psychology or business.

For instance, a company might employ an applied researcher for concluding the best possible approach of selecting employees that would be the best fit for specific positions in the company.

Fundamental Research

This is a Research type that is primarily concerned with formulating a theory or understanding a particular natural phenomenon. Fundamental Research aims to discover information with an extensive application base, supplementing the existing concepts in a certain field or industry.

Research on pure mathematics or research regarding generalization of the behavior of humans are also examples of Fundamental Research. This form of research is mainly carried out in sectors like Education, Psychology and Science.

Quantitative Research

Quantitative Research, as the name suggests, is based on the measurement of a particular amount or quantity of a particular phenomenon. It focuses on gathering and interpreting numerical data and can be adopted for discovering any averages or patterns or for making predictions.

This form of Research is number based and it lies under the two main Research Types. It makes use of tables, data and graphs to reach a conclusion. The outcomes generated from this research are measurable and can be repeated unlike the outcomes of qualitative research. This research type is mainly adopted for scientific and field based research.

Quantitative research generally involves a large number of people and a huge section of data and has a lot of scope for accuracy in it.

These research methods can be adopted for approaches like descriptive, correlational or experimental research.

Descriptive research - The study variables are analyzed and a summary of the same is sought.

Correlational Research - The relationship between the study variables is analyzed.

Experimental Research - It is deciphered to analyze whether a cause and effect relationship between the variables exists.

Quantitative research methods

- Experiment Research - This method controls or manages independent variables for calculating the effect it has on dependent variables.
- Survey - Surveys involve inquiring questions from a certain specified number or set of people either online, face to face or over the phone.
- (Systematic) observation - This method involves detecting any occurrence and monitoring it in a natural setting.
- Secondary research : This research focuses on making use of data which has been previously collected for other purposes such as for say, a national survey.

Qualitative Research

As the name suggests, this form of Research is more considered with the quality of a certain phenomenon, it dives into the “why” alongside the “what”. For instance, let’s consider a gender neutral clothing store which has more women visiting it than men.

Qualitative research would be determining why men are not visiting the store by carrying out an in-depth interview of some potential customers in this category.

This form of research is interested in getting to the bottom of the reasons for human behavior, i.e understanding why certain actions are taken by people or why they think certain thoughts.

Through this research the factors influencing people into behaving in a certain way or which control their preferences towards a certain thing can be interpreted.

Qualitative research methods

- Observations: In this method what the researcher sees, hears of or encounters is recorded in detail.
- Interviews: Personally asking people questions in one-on-one conversations.
- Focus groups: This involves asking questions and discussions among a group of people to generate conclusions from the same.
- Surveys: In these surveys unlike the quantitative research surveys, the questionnaires involve extensive open ended questions that require elaborate answers.
- Secondary research: Gathering the existing data such as images, texts or audio or video recordings. This can involve a text analysis, a research of a case study, or an In-depth interview.

Conceptual Research

This research is related to an abstract idea or a theory. It is adopted by thinkers and philosophers with the aim of developing a new concept or to re-examine the existing concepts.

Conceptual Research is mainly defined as a methodology in which the research is conducted by observing and interpreting the already present information on a present topic. It does not include carrying out any practical experiments.

Empirical Research

This is a research method that focuses solely on aspects like observation and experience, without focusing on the theory or system. It is based on data and it can churn conclusions that can be confirmed or verified through observation and experiment. Empirical Research is mainly undertaken to determine proof that certain variables are affecting the others in a particular way.

This kind of research can also be termed as Experimental Research. In this research it is essential that all the facts are received firsthand, directly from the source so that the researcher can actively go and carry out the actions and manipulate the concerned materials to gain the information he requires.

In this research a hypothesis is generated and then a path is undertaken to confirm or invalidate this hypothesis. The control that the researcher holds over the involved variables defines this research. The researcher can manipulate one of these variables to examine its effect.

3- Reading for Research

Step 1: Read Strategically, Not Linearly

Books

1. Read the TABLE OF CONTENTS
2. Read the INTRODUCTIONS carefully: Note the author's arguments, framework, organization
3. Read the LAST CHAPTER: Note restatement of arguments, conclusions, recommendations
4. Use the INDEX to identify RELEVANT chapters or passages
5. Read RELEVANT parts of the book: Skim beginnings and ends of those chapters, browse the middle of each
6. Skim the SOURCE NOTES for similar work and field experts

Articles

1. Identify NAME of JOURNAL: Use to identify scope and parameters of article
2. Read the TITLE and ABSTRACT of the article: Note the main argument, evidence, statement of conclusion
3. Read the INTRODUCTION: Note framework and any citations
4. Read the DISCUSSION and CONCLUSION sections: Note "why you should care"
5. Browse METHODS and RESULTS: Note images, tables, charts and other data
6. Search the WORKS CITED page for similar works and field experts

Step2: Take Notes!

- A. Develop a NOTE-TAKING system (Google Docs)
- B. Use a CITATION TOOL: Zotero, Refworks, EasyBib
- C. Be specific
- D. Note PAGE NUMBERS of exact quotes
- E. Jot down your questions and observations
- F. Note opposing viewpoints

Step 3: Be Purposeful

Ask Yourself:

- "What is the author trying to say?"
- "What is motivating the exploration of this topic?"

- “What does this research contribute?”
- “What academic conversations is the author trying to align with?”
- “What are the main arguments of this piece?”
- “How does this relate to my other readings?”

Step 4: Apply Critical Perspective

A Critical Perspective traces and names flows of POWER.

- “Who has power and who does not?”
- “Who benefits from particular social arrangements, and whom do they marginalize?”

Critical perspectives QUESTION assumptions and values implicit in arguments.

- “What are the values underlying this work?”
- “What experiences and perspectives do these values privilege?”
- “How might centering different values or experiences re-frame the argument or conversation?”

4- Collecting Data

Quantitative Methods

Quantitative techniques for market research and demand forecasting usually make use of statistical tools. In these techniques, demand is forecast based on historical data. These methods of primary data collection are generally used to make long-term forecasts. Statistical methods are highly reliable as the element of subjectivity is minimum in these methods.

Time Series Analysis

The term time series refers to a sequential order of values of a variable, known as a trend, at equal time intervals. Using patterns, an organization can predict the demand for its products and services for the projected time.

Smoothing Techniques

In cases where the time series lacks significant trends, smoothing techniques can be used. They eliminate a random variation from the historical demand. It helps in identifying patterns and demand levels to estimate future demand. The most common methods used in smoothing demand forecasting techniques are the simple moving average method and the weighted moving average method.

Barometric Method

Also known as the leading indicators approach, researchers use this method to speculate future trends based on current developments. When the past events are considered to predict future events, they act as leading indicators.

Qualitative Methods:

Qualitative methods are especially useful in situations when historical data is not available. Or there is no need of numbers or mathematical calculations. Qualitative research is closely associated with words, sounds, feeling, emotions, colors, and other elements that are non-quantifiable. These techniques are based on experience, judgment, intuition, conjecture, emotion, etc.

Quantitative methods do not provide the motive behind participants' responses, often don't reach underrepresented populations, and span long periods to collect the data. Hence, it is best to combine quantitative methods with qualitative methods.

Surveys

Surveys are used to collect data from the target audience and gather insights into their preferences, opinions, choices, and feedback related to their products and services. Most survey software often has a wide range of question types to select.

You can also use a ready-made survey template to save on time and effort. Online surveys can be customized as per the business's brand by changing the theme, logo, etc. They can be distributed through several distribution channels such as email, website, offline app, QR code, social media, etc. Depending on the type and source of your audience, you can select the channel.

Once the data is collected, survey software can generate various reports and run analytics algorithms to discover hidden insights. A survey dashboard can give you the statistics related to response rate, completion rate, filters based on demographics, export and sharing options, etc. You can maximize the effort spent on online data collection by integrating survey builders with third-party apps.

Polls

Polls comprise of one single or multiple choice question. When it is required to have a quick pulse of the audience's sentiments, you can go for polls. Because they are short in length, it is easier to get responses from the people.

Similar to surveys, online polls, too, can be embedded into various platforms. Once the respondents answer the question, they can also be shown how they stand compared to others' responses.

Interviews

In this method, the interviewer asks questions either face-to-face or through telephone to the respondents. In face-to-face interviews, the interviewer asks a series of questions to the interviewee in person and notes down responses. In case it is not feasible to meet the person, the interviewer can go for a telephonic interview. This form of data collection is suitable when there are only a few respondents. It is too time-consuming and tedious to repeat the same process if there are many participants.

Delphi Technique

In this method, market experts are provided with the estimates and assumptions of forecasts made by other experts in the industry. Experts may reconsider and revise their estimates and assumptions based on the information provided by other experts. The consensus of all experts on demand forecasts constitutes the final demand forecast.

Focus Groups

In a focus group, a small group of people, around 8-10 members, discuss the common areas of the problem. Each individual provides his insights on the issue concerned. A moderator regulates the discussion among the group members. At the end of the discussion, the group reaches a consensus.

Questionnaire

A questionnaire is a printed set of questions, either open-ended or closed-ended. The respondents are required to answer based on their knowledge and experience with the issue concerned. The questionnaire is a part of the survey, whereas the questionnaire's end-goal may or may not be a survey.

Secondary Data Collection Methods

Secondary data is the data that has been used in the past. The researcher can obtain data from the sources, both internal and external, to the organization.

Internal sources of secondary data:

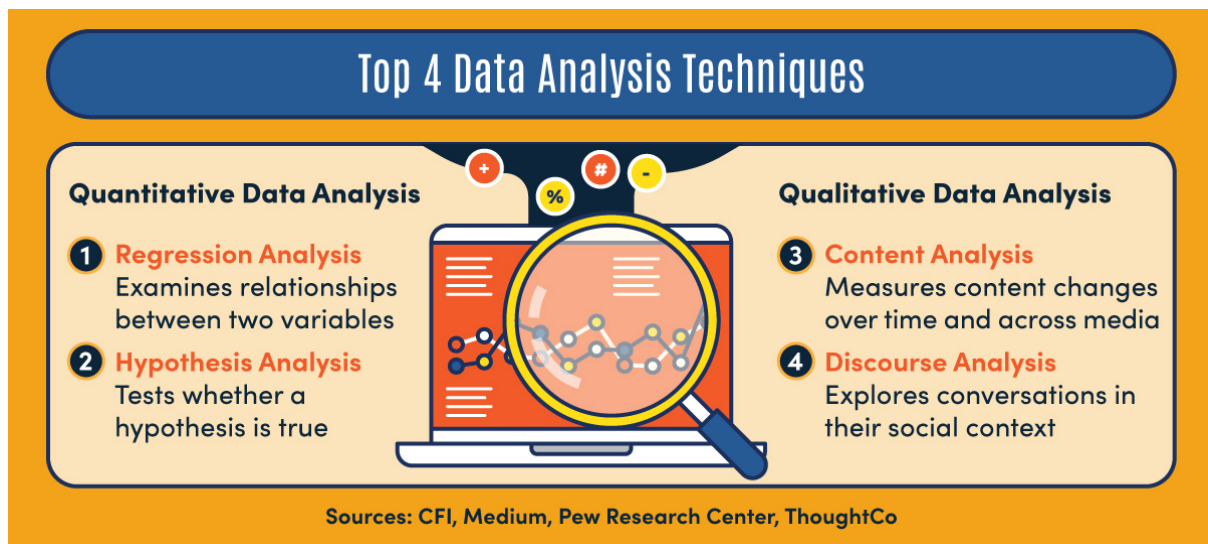
- Organization's health and safety records
- Mission and vision statements
- Financial Statements
- Magazines
- Sales Report
- CRM Software
- Executive summaries

External sources of secondary data:

- Government reports
- Press releases
- Business journals
- Libraries
- Internet

The secondary data collection methods, too, can involve both quantitative and qualitative techniques. Secondary data is easily available and hence, less time-consuming and expensive as compared to the primary data. However, with the secondary data collection methods, the authenticity of the data gathered cannot be verified.

5- Analysing Data



Quantitative data analysis

Quantitative data analysis involves working with numerical variables — including statistics, percentages, calculations, measurements, and other data — as the nature of quantitative data is numerical. Quantitative data analysis techniques typically include working with algorithms, mathematical analysis tools, and software to manipulate data and uncover insights that reveal the business value.

Regression analysis

Regression uses historical data to understand how a dependent variable's value is affected when one (linear regression) or more independent variables (multiple regression) change or stay the same. By understanding each variable's relationship and how they developed in the past, you can anticipate possible outcomes and make better decisions in the future.

Let's bring it down with an example. Imagine you did a regression analysis of your sales in 2019 and discovered that variables like product quality, store design, customer service, marketing campaigns, and sales channels affected the overall result. Now you want to use regression to analyze which of these variables changed or if any new ones appeared during 2020. For example, you couldn't sell as much in your physical store due to COVID lockdowns. Therefore, your sales could've either dropped in general or increased in your online channels. Like this, you can understand which independent variables affected the overall performance of your dependent variable, annual sales.

Hypothesis analysis

Hypothesis analysis is a data analysis technique that uses sample data to test a hypothesis. Hypothesis analysis is a statistical test method to validate an assumption and determine if it's plausible or factual. In this approach, an analyst develops two hypotheses — only one of them can be true. Two foundational components of hypothesis analysis are the null hypothesis and the alternative hypothesis.

Qualitative data analysis

Qualitative data describes information that is typically nonnumerical. The qualitative data analysis approach involves working with unique identifiers, such as labels and properties, and categorical variables, such as statistics, percentages, and measurements. A data analyst may use firsthand or participant observation approaches, conduct interviews, run focus groups, or review documents and artifacts in qualitative data analysis.

Qualitative data analysis techniques are built on two main qualitative data approaches: deductive and inductive.

- **Deductive approach.** This analysis method is used by researchers and analysts who already have a theory or a predetermined idea of the likely input from a sample population. The deductive approach aims to collect data that can methodically and accurately support a theory or hypothesis.
- **Inductive approach.** In this approach, a researcher or analyst with little insight into the outcome of a sample population collects the appropriate and proper amount of data about a topic of interest. Then, they investigate the data to look for patterns. The aim is to develop a theory to explain patterns found in the data.

Content analysis

Researchers and data analysts can use content analysis to identify patterns in various forms of communication. Content analysis can reveal patterns in recorded communication that indicate the purpose, messages, and effect of the content.

Content analysis can also help determine the intent of the content producers and the impact on target audiences. For example, content analysis of political messages can provide

qualitative insights about employment policy amid the COVID-19 pandemic. An analyst could identify instances where the word “employment” appears in social media, news stories, and other media and correlates with other relevant terms, such as “economy,” “business,” and “Main Street.” An analyst can then study the relationships between these keywords to better understand a political campaign’s intention with its messages.

Discourse analysis

A message is not always what it seems, so “reading between the lines,” or the ability to determine underlying messages in communication, is essential. When communications, whether verbal or written, have an indirect or underlying message, it can be interpreted one way by one group and in an entirely different way by another, potentially leading to a breakdown in civil discourse.

Discourse analysis helps provide an understanding of the social and cultural context of verbal and written communication throughout conversations. Discourse analysis aims to investigate the social context of communication and how people use language to achieve their aims, such as evoking an emotion, sowing doubt, or building trust. Discourse analysis analyzes verbal and nonverbal cues. For example, the way a speaker pauses on a particular word or phrase can reveal insights into the speaker’s intent or attitude toward that phrase.

Discourse analysis helps interpret the true meaning and intent of communication and clarifies misunderstandings. For example, an analysis of transcripts of conversations between a physician and a patient can reveal whether the patient truly understood a diagnosis.

An analyst can distinguish subtle subtext in communication through discourse analysis to differentiate whether the content is fact, fiction, or propaganda.

6- Writing Up

1. Carry out a thorough research: This is the most important step while writing a research paper on any subject. You need to carry out a very thorough and prolonged research work before writing the paper. Students can take relevant data and information based on the subject topic from valuable resources like the internet, newspapers, books, scholarly articles, journals, etc. You always need to take the best and the most important points from all these sources.

2. Choose a good topic: If your institute gives you the freedom to choose your own topic, then you can select the one that interests you the most. You also need to be very careful while choosing your topic. Try to choose an uncommon yet interesting topic since most students tend to write on general topics.

3. Write down the notes properly: Take down all the important notes related to the topic on a paper for the ease of writing your research paper. Try to color code your notes and use highlighters for marking the important details. If writing down the detailed notes is more

time-consuming for you, then, you can photocopy the notes from various sources like books, journals, articles, etc. This will definitely save your time.

4. Brainstorm the outline: After conducting an in-depth research, you can write an outline. Include all the vital information and notes you have gathered and start brainstorming them as per your topic. You need to write a well-shaped beginning, body and conclusion part in this part of your research paper. Your paper will really get a good shape and structure with proper brainstorming if you gathered information from various sources.

5. Write a prospectus and outline for your own sake: What is the topic? What is the significance of the topic? Why should you choose the topic? What is the background of this topic? Answers of these few questions are needed to be outlined while writing your research paper on any subject or topic.

6. Write a very good introduction: It is a very important part of your research paper. Thus, you need to be very careful while writing the introduction. It should include a contextual material and relevant background. Here you also need to define the concepts or terms wherever necessary. In the introductory part you need to explain the focus and purpose of your paper.

7. Write a proper body: Body is the main part of your research paper. Here you need to use the prospectus and outline as the flexible guides. In the body part you need to build the body of your research paper around the points you need to make. In this part of your research paper you need to summarize, analyze, evaluate and explain the published work.

8. Give a good conclusion: A good concluding part is very much necessary to make your research paper more impressive. Here you need to summarize your argument. This concluding part is the end of your paper. In the third part you need to add points and explain their significance. Here you need to move from detailed to a general consideration level that returns your top to the content provided by the introductory part.

These are the tips you need to follow while writing a good research paper. They are not compulsory but if you follow those tips, it will be easier for you to write a research paper and also your research paper would look more professional. Apart from that we have a template below for you to have an opinion on what a research paper looks like.

Research Paper Outline Examples

Outline in a list:

I. Introduction

1. Background
2. Thesis Statement

II. Body

First Topic

Point A

1. Supporting evidence
2. Supporting evidence

Point B

1. Supporting evidence
2. Supporting evidence

Second Topic

Point A

1. Supporting evidence
2. Supporting evidence

Point B

1. Supporting evidence
2. Supporting evidence

Third Topic

Point A

1. Supporting evidence
2. Supporting evidence

III. Conclusion

1. Summarize the main points of your paper and restate your thesis in fresh words.
2. Make a strong/memorable final statement

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