Media Research

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It is the study of the effects of the different mass media on social, psychological and physical aspects.

Research survey that segments the people based on what television programs they watch, radio they listen and magazines they read.

For example: Time a person spends with a particular medium.

It includes achievements and effects of media and a study about the development of media.

Newspapers, magazines, radio, TV, Cinema or other mass media analysis and collection of information's. It helps to understand the ways in which media can meet the needs of the audience.

Whether it can provide information and entertainment to more and different types of people.

New technological improvements that helps to improve or enhance the medium.

Thus in order to deal with social and political issues insightfully, management and regulation of media is needed. Unbiased evaluation of data can be achieved through media research.

We need to understand:

- The nature of medium being used
- The working of the medium
- Technologies involved in it
- Difference and similarities between it and other media vehicles
- Functions and services provided by it
- Cost associated and access to new medium
- Effectiveness and how it can be improved

As decision process depends on data, thus media research has grown to be utilized for long range planning. Research is in growth phase due to competitions between different media.

Why Is Research Important?

The main purpose of research is to inform action, to prove a theory, and contribute to developing knowledge in a field or study.

The significance of research with the following points:

- A Tool for Building Knowledge and for Facilitating Learning
- Means to Understand Various Issues and Increase Public Awareness
- An Aid to Business Success
- A Way to Prove Lies and to Support Truths
- Means to Find, Gauge, and Seize Opportunities
- A Seed to Love Reading, Writing, Analyzing, and Sharing Valuable Information
- Nourishment and Exercise for the Mind

#1. Research expands your knowledge base

The most obvious reason to do research is that you'll learn more. There's always more to learn about a topic, even if you are already well-versed in it. If you aren't, research allows you to build on any personal experience you have with the subject. The process of research opens up new opportunities for learning and growth.

#2. Research gives you the latest information

Research encourages you to find the most recent information available. In certain fields, especially scientific ones, there's always new information and discoveries being made. Staying updated prevents you from falling behind and giving info that's inaccurate or doesn't paint the whole picture. With the latest info, you'll be better equipped to talk about a subject and build on ideas.

#3. Research helps you know what you're up against
In business, you'll have competition. Researching your competitors and what they're up to helps you formulate your plans and strategies. You can figure out what sets you apart. In other types of research, like medicine, your research might identify diseases, classify symptoms, and come up with ways to tackle them. Even if your "enemy" isn't an actual person or competitor, there's always some kind of antagonist force or problem that research can help you deal with.

#4. Research builds your credibility
People will take what you have to say more seriously when they can tell you're informed. Doing research gives you a solid foundation on which you can build your ideas and opinions. You can speak with confidence about what you know is accurate. When you've done the research, it's much harder for someone to poke holes in what you're saying. Your research should be focused on the best sources. If your "research" consists of opinions from non-experts, you won't be very credible. When your research is good, though, people are more likely to pay attention.

#5. Research helps you narrow your scope

When you're circling a topic for the first time, you might not be exactly sure where to start. Most of the time, the amount of work ahead of you is overwhelming. Whether you're writing a paper or formulating a business plan, it's important to narrow the scope at some point. Research helps you identify the most unique and/or important themes. You can choose the themes that fit best with the project and its goals.

#6. Research teaches you better discernment

Doing a lot of research helps you sift through low-quality and high-quality information. The more research you do on a topic, the better you'll get at discerning what's accurate and what's not. You'll also get better at discerning the gray areas where information may be technically correct but used to draw questionable conclusions.

#7. Research introduces you to new ideas

You may already have opinions and ideas about a topic when you start researching. The more you research, the more viewpoints you'll come across. This encourages you to entertain new ideas and perhaps take a closer look at yours. You might change your mind about something or, at least, figure out how to position your ideas as the best ones.

#8. Research helps with problem-solving

Whether it's a personal or professional problem, it helps to look outside yourself for help. Depending on what the issue is, your research can focus on what others have done before. You might just need more information, so you can make an informed plan of attack and an informed decision. When you know you've collected good information, you'll feel much more confident in your solution.

#9. Research helps you reach people

Research is used to help raise awareness of issues like climate change, racial discrimination, gender inequality, and more. Without hard facts, it's very difficult to prove that climate change is getting worse or that gender inequality isn't progressing as quickly as it should. The public needs to know what the facts are, so they have a clear idea of what "getting worse" or "not progressing" actually means. Research also entails going beyond the raw data and sharing real-life stories that have a more personal impact on people.

#10. Research encourages curiosity

Having curiosity and a love of learning take you far in life. Research opens you up to different opinions and new ideas. It also builds discerning and analytical skills. The research process rewards curiosity. When you're committed to learning, you're always in a place of growth. Curiosity is also good for your health. Studies show curiosity is associated with higher levels of positivity, better satisfaction with life, and lower anxiety.

Qualitative research involves collecting and analyzing non-numerical data (e.g., text, video, or audio) to understand concepts, opinions, or experiences. It can be used to gather in-depth insights into a problem or generate new ideas for research.

Qualitative research is the opposite of quantitative research, which involves collecting and analyzing numerical data for statistical analysis.

Qualitative research is commonly used in the humanities and social sciences, in subjects such as anthropology, sociology, education, health sciences, history, etc.

Approaches to qualitative research

Qualitative research is used to understand how people experience the world. While there are many approaches to qualitative research, they tend to be flexible and focus on retaining rich meaning when interpreting data.

Common approaches include grounded theory, ethnography, action research, phenomenological research, and narrative research. They share some similarities, but emphasize different aims and perspectives.

Qualitative research approaches	
Approach	What does it involve?
Grounded theory	Researchers collect rich data on a topic of interest and develop theories inductively.
Ethnography	Researchers immerse themselves in groups or organizations to understand their cultures.
Action research	Researchers and participants collaboratively link theory to practice to drive social change.
Phenomenological research	Researchers investigate a phenomenon or event by describing and interpreting participants' lived experiences.
Narrative research	Researchers examine how stories are told to understand how participants perceive and make sense of their experiences.

Qualitative research methods

Each of the research approaches involve using one or more data collection methods. These are some of the most common qualitative methods:

Observations: recording what you have seen, heard, or encountered in detailed field notes.

Interviews: personally asking people questions in one-on-one conversations.

Focus groups: asking questions and generating discussion among a group of people.

Surveys: distributing questionnaires with open-ended questions.

Secondary research: collecting existing data in the form of texts, images, audio or video recordings, etc.

Research example

To research the culture of a large tech company, you decide to take an ethnographic approach. You work at the company for several months and use various methods to gather data:

You take field notes with observations and reflect on your own experiences of the company culture.

You distribute open-ended surveys to employees across all the company's offices by email to find out if the culture varies across locations.

You conduct in-depth interviews with employees in your office to learn about their experiences and perspectives in greater detail.

Qualitative researchers often consider themselves “instruments” in research because all observations, interpretations and analyses are filtered through their own personal lens.
For this reason, when writing up your methodology for qualitative research, it’s important to reflect on your approach and to thoroughly explain the choices you made in collecting and analyzing the data.

Qualitative data analysis

Qualitative data can take the form of texts, photos, videos and audio. For example, you might be working with interview transcripts, survey responses, fieldnotes, or recordings from natural settings.

Most types of qualitative data analysis share the same five steps:

Prepare and organize your data. This may mean transcribing interviews or typing up fieldnotes.

Review and explore your data. Examine the data for patterns or repeated ideas that emerge.

Develop a data coding system. Based on your initial ideas, establish a set of codes that you can apply to categorize your data.

Assign codes to the data. For example, in qualitative survey analysis, this may mean going through each participant's responses and tagging them with codes in a spreadsheet. As you go through your data, you can create new codes to add to your system if necessary.

Identify recurring themes. Link codes together into cohesive, overarching themes.

There are several specific approaches to analyzing qualitative data. Although these methods share similar processes, they emphasize different concepts.

Qualitative data analysis		
Approach	When to use	Example
Content analysis	To describe and categorize common words, phrases, and ideas in qualitative data.	A market researcher could perform content analysis to find out what kind of language is used in descriptions of therapeutic apps.
Thematic analysis	To identify and interpret patterns and themes in qualitative data.	A psychologist could apply thematic analysis to travel blogs to explore how tourism shapes self-identity.
Textual analysis	To examine the content, structure, and design of texts.	A media researcher could use textual analysis to understand how news coverage of celebrities has changed in the past decade.
Discourse analysis	To study communication and how language is used to achieve effects in specific contexts.	A political scientist could use discourse analysis to study how politicians generate trust in election campaigns.

Advantages of qualitative research

Qualitative research often tries to preserve the voice and perspective of participants and can be adjusted as new research questions arise.

Qualitative research is good for:

Flexibility

The data collection and analysis process can be adapted as new ideas or patterns emerge. They are not rigidly decided beforehand.

Natural settings

Data collection occurs in real-world contexts or in naturalistic ways.

Meaningful insights

Detailed descriptions of people's experiences, feelings and perceptions can be used in designing, testing or improving systems or products.

Generation of new ideas

Open-ended responses mean that researchers can uncover novel problems or opportunities that they wouldn't have thought of otherwise.

Disadvantages of qualitative research

Researchers must consider practical and theoretical limitations in analyzing and interpreting their data. Qualitative research suffers from:

Unreliability

The real-world setting often makes qualitative research unreliable because of uncontrolled factors that affect the data.

Subjectivity

Due to the researcher's primary role in analyzing and interpreting data, qualitative research cannot be replicated. The researcher decides what is important and what is irrelevant in data analysis, so interpretations of the same data can vary greatly.

Limited generalizability

Small samples are often used to gather detailed data about specific contexts. Despite rigorous analysis procedures, it is difficult to draw generalizable conclusions because the data may be biased and unrepresentative of the wider population.

Labor-intensive

Although software can be used to manage and record large amounts of text, data analysis often has to be checked or performed manually.

Qualitative vs. quantitative research

When collecting and analyzing data, quantitative research deals with numbers and statistics, while qualitative research deals with words and meanings. Both are important for gaining different kinds of knowledge.

Quantitative researchQuantitative research is **expressed in numbers and graphs**. It is **used to test or confirm** theories and assumptions. This type of research can be used to establish **generalizable facts** about a topic. Common quantitative methods include experiments, observations recorded as numbers, and surveys with closed-ended questions.

Qualitative researchQualitative research is **expressed in words**. It is **used to understand** concepts, thoughts or experiences. This type of research enables you to gather **in-depth insights** on topics that are not well understood. Common qualitative methods include interviews with open-ended questions, observations described in words, and literature reviews that explore concepts and theories.

The differences between quantitative and qualitative research

Quantitative and qualitative research use different research methods to collect and analyze data, and they allow you to answer different kinds of research questions.

Quantitative research	Qualitative Research
Focuses on testing theories and hypotheses	Focuses on exploring ideas and formulating a theory or hypothesis
Analyzed through math and statistical analysis	Analyzed by summarizing, categorizing and interpreting
Mainly expressed in numbers, graphs and tables	Mainly expressed in words
Requires many respondents	Requires few respondents
Closed (multiple choice) questions	Open-ended questions
Key terms: testing, measurement, objectivity, replicability	Key terms: understanding, context, complexity, subjectivity

Data collection methods

Quantitative and qualitative data can be collected using various methods. It is important to use a data collection method that will help answer your research question(s).

Many data collection methods can be either qualitative or quantitative. For example, in surveys, observations or case studies, your data can be represented as numbers (e.g. using rating scales or counting frequencies) or as words (e.g. with open-ended questions or descriptions of what you observe). However, some methods are more commonly used in one type or the other.

Quantitative data collection methods

Surveys: List of closed or multiple choice questions that is distributed to a sample (online, in person, or over the phone).

Experiments: Situation in which variables are controlled and manipulated to establish cause-and-effect relationships.

Observations: Observing subjects in a natural environment where variables can't be controlled.

Qualitative data collection methods

Interviews: Asking open-ended questions verbally to respondents.

Focus groups: Discussion among a group of people about a topic to gather opinions that can be used for further research.

Ethnography: Participating in a community or organization for an extended period of time to closely observe culture and behavior.

Literature review: Survey of published works by other authors.

When to use qualitative vs. quantitative research

A rule of thumb for deciding whether to use qualitative or quantitative data is:

Use quantitative research if you want to **confirm or test something** (a theory or hypothesis)

Use qualitative research if you want to **understand something** (concepts, thoughts, experiences)

For most research topics you can choose a qualitative, quantitative or mixed methods approach. Which type you choose depends on, among other things, whether you're taking an inductive vs. deductive research approach; your research question(s); whether you're doing experimental, correlational, or descriptive research; and practical considerations such as time, money, availability of data, and access to respondents.

Quantitative research approach

You survey 300 students at your university and ask them questions such as: "on a scale from 1-5, how satisfied are your with your professors?"

You can perform statistical analysis on the data and draw conclusions such as: "on average students rated their professors 4.4".

Qualitative research approach

You conduct in-depth interviews with 15 students and ask them open-ended questions such as: "How satisfied are you with your studies?", "What is the most positive aspect of your study program?" and "What can be done to improve the study program?"

Based on the answers you get you can ask follow-up questions to clarify things. You transcribe all interviews using transcription software and try to find commonalities and patterns.

Mixed methods approach

You conduct interviews to find out how satisfied students are with their studies. Through open-ended questions you learn things you never thought about before and gain new insights. Later, you use a survey to test these insights on a larger scale.

It's also possible to start with a survey to find out the overall trends, followed by interviews to better understand the reasons behind the trends.

How to analyze qualitative and quantitative data

Qualitative or quantitative data by itself can't prove or demonstrate anything, but has to be analyzed to show its meaning in relation to the research questions. The method of analysis differs for each type of data.

Analyzing quantitative data

Quantitative data is based on numbers. Simple math or more advanced statistical analysis is used to discover commonalities or patterns in the data. The results are often reported in graphs and tables.

Applications such as Excel, SPSS, or R can be used to calculate things like:

Average scores

The number of times a particular answer was given

The correlation or causation between two or more variables

The reliability and validity of the results

Analyzing qualitative data

Qualitative data is more difficult to analyze than quantitative data. It consists of text, images or videos instead of numbers.

Some common approaches to analyzing qualitative data include:

Qualitative content analysis: Tracking the occurrence, position and meaning of words or phrases

Thematic analysis: Closely examining the data to identify the main themes and patterns

Discourse analysis: Studying how communication works in social contexts

	Pros	Cons
Qualitative	•Flexible – you can often adjust your methods as you go to develop new knowledge. •Can be conducted with small samples.	•Can't be analyzed statistically or generalized to broader populations. •Difficult to standardize research.
Quantitative	•Can be used to systematically describe large collections of things. •Generates reproducible knowledge.	•Requires statistical training to analyze data. •Requires larger samples.

Primary vs. secondary data

Primary data is any original information that you collect for the purposes of answering your research question (e.g. through surveys, observations and experiments). Secondary data is information that has already been collected by other researchers (e.g. in a government census or previous scientific studies).

If you are exploring a novel research question, you'll probably need to collect primary data. But if you want to synthesize existing knowledge, analyze historical trends, or identify patterns on a large scale, secondary data might be a better choice.

	•Pros	•Cons
Primary	•Can be collected to answer your specific research question. •You have control over the sampling and measurement methods.	•More expensive and time-consuming to collect. •Requires training in data collection methods.
Secondary	•Easier and faster to access. •You can collect data that spans longer timescales and broader geographical locations.	•No control over how data was generated. •Requires extra processing to make sure it works for your analysis.

Descriptive vs. experimental data

In descriptive research, you collect data about your study subject without intervening. The validity of your research will depend on your sampling method.

In experimental research, you systematically intervene in a process and measure the outcome. The validity of your research will depend on your experimental design.

To conduct an experiment, you need to be able to vary your independent variable, precisely measure your dependent variable, and control for confounding variables. If it's practically and ethically possible, this method is the best choice for answering questions about cause and effect.

	Pros	Cons
Descriptive	•Allows you to describe your research subject without influencing it. •Accessible – you can gather more data on a larger scale.	•No control over confounding variables. •Can't establish cause and effect relationships.
Experimental	•More control over confounding variables. •Can establish cause and effect relationships.	•You might influence your research subject in unexpected ways. •Usually requires more expertise and resources to collect data.

What Is a Director?

- A director is a person who determines the creative vision of a feature film, television show, play, short film, or other production.
- They have complete artistic control of a project.
- In addition to having a strong grasp of technical knowledge taught in directing classes, they must also have a personal or emotional connection to the material.
- Film Directors control and manage a film's creative components and form.
- Their primary duties include reading and editing scripts, motivating and directing actors and working with editors to produce the film in its final form.

What Does a Director Do During Pre-production?

Assemble a team. The first people you'll need are a line producer, production designer, location manager, cinematographer, and assistant director.

Create your vision for the film and communicate it to your crew. Establish a visual language for your film by creating a lookbook. Fill it with reference images to help you articulate your ideal color palette, locations, and framing. It helps to reference other films that inspire you.

Discuss your vision with each key crew member individually. Your vision affects every department differently. For example, if you say, "I want it to feel like the character is isolated," that affects lens choice, lighting, and music. Learn to speak the language of every department so you can successfully communicate what you need from them.

Make casting choices. You can change many of your decisions along the way, but casting is the least flexible in terms of making last-minute changes. Before you cast an actor, it's important that they understand the story you're telling. They should be someone you trust to prepare the role to the best of their ability and who is willing to be flexible and collaborate with you.

What Does a Director Do During Production?

Guide the actors through scenes. It's your job to help inform and shape their performances, so give the actors positive but specific (and short) praise and/or notes after every take. Make sure you're on the same page about who the characters are and what they want in each scene.

Ensure every department is doing its job. You're the person who is most familiar with every part of the production. You must make sure every department is doing its job and working together to bring the film to life.

Communicate with everyone as much as possible. Directing is a collaborative process. Having open communication with every team is vital to making the best film possible so everyone feels comfortable speaking up and knows exactly what they need to be doing.

Keep your artistic vision alive. Continue to check in with every department, from the producers to the actors to the crew, about what you need from them in order to translate your creative vision to the screen.

What Does a Director Do During Post-production?

Give notes to the editor. Review the editor's cuts, break down the footage, and find the shots, angles, and takes that add the most meaning.

Check in with post-production teams. Work with the sound design team, the music supervisor, and the visual effects team to ensure every postproduction decision is in line with your overall vision.

Give final signoff. You have complete creative control, and it's up to you to determine when a project is finished.

Duties and Responsibilities of a Film Director

- The film directors have to direct the complete film and have to be a part of all the processes
- They are a part of the whole process from the beginning; they have to read the whole script and be present with the screenwriter to make the screenplay
- They have to make shot division and a complete shooting script based on the screenplay
- They have to meet all the technicians that are a part of the filmmaking process and give them a briefing about what all is required of them
- The directors explain the scenes to all the actors and get the desired performance from them
- They have to give instructions like light, camera, action, cut and print to the cameraman

- They have to approve each and every shot and only then do they move on to shoot the next shot
- Once all the scenes are filmed, they have to be present with the editor during the whole editing process
- The directors should ensure that the scenes are all according to the original screenplay
- After the film is edited, they have to coordinate with the producers on the release of the film and be a part of promotion of the film
- They even have to speak to media about their film and be present at the premiere and the award functions where the film has been nominated for any award

Film directors make good money, but their paycheck depends upon the quality of their work and experience. However, the directors are probably highest paid of all the technicians. They require expert education which is expensive. However, there are directors who have not had any formal education but have learned it all by being a part of the filmmaking process.

What is a film producer?

A **film producer** is a person that initiates, coordinates, supervises and manages the creation and production of movies, television shows, web series, and commercial videos, amongst other productions.

A producer may be a self-employed contractor, or subject to the authority of an employer such as a production company or studio.

They are involved throughout all phases of production from inception to completion, including coordination, supervision, and control of finances, talent, crafts.

WHAT DOES A PRODUCER DO?

- Find and develop material
- Budget and Schedule
- Raise Money
- Manage pre-production & production
- Hire cast & crew
- Manage post-production
- Marketing/Distribution

Finding & Developing Material

- A producer is always on the hunt for a new script.
- Whether they themselves buy the rights to a book, and hire a writer to write it.
- Or a writer has already finished an original and it caught the producer's eye.

Budgeting

- Before a producer can go scout for funds, they put a budget together.
- This will help investors decide if it's worth their time and/or do able for them.
- A fiscal road map will establish trust between you and potential investors.
- It will also keep you on track in terms of hiring cast and crew, revealing where you can cut corners and where you can't.

Fundraising

- The producer is responsible for getting the money to actually make the film.

- Or at the very least, they find people who can help find the money! This is usually where pitch decks are created to sell the idea to potential executive producers looking to get involved.

Scheduling

- The producer typically makes the schedule. And they schedule shoot days within the limits of the budget.

- This is why budgeting is so important. If you've budgeted, you'll know, roughly, how many days you can shoot.

- The producer also schedules based on talent's needs and considers locations early. If there are scenes in the same location, the producer will likely schedule those on the same day.

- Of course, there are exceptions to everything. Production management software has made it easier to juggle all these considerations.

- You can streamline the entire production process, from script to scheduling, with these softwares.

Hiring Cast & Crew

- The producer is responsible for hiring *everyone*. Yep, even the director.
- But it's hard to say that the producer is "in charge of" the director.

- The reason why the producer hires that specific director is for their vision. And once the director is hired, the producer does everything in his or her power to support the director's vision.
- So who's in charge of who?
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- Well, they really work together. Often the director is responsible for hiring his or her assistant director.

- The producer and director also work together when casting. We'll expand more on this in the director's section.

Managing Pre-Production & Production

- Once everyone is hired, pre-production consists of securing locations and permits, call sheets, and even dealing with SAG contracts, depending on who is casted.

- During the actual shooting, the producer is on top of the production team. They are in communication with all department heads, ensuring everyone is doing their job.

- Of course, different producers do different things.

- On the ground producers are typically your line producers.

Managing Post- Production

- During shooting, producers should already be in communication with editors. They often send footage before the production is wrapped.

- Once the production is wrapped, the producer, like the director, assists the editors with anything they need. The producer may also assist the director with hiring a VFX producer or any other post necessity like composer or colorist.
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- Sometimes, on larger productions, the producer also acts as a middle man between the director and the studio.

Marketing/Distribution

It's the role of the producer to market the film. And there's quite a bit that goes into this. Whether it's entering film festivals, or making sure all of the paperwork is in for your deliverables, it may seem like the producer's job never ends.

Preproduction

- Find material from a book or script.
- Get the script into good enough shape to attract a director (and studio, if this is not a studio-initiated production).
- Secure financing for the film, if it is not being made for a studio.
- Choose the director and other parts of the creative team.
- Cast the actors, working with the director.
- Determine locations and budget.
- Decide on cinematographer and special effects.
- Hire a production team including crew and producers.
- Develop a shooting schedule.
- Create a detailed plan of action for production.

Production

- Offer creative suggestions to the director.
- Handle problems with actors or creative staff.
- Monitor production timetable and budget.
- Review video dailies, the film shot each day.

Postproduction

- Discuss order and selection of scenes with the director.
- Review the fine cut of the film after it is edited.
- In some cases, polish, revise and restructure the film to create the final cut.
- Work with a distributor to secure distribution for the film. This may include showing the distributors the final cut of the film.
- Review the distributor's advertising campaign for the film.

Producer job description and duties:

- Purchase and develop projects. If applicable, producers secure the rights to projects.
- Hire and manage key team members, including writers, directors, managers, talent, heads of department, key crew, staff, and other personnel.
- Set a budget, and secure funds for the project, often through investors, personal funds or a studio.
- After funding, producers oversee the project to ensure it stays within budget.
- Build a schedule using production management software to set the production schedule.
- Oversee post-production from editing, through music composition and picture lock.
- Market the project and generate buzz for the project by working with a PR team.

Historical research

- Historical research involves studying, understanding and interpreting past events.

- The purpose of historical research is to reach insights or conclusions about past persons or occurrences.

- Historical research entails more than simply compiling and presenting factual information; it also requires interpretation of the information.
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- Typically, histories focuses on particular individuals, social issues and links between the old and the new. Some historical research is aimed at reinterpreting prior historical works by revising existing understandings and replacing them with new, often politically charged ones.

- The main emphasis in historical research is on interpretation of documents, diaries and the like.

- Historical data are categorized into primary or secondary sources.

- **Primary sources** include first hand information, such as eyewitness reposts and original documents.

- **Secondary sources** include secondhand information, such as a description of an event by someone other than an eyewitness, or a textbook author's explanation of an event or theory.

- Primary sources may be harder to find but are generally more accurate and preferred by historical researchers. A major problem with much historical research is excessive reliance on secondary sources.

- It covers both primary sources (such as diaries, letters, newspaper articles, photographs, government documents and first-hand accounts) and secondary materials (such as books and articles written by historians and devoted to the analysis and interpretation of historical events and evidence).

- "Research in history involves developing an understanding of the past through the examination and interpretation of evidence.

- Evidence may exist in the form of texts, physical remains of historic sites, recorded data, pictures, maps, artifacts, and so on.

- The historian's job is to find evidence, analyze its content and biases, corroborate it with further evidence, and use that evidence to develop an interpretation of past events that holds some significance for the present.

- Historians use libraries to
- locate primary sources (first-hand information such as diaries, letters, and original documents) for evidence
- find secondary sources (historians' interpretations and analyses of historical evidence)
- verify factual material as inconsistencies arise"

Principal Use

Historical research is used to compare records of historical events and the activities surrounding them. This type of research also helps to organize historical events sequentially, and to preserve historical data so it doesn't get lost.

Advantages

- The research is not involved in the situation that is studied
- The researchers do not interact with the subjects of study
- Analysis of historical data may help explain current and future events

Shortcomings

- Historical data is incomplete and vulnerable to time (documents can be destroyed by wars or over time)
- It can also be biased and corrupt (e.g. diaries, letters, etc. are influenced by the person writing them)
- Historical research is a complex and broad category because the topics of research (e.g. the study of a society) are affected by numerous factors that need to be considered and analyzed

Introduction

- **Ex post facto** is a Latin phrase that essentially means "retroactive," or affecting something that's already happened.

- **Ex post facto** design is a quasi-experimental study examining how an independent variable, present prior to the study in the participants, affects a dependent variable. A quasi-experimental study simply means participants are not randomly assigned.

Independent variable

vs

Dependent variable

The variable the researcher changes.

Application of fertilizer 'x' in this experiment

Variable affected by change in independent variable

- **Plant growth**
- **No. of leaves,**
- **No. of fruits etc in this experiment.**

www.majordifferences.com

Effect of Bio-fertilizer 'x' on Plant growth

PROCEDURES IN AN EX POST FACTO INVESTIGATION

- **Stage One:** Define the problem and survey the literature.
- **Stage Two:** State the hypotheses and the assumptions or premises on which the hypotheses and research procedures are based.
- **Stage Three:** Select the subjects (sampling) and identify the methods for collecting the data.
- **Stage Four:** Identify the criteria and categories for classifying the data to fit the purposes of the study.

PROCEDURES IN AN EX POST FACTO INVESTIGATION

- **Stage Five:** Gather data on those factors which are always present in which the given outcome occurs, and discard the data in which those factors are not always present.
- **Stage Six:** Gather data on those factors which are always present in which the given outcome does not occur.
- **Stage Seven:** Compare the two sets of data (i.e. subtract the former (Stage Five) from the latter (Stage Six), in order to infer the causes that are responsible for the occurrence or non-occurrence of the outcome.
- **Stage Eight:** Analyze, interpret and report findings.

EX POST FACTO RESEARCH AND INDEPENDENT VARIABLES

*Differing on the **independent** variable:*
Presence of independent variable
Absence of independent variable
Degrees of independent variable

Investigate → Effect on the **dependent** variable

*Same on the **independent** variable(s)*

Investigate → Effect on the **dependent** variable

EX POST FACTO RESEARCH AND DEPENDENT VARIABLES

*Differing on the **dependent** variable*

Investigate → *Differing on **independent** variables:*
Presence of independent variables
Absence of independent variables
Degrees of independent variables

*Same on the **dependent** variable*

Investigate → *Differing on **independent** variables:*
Presence of independent variables
Absence of independent variables
Degrees of independent variables

Characteristics of Ex Post Facto

- The independent variable (IV) is not manipulated; it has already occurred.
- Less costly and time-consuming to conduct.
- Establishing cause-effect relationships is more difficult than in experiments.
- Researcher has little to no control over independent variables.
- Flexible by nature.

Ex post facto advantages and disadvantages

Advantages

- Show a correlation where more rigorous experimentation is not possible
- Exploratory tool
- Useful to avoid artificial in the research.
- Shows cause and effect relationships (possible)

Disadvantages

- Lack of control for independent variable and randomizing subjects.
- Never certain if causative factor has been included or identified
- Relationship between two factors does not est. cause and effect.
- May be regarded as too flexible.

Survey research

Survey Research is defined as the process of conducting research using surveys that researchers send to survey respondents. The data collected from surveys is then statistically analyzed to draw meaningful research conclusions.

In the 21st century, every organization's eager to understand what their customers think about their products or services and make better business decisions. Researchers can conduct research in multiple ways, but surveys are proven to be one of the most effective and trustworthy research methods. An online survey is a method for extracting information about a significant business matter from an individual or a group of individuals. It consists of structured survey questions that motivate the participants to respond,

Creditable survey research can give these businesses access to a vast information bank. Organizations in media, other companies, and even governments rely on survey research to obtain accurate data.

The traditional definition of survey research is a quantitative method for collecting information from a pool of respondents by asking multiple survey questions.

This research type includes the recruitment of individuals, collection, and analysis of data. It's useful for researchers who aim at communicating new features or trends to their respondents.

Generally, it's the primary step towards obtaining quick information about mainstream topics and conducting more rigorous and detailed quantitative research methods like surveys/polls or qualitative research methods like focus groups/on-call interviews can follow.

There are many situations where researchers can conduct research using a blend of both qualitative and quantitative strategies.

Survey research methods

Survey research methods can be derived based on two critical factors: Survey research tool and time involved to conduct research.

There are three main survey research methods, divided based on the medium of conducting survey research:

Online/ Email: Online survey research is one of the most popular survey research methods today. The cost involved in online survey research is extremely minimal, and the responses gathered are highly accurate.

Phone: Survey research conducted over the telephone (CATI) can be useful in collecting data from a more extensive section of the target population. There are chances that the money invested in phone surveys will be higher than other mediums, and the time required will be higher.

Face-to-face: Researchers conduct face-to-face in-depth interviews in situations where there is a complicated problem to solve. The response rate for this method is the highest, but it can be costly.

Further, based on the time taken, survey research can be classified into two methods:

Longitudinal survey research: Longitudinal survey research involves conducting survey research over a continuum of time and spread across years and decades. The data collected using this survey research method from one time period to another is qualitative or quantitative. Respondent behavior, preferences, attitudes are continuously observed over time to analyze reasons for a change in behavior or preferences. For example, suppose a researcher intends to learn about the eating habits of teenagers. In that case, he/she will follow a sample of teenagers over a considerable period to ensure that the collected information is reliable. Often, cross-sectional survey research follows a longitudinal survey research study.

Cross-sectional survey research: Researchers conduct a cross-sectional survey to collect insights from a target audience at a particular time interval. This survey research method is implemented in various sectors such as retail, education, healthcare, SME businesses, etc.

Cross-sectional survey research can either be descriptive or analytical. It is quick and helps researchers collected information in a brief period. Researchers rely on cross-sectional survey research method in situations where descriptive analysis of a subject is required.

Survey research also is bifurcated according to the sampling methods used to form samples for research: Probability and Non-probability sampling.

Every individual of a population should be considered equally to be a part of the survey research sample. Probability sampling is a sampling method in which the researcher chooses the elements based on probability theory.

The are various probability research methods such as simple random sampling, systematic sampling, cluster sampling, stratified random sampling, etc. Non-probability sampling is a sampling method where the researcher uses his/her knowledge and experience to form samples.

The various non-probability sampling techniques are convenience sampling, snowball sampling, consecutive sampling, judgemental sampling, and quota sampling.

Process of implementing survey research methods:

Decide survey questions: Brainstorm and put together valid survey questions that are grammatically and logically appropriate. Understanding the objective and expected outcomes of the survey helps a lot. There are many surveys where details of responses are not as important as gaining insights about what customers prefer from the provided options. In such situations, a researcher can include multiple-choice questions or closed-ended questions. Whereas, if researchers need to obtain details about specific issues, they can consist of open-ended questions to the questionnaire. Ideally, the surveys should include a smart balance of open-ended and closed-ended questions. Use survey questions like Likert Scale, Semantic Scale, Net Promoter Score question, etc. to avoid fence-sitting.

Finalize a target audience: Send out relevant surveys as per the target audience and filter out irrelevant questions as per the requirement. The survey research will be instrumental in case the target population decides a sample. This way, results can be according to the desired market and be generalized to the entire population

Send out surveys via decided mediums: Distribute the surveys to the target audience and patiently wait for the feedback and comments- this is the most crucial step of the survey research. The survey needs to be scheduled, keeping in mind the nature of the target audience and its regions. Surveys can be conducted via email, embedded in a website, shared via social media, etc. to gain maximum responses.

Analyze survey results: Analyze the feedback in real-time and identify patterns in the responses which might lead to a much-needed breakthrough for your organization. GAP, TURF, Conjoint analysis, Cross tabulation, and many such survey feedback analysis methods can be used to spot and shed light on respondent behavior. Researchers can use the results to implement corrective measures to improve customer/employee satisfaction.

Benefits of survey research

In case survey research is used for all the right purposes and is implemented properly, marketers can benefit by gaining useful, trustworthy data that they can use to better the ROI of the organization.
Other benefits of survey research are:
Minimum investment: Mobile surveys and online surveys have minimal finance invested per respondent. Even with the gifts and other incentives provided to the people who participate in the study, online surveys are extremely economical compared to the paper-based surveys.
Versatile sources for response collection: You can conduct surveys via various mediums like online and mobile surveys. You can further classify them into qualitative mediums like focus groups, interviews, and quantitative mediums like customer-centric surveys. Due to the offline survey response collection option, researchers can conduct surveys in remote areas with limited internet connectivity. This can make data collection and analysis more convenient and extensive.
Reliable for respondents: Surveys are extremely secure as the respondent details and responses are kept safeguarded. This anonymity makes respondents answer the survey questions candidly and with absolute honesty. An organization seeking to receive explicit responses for its survey research must mention that it will be confidential.

What are the advantages of an online survey?

Accuracy: In an online research study, the margin of error is low, as the respondents register their responses by easy selection buttons. Tradition methods require human interference, and according to a study, human intervention increases the margin of error by 10%.

Easy and quick to analyze: Since all the responses are registered online, it is straightforward to analyze the data in real-time. It is also ready to draw inferences and share the result.

Ease of participation: In this new age technology-oriented universe, most people on this planet have access to the internet. Respondents prefer receiving the survey over the email. Ease of participation dramatically increases as the respondents can choose a suitable time and place, according to their convenience, to register their responses.

Great branding exercise: In an online design, organizations or businesses have this opportunity to develop their questionnaire to align with their brand. Using logos and similar brand language (color and fonts) gives the companies an advantage as respondents can connect better with the brand.

Respondents can be honest and flexible at the same time: According to a study, researchers have found increased participation by respondents when deployed with online surveys rather than answering lengthy questions. By designing questionnaires that ask relevant questions, respondents are honest with their answers and can skip the questions or respondents to a more neutral option, increasing their flexibility to respond.

How to conduct content analysis

If you want to use content analysis in your research, you need to start with a clear, direct research question.

Example research question for content analysis

Is there a difference in how the US media represents male and female politicians in terms of trustworthiness?

Next, you follow these five steps.

1. Select the content you will analyze

Based on your research question, choose the texts that you will analyze. You need to decide:

The medium (e.g. newspapers, speeches or websites) and genre (e.g. opinion pieces, political campaign speeches, or marketing copy)

The criteria for inclusion (e.g. newspaper articles that mention a particular event, speeches by a certain politician, or websites selling a specific type of product)

The parameters in terms of date range, location, etc.

If there are only a small amount of texts that meet your criteria, you might analyze all of them. If there is a large volume of texts, you can select a sample.

To research media representations of male and female politicians, you decide to analyze news articles and opinion pieces in print newspapers between 2017–2019. Because this is a very large volume of content, you choose three major national newspapers and sample only Monday and Friday editions.

2. Define the units and categories of analysis

Next, you need to determine the level at which you will analyze your chosen texts. This means defining:

The **unit(s) of meaning** that will be coded. For example, are you going to record the frequency of individual words and phrases, the characteristics of people who produced or appear in the texts, the presence and positioning of images, or the treatment of themes and concepts?

The **set of categories** that you will use for coding. Categories can be objective characteristics (e.g. *female*, *aged 40-50*, *lawyer*, *mother*) or more conceptual (e.g. *trustworthy*, *corrupt*, *conservative*, *family oriented*).

Your units of analysis are the politicians who appear in each article and the words and phrases that are used to describe them. Based on your research question, you have to categorize based on gender and the concept of trustworthiness. To get more detailed data, you also code for other categories such as the age, political party, and marital status of each politician mentioned.

3. Develop a set of rules for coding

Coding involves organizing the units of meaning into the previously defined categories. Especially with more conceptual categories, it's important to clearly define the rules for what will and won't be included to ensure that all texts are coded consistently.

Coding rules are especially important if multiple researchers are involved, but even if you're coding all of the text by yourself, recording the rules makes your method more transparent and reliable.

In considering the category "female politician," you decide which titles will be coded with this category (*senator, governor, counselor, mayor*). With "trustworthy", you decide which specific words or phrases related to trustworthiness (e.g. *honest* and *reliable*) will be coded in this category.

4. Code the text according to the rules

You go through each text and record all relevant data in the appropriate categories. This can be done manually or aided with computer programs, such as QSR NVivo, Atlas.ti and Diction, which can help speed up the process of counting and categorizing words and phrases.

Following your coding rules, you examine each newspaper article in your sample. You record the characteristics of each politician mentioned, along with all words and phrases related to trustworthiness that are used to describe them.

5. Analyze the results and draw conclusions

Once coding is complete, the collected data is examined to find patterns and draw conclusions in response to your research question. You might use statistical analysis to find correlations or trends, discuss your interpretations of what the results mean, and make inferences about the creators, context and audience of the texts.

The results reveal that words and phrases related to trustworthiness appeared in the same sentence as a male politician more frequently than they did in the same sentence as a female politician. From these results, you conclude that national newspapers present male politicians as more trustworthy than female politicians, and infer that this might have an effect on readers' perceptions of women in politics.

Advantages of content analysis

Unobtrusive data collection

You can analyze communication and social interaction without the direct involvement of participants, so your presence as a researcher doesn't influence the results.

Transparent and replicable

When done well, content analysis follows a systematic procedure that can easily be replicated by other researchers, yielding results with high reliability.

Highly flexible

You can conduct content analysis at any time, in any location, and at low cost – all you need is access to the appropriate sources.

Disadvantages of content analysis

Reductive

Focusing on words or phrases in isolation can sometimes be overly reductive, disregarding context, nuance, and ambiguous meanings.

Subjective

Content analysis almost always involves some level of subjective interpretation, which can affect the reliability and validity of the results and conclusions.

Time intensive

Manually coding large volumes of text is extremely time-consuming, and it can be difficult to automate effectively.

Advantages of Content Analysis

Directly examines communication using text

Allows for both qualitative and quantitative analysis

Provides valuable historical and cultural insights over time

Allows a closeness to data

Coded form of the text can be statistically analyzed

Unobtrusive means of analyzing interactions

Provides insight into complex models of human thought and language use

When done well, is considered a relatively “exact” research method

Content analysis is a readily-understood and an inexpensive research method

A more powerful tool when combined with other research methods such as interviews, observation, and use of archival records. It is very useful for analyzing historical material, especially for documenting trends over time.

Disadvantages of Content Analysis

Can be extremely time consuming

Is subject to increased error, particularly when relational analysis is used to attain a higher level of interpretation

Is often devoid of theoretical base, or attempts too liberally to draw meaningful inferences about the relationships and impacts implied in a study

Is inherently reductive, particularly when dealing with complex texts

Tends too often to simply consist of word counts

Often disregards the context that produced the text, as well as the state of things after the text is produced

Can be difficult to automate or computerize

What is content analysis?

Content analysis in general:

- Content Analysis is:

"a research technique for the objective, systematic, and quantitative description of manifest content of communications such as books, journals, websites, paintings and laws ....etc."

Content Analysis is:

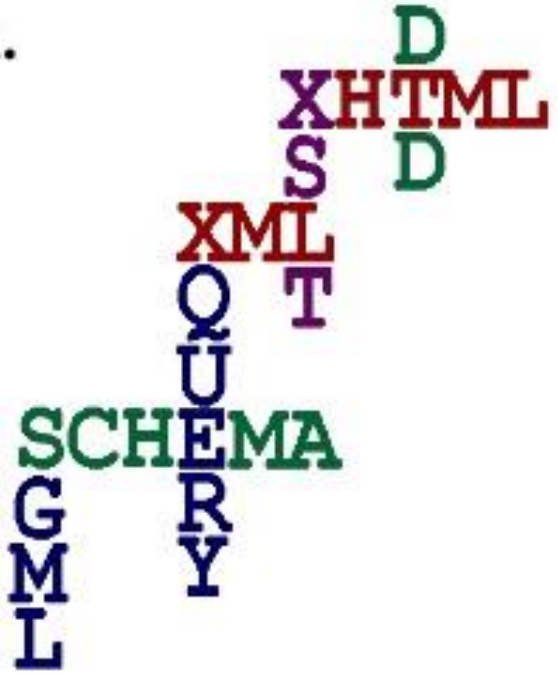
- It is a research tool or technique that help to analyze the actual content and it is features of any kind , whether it was a word, picture, themes, text , and try to present the content in objective and quantitative manner .

Content analysis is a research tool focused on the actual content and internal features of media.

It is used to determine the presence of certain words, concepts, themes, phrases, characters, or sentences within texts or sets of texts and to quantify this presence in an objective manner.

- Texts can be defined broadly as *books, book chapters, essays, interviews, discussions, newspaper headlines and articles, historical documents, speeches, conversations, advertising, theater, informal conversation, films, photos, websites* or really any occurrence of communicative language.

- Content analysis is a term sometimes used to describe both quantitative and qualitative approaches to analyzing content.



How conduct a content analysis ?

- To conduct a content analysis on a text, the text is coded, or broken down, into manageable categories on a variety of levels--word, word sense, phrase, sentence, or theme--and then examined using one of content analysis' basic methods: conceptual analysis or relational analysis.

- The results are then used to make inferences about the messages within the text(s), the writer(s), the audience, and even the culture and time of which these are a part.

For example

- Content Analysis can indicate pertinent features such as comprehensiveness of coverage or the intentions, biases, prejudices, and oversights of authors, publishers, as well as all other persons responsible for the content of materials.

- **Content analysis is a product of the electronic age.**

The process of a content analysis

six questions must be addressed in every content analysis:

- Which data are analyzed?
- How are they defined?
- What is the users from which they are drawn?
- What is the context relative to which the data are analyzed?
- What are the boundaries of the analysis?
- What is the target of the inferences?

Why use content analysis?

- Due to the fact that it can be applied to examine any piece of writing or occurrence of recorded communication.
- Content analysis is used in large number of fields, ranging from marketing and media studies, to literature , rhetoric, ***information studies***, sociology and political science, psychology science, as well as other fields of inquiry.

The goals of content analysis:

The following goals summarizes the reasons for using content analysis.

- To reduce large amounts of unstructured content.
- To describe characteristics of the content.
- To Identify important aspects of the content.
- To present important aspects of the content clearly and effectively.
- To support of some argument.

The goals of content analysis:

- To examine trends and relationships in the text and multimedia produced or used in the fields context to provide an insight into it.
- To identify the intentions, focus or communication trends of an individual, group or institution.
- To describe attitudinal and behavioral responses to communications
- To determine psychological or emotional state of persons or groups.

Summary

- The goals :
- To reduce large amounts of unstructured content.
- To Identify and present important aspects of the content.
- To focus on groups or individual intention .
- To support some argument by understanding the characteristic of the content .
- To determine the behavioral and psychology .

Types of Content Analysis

There are two general categories of content analysis: conceptual analysis and relational analysis:-

Conceptual analysis: **can be thought of as establishing the existence and frequency of concepts in a text.**

Relational analysis: **builds on conceptual analysis by examining the relationships among concepts in a text.**

Conceptual analysis vs. Relational analysis

- **Conceptual analysis can be thought of as establishing the existence and frequency of concepts " most often represented by words of phrases " in a text.**
- For instance, in text often writes about information. With conceptual analysis you can determine how many times words such as **"information, informational, inform, or formation"** .
- In contrast, relational analysis goes one step further by examining the relationships among concepts in a text.
- **Returning to the information example, with relational analysis, you could identify what other words or phrases information or security information or network information appear next to and then determine what different meanings emerge as a result of these groupings.**

Conceptual analysis vs. Relational analysis

- Relational analysis, like conceptual analysis, begins with the act of identifying concepts present in a given text or set of texts.
- **However, relational analysis seeks to go beyond presence by exploring the relationships between the concepts identified. Relational analysis has also been termed semantic analysis.**
- In other words, the focus of relational analysis is to look for semantic, or meaningful, relationships.
- **Individual concepts, in and of themselves, are viewed as having no inherent meaning. Rather, meaning is a product of the relationships among concepts in a text.**

Advantages of Content Analysis

- **Content analysis offers several advantages to researchers who consider using it. In particular, content analysis:**

➢ **looks directly at communication via texts or transcripts, and hence gets at the central aspect of social interaction.**

➢ **can allow for both quantitative and qualitative operations.**

➢ **can provides valuable historical/cultural insights over time through analysis of texts.**

- can be used to interpret texts for purposes such as the development of expert systems (since knowledge and rules can both be coded in terms of explicit statements about the relationships among concepts).
- is an unobtrusive means of analyzing interactions.
- provides insight into complex models of human thought and language use.
- when done well, is considered as a relatively "exact" research method.

Disadvantages of Content Analysis

- can be extremely time consuming.
- is subject to increased error, particularly when relational analysis is used to attain a higher level of interpretation.
- is often devoid of theoretical base, or attempts too liberally to draw meaningful inferences about the relationships and impacts implied in a study .

Disadvantages of Content Analysis

- is inherently reductive, particularly when dealing with complex texts.
- tends too often to simply consist of word counts.
- often disregards the context that produced the text, as well as the state of things after the text is produced .

Document Research

Document research method refers to the analysis of documents that contains information about the scenario or event under consideration.

It is used to investigate, categorize and analyze physical sources, most commonly written documents, in the social, public or digital world.

This research method is just as good as and sometimes even more cost effective than the surveys, in-depth interviews or other observation based methods such as ethnography.

What is documentary research?

Documentary research is defined as the research conducted through the use of official documents or personal documents as the source of information.

Documents can include anything from the following:

Newspapers
Stamps
Diaries
Maps
Handbills
Directories
Paintings
Government statistical publications
Gramophone records
Photographs
Computer files
Tapes

More about Document Research

A document is defined as written text. Documents can be files, statistical data, records of official or unofficial nature providing an account of an event, images, other written material that can be accessed in a social, public or digital context.

For example, institutional memoranda and reports, census publications, government pronouncements and proceedings, diaries and other written, visual and pictorial sources in different forms and so on are socially, publically or digitally accessible either openly or on request.

Document research is not a standalone method; it is usually used in conjunction with other design methods. Document research is employed when the researcher has questions to which they seek answers.

It is not as helpful in an open inquiry to determine patterns as the number of documents that would need to be investigated can be huge, turning the researcher's task into a never-ending exercise. Therefore, This research method is often used only as a supplement to the other research methods.

Along with surveys and ethnography, document research is one of the three major types of social research and arguably has been the most widely used of the three, to study needs, behavior and expectations of user groups.

The analysis of the documents in document research is either quantitative or qualitative analysis (or both). The key issues surrounding types of documents and our ability to use them as reliable sources of evidence on the user groups must be considered by all who use documents in their research.

Advantages of Document Research

1. **Availability**

Document research method uses documents that are public or can be accessed on request if private.

2. **Time & Cost effective**

As the phenomenon being investigated is clearly defined before the method is exercised, the research is focused and closed. This saves a lot of time for the researcher and also costs that would have been incurred if an expert was consulted for the study.

3. **Unbiased Collection Process**

As the collection process doesn't involve direct interaction of the researcher with the user groups or author of the documents, the chances of introducing bias stays low. Again, if the document is of the statistical record type, then the data being collected is based on facts that can be verified and cross-checked for errors.

4. **Researcher Presence**

The researcher is not required to be present at the time of data collection.

Disadvantages of Document Research

1. **Limited by available data**

As the data or documents that are available on the phenomenon being investigated as the primary resources for the study, the findings will be based on only the data that is documented on the subject.

2. **Errors in written material**

If there are errors in the documents being referred, these errors will render erroneous findings as well.

3. **Out of context**

If the documents studied are out of context, they will not contribute meaning to the study or will not lead to an insightful findings.

4. **Preparation before analysis**

The preparation required before document analysis is performed is a task in itself. The efforts are usually directed toward recruiting the researchers, identifying sources, shortlisting the material to be researched and analyzed, among others.

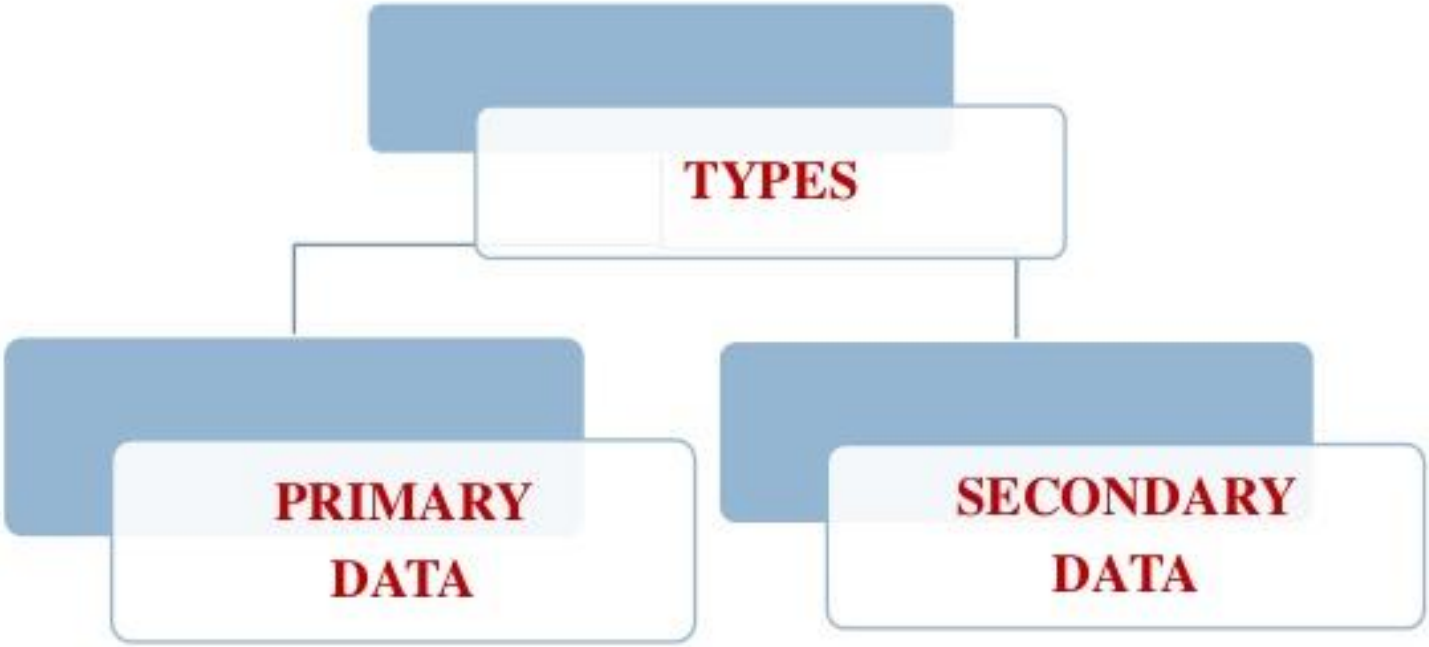
INTRODUCTION

- Data collection is a term used to describe a process of preparing and collecting data
- Systematic gathering of data for a particular purpose from various sources, that has been systematically observed, recorded, organized.
- Data are the basic inputs to any decision making process in business

PURPOSE OF DATA COLLECTION

- The purpose of data collection is-
  - ✓ to obtain information
  - ✓ to keep on record
  - ✓ to make decisions about important issues,
  - ✓ to pass information on to others

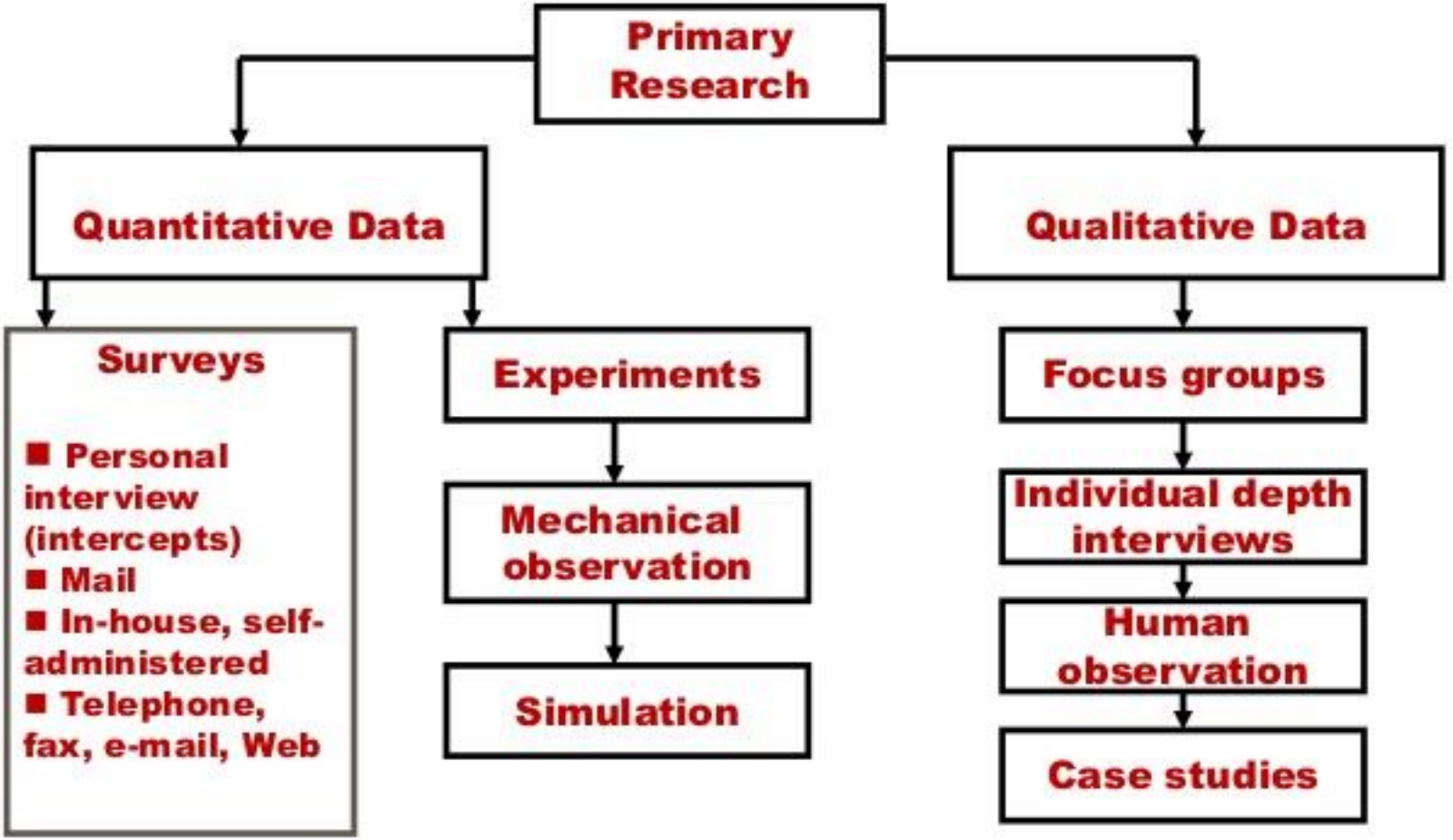
CLASSIFICATION OF DATA



PRIMARY DATA

- The data which are collected from the field under the control and supervision of an investigator
- Primary data means original data that has been collected specially for the purpose in mind
- This type of data are generally afresh and collected for the first time
- It is useful for current studies as well as for future studies
- For example: your own questionnaire.

Primary Research Methods & Techniques



Primary Research Methods & Techniques

- **Quantitative and Qualitative Information:**

- **Quantitative** – based on numbers – 56% of 18 year olds drink alcohol at least four times a week - doesn't tell you why, when, how.

- **Qualitative** – more detail – tells you why, when and how!

Primary Research Categories

- Quantitative Research
  - Numerical
  - Statistically reliable
  - Projectable to a broader population

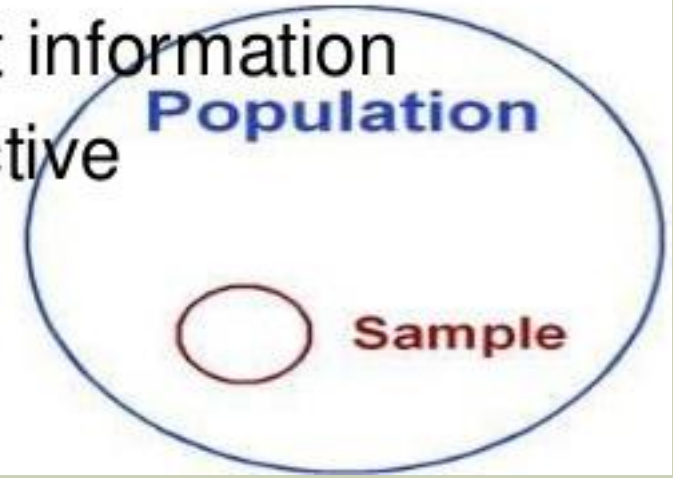
Quantitative Research Categories

- **Sampling Methods:**
- **Random Samples** – equal chance of anyone being picked
  - May select those not in the target group – indiscriminate
  - Sample sizes may need to be
  Large to be representative
  - Can be very expensive

Assign Numbers, Auto-Generate Random Selections

Quantitative Research Categories

- **Stratified or Segment Random Sampling**
  - Samples on the basis of a representative strata or segment
  - Still random but more focussed
  - May give more relevant information
  - May be more cost effective



Quantitative Research Categories

- **Quota Sampling**
  - Again – by segment
  - Not randomly selected
  - Specific number on each segment are interviewed, etc.
  - May not be fully representative
  - Cheaper method

Qualitative Research Categories

- **Qualitative Research**
  - In-depth, insight generating
  - Non-numerical
  - 'Directional'

- **Common Techniques**
  - Personal interviews (depth, one-on-one)
  - Focus groups (8-12) and mini-groups (3-6)

METHODS

- OBSERVATION METHOD

  Through personal observation

- PERSONAL INTERVIEW

  Through Questionnaire

- TELEPHONE INTERVIEW

  Through Call outcomes, Call timings

- MAIL SURVEY

  Through Mailed Questionnaire

SECONDARY DATA

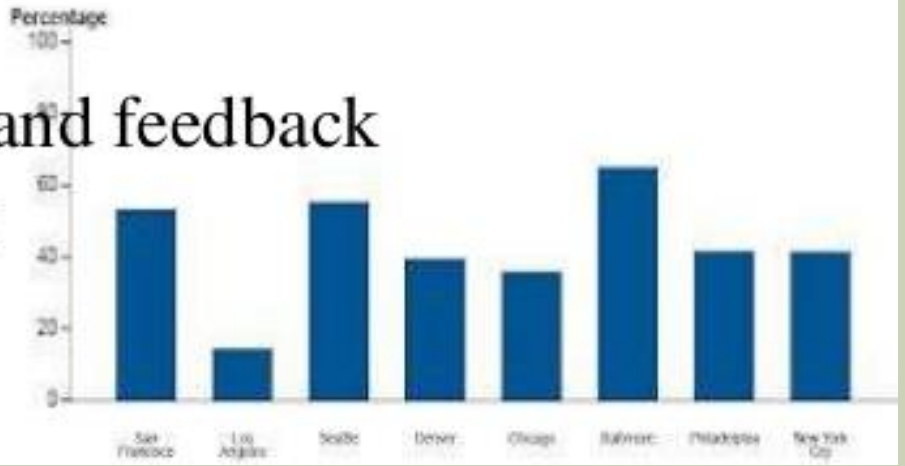
- Data gathered and recorded by someone else prior to and for a purpose other than the current project
- Secondary data is data that has been collected for another purpose.
- It involves less cost, time and effort
- Secondary data is data that is being reused. Usually in a different context.
- For example: data from a book.

SOURCES

INTERNAL SOURCES

Internal sources of secondary data are usually for marketing application-

- Sales Records
- Marketing Activity
- Cost Information
- Distributor reports and feedback
- Customer feedback



SOURCES

EXTERNAL SOURCES

External sources of secondary data are usually for Financial application-

- Journals
- Books
- Magazines
- Newspaper
- Libraries
- The Internet

Advantages & Disadvantages of Primary Data

- **Advantages**
- Targeted Issues are addressed
- Data interpretation is better
- Efficient Spending for Information
- Decency of Data
- Proprietary Issues
- Addresses Specific Research Issues
- Greater Control

Advantages & Disadvantages of Primary Data

- **Disadvantages**
- High Cost
- Time Consuming
- Inaccurate Feed-backs
- More number of resources is required

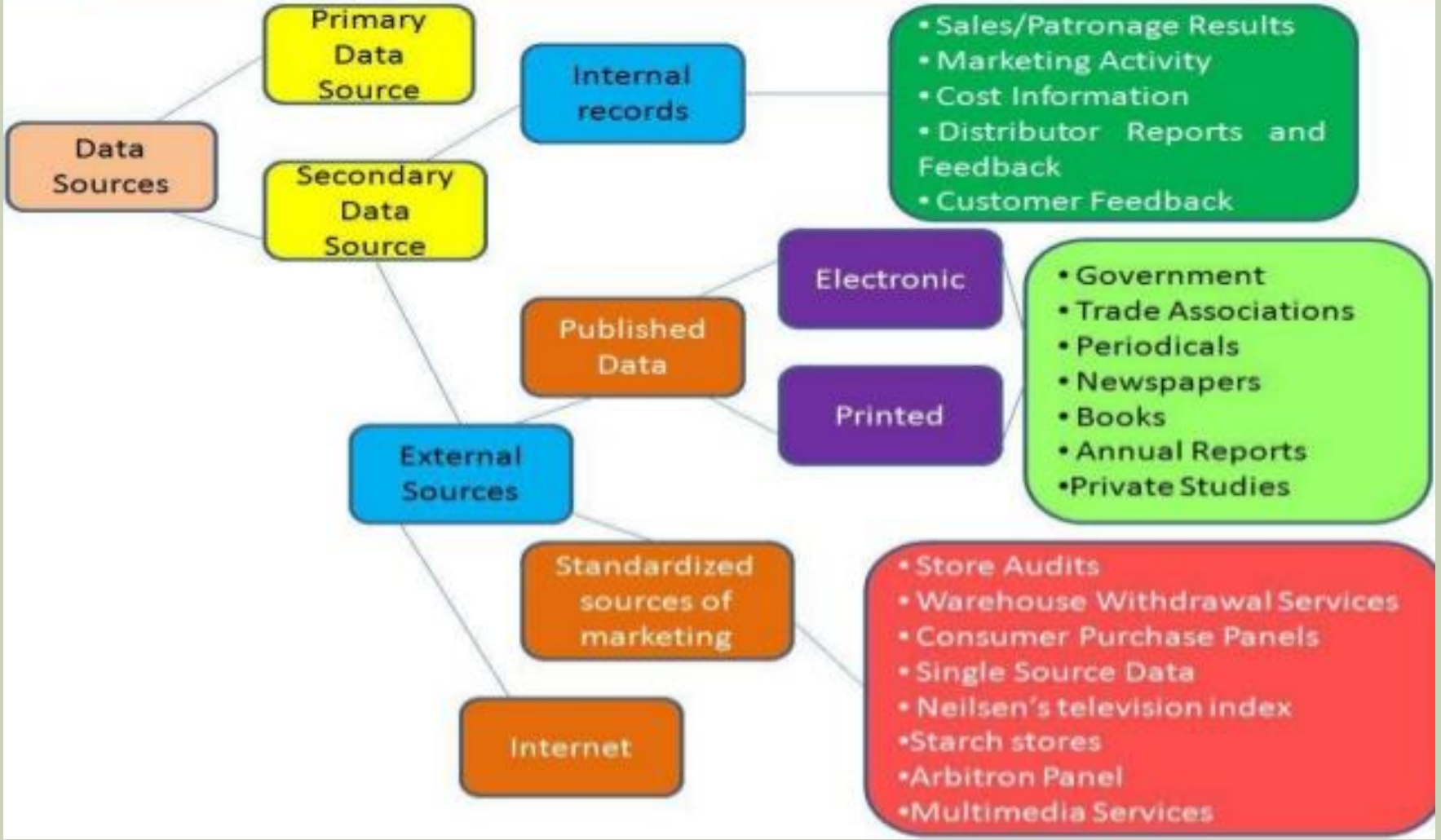
Advantages & Disadvantages of Secondary Data

- **Advantages**
- Ease of Access
- Low Cost to Acquire
- Clarification of Research Question
- May Answer Research Question

Disadvantages & Disadvantages of Secondary Data

- **Disadvantages**
- Quality of Research
- Not Specific to Researcher's Needs
- Incomplete Information
- Not Timely

Data Collection Flow



ANALYSIS

- A separation of a whole into its constituent parts (Merriam-Webster, 2012)
- The process of breaking up the whole study into its constituent parts of categories according to the specific questions under the statement of the problem. (Calderon, 1993)

Two ways of data analysis

1. **Qualitative Analysis** – is not based on precise measurement and quantitative claims. (PSSC: 2001: 51)

Examples of Qual. Analysis:

1. Social analysis;
2. From the biggest to the smallest class;
3. Most important to the least important;
4. Ranking of students according to brightness;

2. **Quantitative Analysis** – is employed on data that have been assigned some numerical value. (PSSC: 2001: 51)

- It can range from the examination of simple frequencies to the description of events or phenomenon using descriptive statistics, and to the investigation of correlation and causal hypothesis using various statistical tests. (PSSC: 2001: 51)

INTERPRETATION

- This section answers the question, "So what?" in relation to the results of the study. *What do the results of the study mean?* This part is, perhaps, the *most* critical aspect of the research report.

INTERPRETATION

- It is often the most difficult to write because it is the least structured.
- This section demands **perceptiveness and creativity** from the researcher.

ANALYSIS and **INTERPRETATION** provide answers to the research questions postulated in the study.

ANALYSIS means the ordering, manipulating, and summarizing of data to obtain answers to research questions. Its purpose is to reduce data to intelligible and interpretable form so that the relations of research problems can be studied and tested.

INTERPRETATION gives the results of analysis, makes inferences pertinent to the research relations studied, and draws conclusions about these relations.

STATISTICS is simply a tool in research. In fact, according to Leedy (1974:21), statistics is a language which, through its own special symbols and grammar, takes the numerical facts of life and translates them meaningfully.

Statistics thus gathers numerical data. The variations of the data gathered are abstracted based on group characteristics and combined to serve the purpose of description, analysis, interpretation, and possible generalization. According to McGuigan (1987), in research, this is known as the process of **concatenation** where the statements are "chained together" with other statements.

There are two kinds of statistics:

- **DESCRIPTIVE STATISTICS** – allows the researcher to describe the population or sample used in the study.

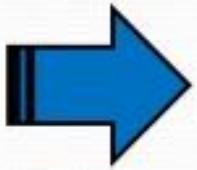
- **INFERENTIAL STATISTICS** – draws inferences from sample data and actually deals with answering the research questions postulated which are, in some cases, cause and effect relationship.

DESCRIPTIVE STATISTICS

❖ describes the characteristics of the population or the sample. To make them meaningful, they are grouped according to the following measures:

- ✓ Measures of Central Tendency or Averages
- ✓ Measures of Dispersion or Variability
- ✓ Measures of Noncentral Location
- ✓ Measures of Symmetry and/or Asymmetry
- ✓ Measures of Peakedness or Flatness

Measures of Central Tendency or Averages. These include the mean, mode and the median. The ***mean*** is a measure obtained by adding all the values in a population or sample and dividing by the number of values that are added (Daniel, 1991:19-20). The ***mode*** is simply the most frequent score of scores (Blalock, 1972:72). The ***median*** is the value above and below which one half of the observations fall (Norusis, (1984:B-63)

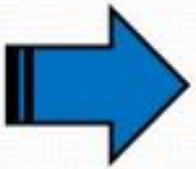


Measures of Dispersion or Variability. These include the variance, standard deviation, and the range. According to Daniel (1991:24), a measure of dispersion conveys information regarding the amount of variability present in a set of idea.

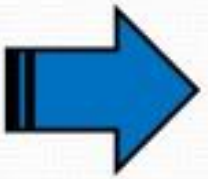
The **VARIANCE** is a measure of the dispersion of the set of scores. It tells us how much the scores are spread out. Thus, the variance is a measure of the spread of the scores; it describes the extent to which the scores differ from each other about their mean.

STANDARD DEVIATION thus refers to the deviation of scores from the mean. Where ordinal measures of 1-5 scales (low-high) are used, data most likely have standard deviations of less than one unless, the responses are extremes (i.e., all ones and all fives).

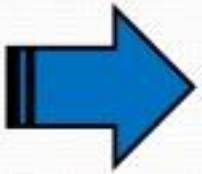
The **RANGE** is defined as the difference between the highest and lowest scores (Blalock, 1972:77)



Measures of Noncentral Location. These include the quantiles (i.e., percentiles, deciles, quartiles). The word *percent* means *"per hundred"*. Therefore, in using percentages, size is standardized by calculating the number of individuals who would be in a given category if the total number of cases were 100 and if the proportion in each category remains unchanged. Since proportions must add to unity, it is obvious that percentages will sum up to 100 unless the categories are not mutually exclusive or exhaustive (Blalock, 1972:33)



Measures of Symmetry and/or Asymmetry. These include the ***skewness*** of the frequency distribution. If a distribution is asymmetrical and the larger frequencies tend to be concentrated toward the low end of the variable and the smaller frequencies toward the high end, it is said to be ***positively skewed.*** If the opposite holds, the larger frequencies being concentrated toward the high end of the variable and the smaller frequencies toward the low end, the distribution is said to be ***negatively skewed*** (Ferguson and Takane, 1989:30).



Measures of Peakedness or Flatness of one distribution in relation to another is referred to as ***Kurtosis***. If one distribution is more peaked than another, it may be spoken of as more ***leptokurtic.*** If it is less peaked, it is said to be more ***platykurtic.***

NONPARAMETRIC TESTS

Two types of data are recognized in the application of statistical treatments, these are: ***parametric data and nonparametric data***.

Parametric data are measured data and parametric statistical tests assume that the data are normally, or nearly normally, distributed (Best and Kahn, 1998:338).

Nonparametric data are *distribution free* samples which implies that they are free, of independent of the population distribution (Ferguson and Takane, 1989:431).

The tests on these data do not rest on the more stringent assumption of normally distributed population (Best and Kahn, 1998:338).

- ***Kolmogorov – Smirnov test*** **-** fulfills the function of chi-square in testing goodness of fit and of the Wilcoxon rank sum test in determining whether random samples are from the same population.
- ***Sign Test*** **-** is important in determining the significance of differences between two correlated samples. The "signs" of the test are the algebraic plus or minus values of the difference of the paired scores.
- ***Median Test*** **-** is a sign test for two independent samples in contradistinction to two correlated samples, as is the case with the sign test.

- ***Spearman rank order correlation*** **-** sometimes called Spearman rho (p) or Spearman's rank difference correlation, is a nonparametric statistic that has its counterpart in parametric calculations in the Pearson product moment correlation.
- ***Kruskal – Wallis*** – sometimes known as the Kruskal-Wallis H test of ranks for k independent samples. The H is the title of the test and stands for the null hypothesis; and the k for the classes or samples.
- ***Kendall coefficient of concordance*** – is also known as Kendall's coefficient W or the concordance coefficient of W. it is a technique which can be used with advantage in studies involving rankings made by independent judges.

The nonparametic tests available are:

- ***Mann-Whitney U-test*** - in nonparametric statistics is the counterpart of the t-test in parametric measurements. It may find use in determining whether the medians of two independent samples differ from each other to a significant degree.
- ***Wilcoxon match pairs, signed rank test*** – is employed to determine whether two samples differ from each other to a significant degree when there is a relationship between the samples.
- ***Wilcoxon rank sum test*** – may be used in those nonparametric situations where measures are expressed as ranked data in order to test the hypothesis that the samples are from a common population whose distribution of the measures is the same as that of the samples.

APPROPRIATE STATISTICAL METHODS BASED ON THE RESEARCH PROBLEM AND LEVELS OF MEASUREMENT

❖ the statistical methods appropriate to any studies are always determined by the research problem and the measurement scale of the variables used in the study.

CHI - SQUARE

❖ the most commonly used nonparametric test. It is employed in instances where a comparison between observed and theoretical frequencies is present, or in testing the mathematical fit of a frequency curve to an observed frequency distribution.

T - TESTS

❖ provides the capability of computing student's t and probability levels for testing whether or not the difference between two samples means is significant (Nie, et al., 1975:267). This type of analysis is the comparison of two groups of subjects, with the group means as the basis for comparison.

Two types of T-tests may be performed:

❖***Independent Samples*** - cases are classified into 2 groups and a test of mean differences is performed for specified variables;

❖ ***Paired Samples*** – for paired observations arrange casewise, a test of treatment effects is performed.

CORRELATION ANALYSIS

❖ Correlation is used when one is interested to know the relationship between two or more paired variables. According to Blalock (1972:361), this is where interest is focused primarily on the exploratory task of finding out which variables are related to a given variable.