Introduction to research

What is research?

Research is simply the process of finding solutions to a problem after a thorough study and analysis of the situational factors.

The difference between making good decisions and committing blunders lies in how managers go about the decision-making process.

Business research

Business research can be described as a systematic and organized effort to investigate a specific problem encountered in the work setting, which needs a solution.

The first step in research is to know where the problem areas exist in the organization, and to identify as clearly and specifically as possible the problems that need to be studied and resolved. Once a problem is clearly defined, steps can be taken to gather information, analyze the data, and determine the factors that are associated with the problem and then solve it with corrective measures.

The entire process by which we attempt to solve problems is called research. Research involves a series of well-thought-out and carefully executed activities that enable the manager to know how organizational problems can be solved, or minimized.

Research encompasses the process of inquiry, investigation, examination, and experimentation.

Definition of business research

Business research can be defined as an organized, systematic, data-based, critical, objective scientific inquiry or investigation into a specific problem, undertaken with the purpose of finding answers or solutions to it.

Research provides the necessary information that guides managers to make informed decisions to successfully deal with problems.

Data can be:

- Quantitative: Generally gathered through structured questions
- Qualitative: Generated from broad answers to specific questions, open-ended questions, observation, available information from other sources

Research and the manager

Not only are the issues within any subarea related to many factors within that particular system, but they must also be investigated in the context of the external environment facing the business.

Types of business research

Applied research: Research done with the intention of applying the results of the findings to solve specific problems currently being experienced in an organization.

Basic research: Research done chiefly to make a contribution to existing knowledge. Also called fundamental or pure research.

Both applied and basic business research are scientific in nature, the main difference being that the former is undertaken specifically to solve a current business problem whereas the latter is primarily resorted to because of the importance of the subject to the researcher.

Both basic and applied research have to be carried out in a scientific manner so that the findings or results generated by them can be relied upon to effectively solve the problem investigated.

Managers and research

Being knowledgeable about research and research methods helps professional managers:

- Identify and effectively solve minor problems in the work setting
- Know how to discriminate good from bad research
- Appreciate and be constantly aware of the multiple influences and effects or factors impinging on a situation
- Take calculated risks in decision making, knowing the probabilities associated with different outcomes
- Prevent possible vested interests from exercising their influence in a situation
- Relate to hired researchers and consultants more effectively
- Combine experience with scientific knowledge while making decisions

While hiring researchers or consultants the manager should make sure that:

- The roles and expectations of both parties are made explicit
- Relevant philosophies and value systems of the organization are clearly stated and constraints, if any, communicated
- A good rapport is established with the researchers, and between the researches and the employees in the organization, enable the full cooperation of the latter

Internal consultants/researchers

Advantages:

- Stand a better chance of being readily accepted by the employees where research needs to be done
- Less time required to understand the structure, philosophy, climate, functioning, and work systems of the organization

- Available to implement their recommendations after research findings have been implemented. Important because any bugs in the implementation of the recommendations may be removed with their help, and they are available to evaluate the effectiveness of the changes.
- Might cost considerably less than external team, due to needing less time to understand the system. Ideal for low complexity problems.

Disadvantages:

- Internal teams may fall into a stereotyped way of looking at the organization and its problems. This inhibits fresh ideas that might be needed to correct the problem.
- Coalitions in the organization could influence the internal team to conceal, distort, or misrepresent certain facts.
- Possibility that even the most highly qualified internal research teams are not perceived as experts by the staff and management, thus their recommendations may not get consideration or attention.
- Organizational biases of the internal research team might make the findings less objective and scientific.

External consultants/researchers

Advantages:

- Can draw on a wealth of experience from having worked with different organizations that might have had same or similar problems. This experience allows them to think divergently and convergently. Able to ponder over several alternative ways of looking at the problem.
- Might have more knowledge of current sophisticated problem-solving models. External research institutions ensure that their members are current on the latest innovations through periodic training programs.

Disadvantages:

- High cost
- Considerable time to understand the organization being research and usually not well received by employees.
- Additional fees charged for assistance in implementing and evaluating phases

Ethics

Ethics in business research refers to a code of conduct or expected societal norm of behavior while conducting research. Ethical conduct applies to the organization and the members that sponsor the research, the researchers who undertake the research, and the respondents who provide them with the necessary data.

The observance of ethics begins with the person instituting the research and should also be reflected in the behavior of the research who conduct the investigation, the participants, and the analysts. Ethical behavior pervades each step of the research process.

The research process

A problem could indicate an interest in an issue where finding the right answers might help to improve an existing situation. A problem is any situation where a gap exists between the actual and the desired ideal state.

Preliminary information gathering

Unstructured interviews, structured interviews, and a review through existing sources of information will help narrow the broad problem are and define a specific problem statement. A problem may be broadly classified under two headings:

1. Contextual factors – background information on the organization
2. Relevant findings from previous research – prevailing knowledge of the topic

Secondary data: data that already exist and do not have to be collected by the researcher.
Primary data: data gathered for research from the actual site of occurrence of events.

It is important for the researcher or the research team to be well acquainted with the background of the company or organization studied.

- The origin and history of the company
- Size in terms of employees, assets, or both
- Charter
- Location
- Resources
- Interdependent relationships with other institutions and the external environment
- Financial position during the previous 5 – 10 years and relevant financial data
- Information on structural factors
- Information on the management philosophy

A literature review should help the researcher to identify and highlight the important variables that are related to the problem. It ensures that the research is structured on work already done and that it build on the foundation of prevailing knowledge.

Literature review

A **literature review** is a step-by-step process that involves the identification of published and unpublished work from secondary data sources on the topic of interest, the evaluation of this work in relation to the problem, and the documentation of this work.
A good literature review ensures that:

- Important variables likely to influence the problem aren't left out
- A clearer idea emerges as to what variables will be most important to consider, why they are considered important, and how they should be investigated
- The problem statement can be made with precision and clarity
- Testability and replicability of the findings of the current research are enhanced

- Not running the risk of reinventing the wheel
- The problem investigated is perceived by the scientific community as relevant and significant

Conducting the literature review

- Data sources
- Textbooks
- Journals
    - *Review articles* summarize previous research findings to inform the reader of the state of existing research
    - *Research articles* are reports of empirical research, describing one or a few related studies
- Theses
    - PhD theses often contain an exhaustive review of the literature in a specific area
- Conference proceedings
    - Very up to date
    - Quite valuable if working in a relatively new area or domain
- Unpublished manuscripts
    - Any information source that is not officially released by an individual, publishing house, or other company.
    - Very up to date
- Reports
- Newspapers
- The Internet

Computerized databases provide a number of advantages:

- Save time
- Comprehensive in their listing and review of references
- Gaining access to them is relatively inexpensive

Most libraries have the following electronic resources available:

- Electronic journals
- Full-text databases
- Bibliographic databases
- Abstract databases

The *abstract* of an article usually provides an overview of the study purpose, general research strategy, findings, and conclusions.

An article's *introduction* provides an overview of the problem addressed and specific research objectives. It often ends with a summary of the research questions that guide the study.

The problem statement, research questions, and/or research objectives give you a feel for what the researcher is studying.

The *table of contents* and the *first chapter* help assess the relevance of the book.

A good literature review needs to include references to the key studies in the field.

The *impact factor* of a journal can be viewed as the average number of citations in a year given to those papers in the journal that were published during a given period.

A review of the literature identifies and highlights the important variables, and documents the significant findings from earlier research. Documenting the literature review is important to convince the reader that the researcher is knowledgeable about the problem area and that the theoretical framework will be structured on work already done.

A literature survey should bring together all relevant information in cogent and logical manner.

Defining the problem statement

It is critical that the problem be unambiguously identified and defined.

A **problem statement** is a clear, precise, and succinct statement of the specific issue that a research wishes to investigate.

3 key criteria to assess the quality of a problem statement:

1. Relevant
2. Feasible
3. Interesting

From a managerial perspective, research is relevant if it relates to:

1. A problem that currently exists in an organizational setting
2. An area that a manager believes needs to be improved in the organization

From an academic perspective, research is relevant if:

1. Nothing is known about a topic
2. Much is known about the topic, but the knowledge is scattered and not integrated
3. Much research on the topic is available, but the results are contradictory
4. Established relationships do not hold in certain situations

A good problem statement is relevant but also feasible. A problem statement is feasible is you are able to answer the problem statement within the restrictions of the research project.

The research proposal

The **research proposal** drawn up by the investigator is the result of a planned, organized, and careful effort, and contains the following:

1. The purpose of the study

2. The specific problem to be investigated
3. The scope of the study
4. The relevance of the study
5. The research design offering details on:
    a. The sampling design
    b. Data collection methods
    c. Data analysis
6. Time frame of the study
7. The budget
8. Selected bibliography

Managerial implications

A well-developed research proposal allows managers to judge the relevance of the proposed study.

Ethical issues in the preliminary stages of investigation

Preliminary information is gathered by the researcher to narrow the broad problem area and define a specific problem statement.
Once a problem is specific and a problem statement defined, the researcher needs to assess their capabilities; and decline the problem if incapable. If the project is carried out employees should be informed, assure them their responses will be kept confidential, and they shouldn't be forced to participate. Attempts to obtain information through deceptive means should be avoided at all costs.

Scientific Inquiry

At its core, research is about answering questions as we attempt to understand the world around us.

- **Formal research** involves systematic actions that help the researcher add credibility to the questions and answers engaged in his research.
    - It involves finding patterns or irregularities in data, which in turn become tentative answers to questions that often form the basis for additional study.
    - Answering questions is not as easy as it looks for several reasons:
        - We sometimes observe things in different ways or incorrectly
        - We often oversimplify things around us
        - We sometimes fail to recognize or account for variables that are influencing a situation under investigation
    - To do a better job of answering important questions, we often apply research procedures that allow us to reach conclusions that are sensible, credible, and interpretable. Research involves determining:
        - The research questions
        - The design
        - The case, cases, or sample
        - The data collection techniques
        - The data analysis
        - The dissemination process
        - The verification process
    - To accomplish the aforementioned tasks, research have devices a number of organizing frameworks:
        - **Organizing frameworks** are basically road maps, which establishes for a traveler the possibilities for getting from one location to another.
        - A researcher shouldn't conduct a research project without an organizing framework. This framework establishes for the researcher the defining features and possibilities for acquiring answers to a research question.
        - Before conducting a research study, a researcher must be familiar with the most significant organizing frameworks.
        - Most organizing frameworks are labeled by their essential attributes.
        - One common organizing framework is the distinction between *descriptive* and *inferential* research.
            - In *descriptive* studies, information is collected for the purpose of describing a specific group with no intention of going beyond that group.

        - In *inferential* studies, researchers desire to go beyond a specific group in order to make generalized statements about a larger population.
- Another organizing framework involves the level of research experimentation.
    - True *experimental* research is characterized by manipulation of an independent variable combined with random assignment of participants to groups.
    - An alternative to true experimental designs are quasi-experimental design in which variables are manipulated but no random assignment of participants occurs.
    - Non-experimental designs involve no variable manipulation and no random assignment.
- The distinction between *basic* and *applied* research represents another organizing framework.
    - *Basic* research involves the examination of variables in order to construct or verify a theory.
        - Basic research is sometimes called theory-based research.
    - *Applied* research is concerned primarily with addressing an existing problem or issue.
        - Applied research is sometimes called problem-based research.
    - These approached overlap in that practical outcomes often result from basic research while contributions to a theory often results from an applied-research effort.
- A final organizing framework classifies research as *quantitative* or *qualitative*.
    - *Quantitative* researchers use numbers, normally in the form of statistics, to explain phenomena.
    - *Qualitative* researchers use words to describe trends or patterns in research settings.

Qualitative and Quantitative research

- *If time and resources are limited*, a quantitative approach may be more appropriate because this type of research often involves instruments, such as surveys and tests, to measure specific variables from large group of people.
    - These instruments typically produce useful data in short time periods with reasonable investment of personnel and materials, whereas a qualitative approach may require individual interviews, focus groups, observations, a review of existing documents, or a combination of these.
- *If little is known about an issue*, a qualitative approach might be more useful.
    - Qualitative research attempts to explore a host of factors that may be influencing a situation.
- *If access to people who can participate in the research study is limited*, a quantitative approach may be preferred because quantitative research can often be accomplished with minimal involvement of participants.
- *If the consumers of research findings prefer words to numbers*, a qualitative approach may be best.
- Another factor affecting decisions to use a qualitative or quantitative approach involves the relationship of the researcher to those being studied.
    - In qualitative research the goal is to understand the situation under investigation primarily from the participant's and not the researcher's perspective.
        - This is called the *emic*, or insider's perspective.
        - *Etic* is the outsider's perspective.
- Because the researcher is the primary instrument for data collection and analysis in qualitative research, he must spend significant amount of time in the environment of those being studied.
    - A quantitative researcher often seeks to remain *blind* to the experimental conditions of the research in order to maintain objectivity and to avoid influencing the variables under investigation.
- *Phenomenological studies* are one type of qualitative research.
    - These studies explore the meaning of several people's lived experiences around a specific issue or phenomenon.
    - The assumption is that there is an essence or central meaning of an experience shared by individuals that can be investigated and explained through research.
    - The experiences of different people are analyzed to describe the essence of a phenomenon.
- *Ethnographic studies* investigate intact cultural or social groups to find and describe beliefs, values, and attitudes that structure the behavior, language, and interactions of the group.
    - Findings are based primarily on observations by the researcher.
- In *grounded-theory qualitative research*, a researcher seeks to create a theory that explains some actions, interaction, or process.

    - The investigator is the primary instrument of data collection and attempts to inductively derive meaning from the data.
- *Biographical studies* constitute another type of qualitative research in which a researcher explores a single individual and his experiences.
    - Findings are derived largely from oral storytelling by the person being studied or from documents and archival materials related to the person's life.
- *Case studies* represent another type of qualitative research.
    - They are different from other types in that they are intensive analyses and descriptions of a single unit or system bounded by space and time.

Setting the Stage

Case study research means conducting an empirical investigation of a contemporary phenomenon within its natural context using multiple sources of evidence. The topics of case study research vary widely.

- Although case study research sometimes focuses on an individual representative of a group, more often it addresses a phenomenon.
- The phenomenon being researched is studied in its natural context, bounded by space and time.
    - Context is important in case study research, and its benefits are a strength of doing intensive investigations of individuals or groups as well as events, situations, program, activities, and other phenomena of interest.
- Case study research is richly descriptive, because it's grounded in deep and varied sources of information.
    - Information is explored and mined in the case study environment for a more thorough examination of the given phenomenon.
- In contrast with experimental research, case study research is generally more exploratory than confirmatory.
- Because it involves collecting and analyzing information from multiple sources, case study research sometimes requires the researcher to spend more time in the environment being investigated than is the case with other types of research.
- Doing case studies:
    - creates opportunities for the researcher to explore additional questions by the act of investigating a topic in detail.
    - research means identifying a topic that lends itself to in-depth analysis in a natural context using multiple sources of information.
        - We must determine what is known and not known about the topic to create an important research question.

Determining what we Know

Your purposes in reviewing the literature are to:

- Establish the conceptual foundation for the study
- Define and establish the importance of your research question
- Identify strengths and weaknesses of models and designs that others have used to study it
- Identify the style and form used by experts to extend the knowledge base surrounding your question

- Examining existing literature helps researchers identify viable and important research questions or hypotheses.
    - Identifying what is known and not known helps you establish the importance of your topic.
- Reading existing literature helps researchers identify possible research designs and strategies for their own research efforts.
- Reading the works of others helps researchers learn the formats and procedures for writing and communicating their own findings to others.

Doing case study research means:

- determining what we know about a research question to establish its importance and the need for further research about it
- to identify strengths and weaknesses of previous research
- to identify areas of sufficient and insufficient study as well as methods used to study it

How to do a literature review

- Select a topic and identify literature to review
    - Identify appropriate databases, review articles, and classic studies
    - Review recent literature first and work backward
    - Define what is know and what is not known as quickly as possible
- Analyze the literature
    - Use consistent form for summarizing articles
    - Look for strengths and weakness
    - Identify gaps in what is known
- Criticize the literature
    - Summarize nature of the research
    - Identify who participated and how variables were measured
    - Identify limitations to be addressed in efforts to strengthen your research
- Synthesize the literature

    - Avoid note card presentation and strive to represent an integrated body of knowledge
    - Use headings to organize your presentation
    - Introduce and summarize each section of the review
- Document the literature
    - Move from very general to very specific representations of what is known
    - Explain inconsistencies
    - Use tables to compare, contract, and summarize bodies of knowledge

Selecting a Design

Case study research designs or approaches can be based on their function, characteristics, or disciplinary perspective.

One's selection of a research design is determined by how well it allows full investigation of a particular research question.

It has been suggested that case study research may be founded in *ethnographic, historical, psychological*, or *sociological* orientations.

- *Ethnographic* case study research is used when one wants to explore the observable and learned patterns of behavior, customs, and ways of life of a culture-sharing group.
    - Typically involve extended interaction with the group, during which the researcher is immersed in the day-to-day lives of group members.
    - The outgrowth of this effort is a holistic description of the group that incorporates both the views of group members and the researcher's perceptions and interpretations of the group's functioning.
- *Historical* case studies are often descriptions of events, programs, or organizations as they have evolved over time.
    - Typically includes direct observation and interviews of key participants.
    - It results in a researcher's descriptive interpretation of factors that both cause and result from the events.
- Examining literature and practices in psychology related to aspects of human behavior are common in *psychological* case study research.
    - The individual is typically the focus of psychological case studies, organizations and programs as well as events are sometimes investigated using the theories and concepts generated by many years of research in psychology.
- Topics often examined in *sociological* case study research include families, religion, politics, health care, demographics, urbanization, and issues related to gender, race, status, and aging.

In addition to their disciplinary orientation, case study research design may also be classified as *intrinsic, instrumental,* or *collective*.

- Researchers engage in *intrinsic* case study research when they want to know more about a particular individual, group, event, or organization.
    - Using an intrinsic case study, researchers are not necessarily interested in examining of creating general theories or in generalizing their findings to broader populations.
- The primary goal of an *instrumental* case study research design is to better understand a theoretical question or problem.
    - Using this approach, enhanced understanding of the particular issue being examined is of secondary important to a greater insight of the theoretical explanation that underpins the issue.

- *Collective* case study research attempts to address an issue in question while adding to the literature base that helps us better conceptualize a theory.
    - Usually involves several instrumental cases performed to enhance our ability to theorize about some larger collection of cases.

Types of case study research design include *exploratory, explanatory,* and *descriptive*.

- *Exploratory* designs seek to define research questions of a subsequent study to determine the feasibility of research procedures.
    - Often a prelude to additional research efforts and involve fieldwork and information collection prior to the definition of a research question.
- *Explanatory* designs seek to establish cause-and-effect relationships.
    - Their primary purpose is to determine how events occur and which ones may influence particular outcomes.
- *Descriptive* designs attempt to present a complete description of a phenomenon within its context.

Gathering information from Interviews

Interviews of individuals or groups allow the researcher to attain rich, personalized information.

- The researcher should identify key participants in the situation whose knowledge and opinions may provide important insights regarding the research questions.
    - Participants may be interviewed individually or in groups.
    - Individual interviews yield significant amount of information from an individual's perspective, but may be quite time-consuming.
    - Group interviews capitalize on the sharing and creation of new ideas that sometimes would not occur if the participants were interviewed individually, however, group interviews run the risk of not fully capturing all participants' viewpoints.
- The researcher should develop an interview guide (interview protocol)
    - This guide will identify appropriate open-ended questions that the researcher will ask each interviewee.
        - These questions are designed to allow the researcher to gain insights into the study's fundamental research questions.
- The researcher should consider the setting in which her or she conducts the interview.
- The researcher should develop a means for recording the interview data.
- The researcher must adhere to legal and ethical requirements for all research involving people.
    - Interviewees should not be deceived and are protected from any form of mental, physical, or emotional injury.
    - Interviewees must provide informed consent for their participation in the research.

Interviews may be structured, semistructured, or unstructured.

- Semistructured interviews are particularly well-suited for case study research.
    - Using this approach, researchers ask predetermined but flexibly worded questions, the answers to which provide tentative answers to the researchers' questions.
    - Researchers using semistructured interviews ask follow-up questions designed to probe more deeply issues of interest to interviewees.

Identifying and gaining access to interviewees is a critical step. Selection of interviewees directly influences the quality of the information attained.

When conducting an interview, a researcher should accomplish several tasks.

- He should ensure that he attains the consent of the interviewee to proceed with the interview and clarify issues of anonymity and confidentiality.

- He should review with the interviewee the purpose of the interview, the approximate amount of time needed for the interview, and how and when the interviewee may expect to receive results of the research.
- While asking questions, the researcher should ask only open-ended questions, while avoiding yes/no questions, leading questions, or multiple-part questions.
- The researcher should remember that time spent talking to the interviewee would be better spent listening to the interviewee.

Table 6.1. How to Plan and Conduct an Interview

Step	*Action*	*Example*
1.	List the research questions that your study will explore.	What happens during a transition from traditional to block scheduling?
2.	Break research questions into researchable subquestions.	I. What do teachers do differently when block scheduling is implemented? II. What do students do differently when block scheduling is implemented?
3.	Develop possible interview topics or items for each subquestion.	I.1. What new activities do teachers use when implementing block scheduling? I.2. What do teachers do differently during the beginning, middle, and end of block-scheduled classes? II.1. How do students spend their time during block-scheduled classes? II.2. What do students think about block scheduling?
4.	Cross-reference interview topics or items with each research question to ensure that nothing is overlooked.	Two topics have been identified for each research question. Additional topics may evolve as interview protocol is formalized.
5.	Develop interview structure (i.e., format) and protocol (i.e., guide) for interviews.	*Structure*: Each "subject" will be asked the same set of questions in the same order at the end of the first year of block scheduling. *Protocol (Teachers)*: 1. How long have you been teaching? 2. What grade do you teach? 3. What did the block schedule allow you to do that you could not do on the traditional schedule? 4. What did you do differently in the first year of block scheduling? 5. What are the advantages of block scheduling? 6. What are the disadvantages of block scheduling?
6.	Identify minimum information to be gathered from each respondent.	Each respondent will provide demographic information (Questions 1–2) and a response to Questions 3 and 4; other questions are optional.
7.	Confirm appropriateness and adequacy of protocol and conduct interview.	Research questions can be answered with completed interviews.

Gathering information from Observations

A frequent source of information in case study research is observations of the research setting by the researcher. Observations of the setting by a case study researcher may provide more objective information related to the research topic.

The researcher should consider 5 factors when conducting observations.

- The most important factor is for the researcher to identify what must be observed in order to shed light on possible answers to the research questions.
- A case study researcher should create an observation guide, that is, a list of features to be addressed during a particular observation.
    - This list often includes:
        - Time/date/location of the observation
        - Names/positions of persons being observed
        - Specific activities and events related to the research question
        - Initial impressions and interpretations of the activities and events under observation.
- A case study researcher must gain access to the research setting.
    - The researcher must be prepared to explain why, how, and for whom the investigation is occurring.
    - The researcher should seek the trust of the participants and strive to be as unobtrusive as possible.
- The researcher must recognize his personal role and biases related to the research.
    - Case study researchers must actively attempt to identify and mitigate the effects of their biases and prejudices in order to ensure the impartiality of their conclusions.
- A case study researcher must follow all ethical and legal requirements regarding research participants.
    - Researchers are required by federal law to minimize risks, to balance any risks with potential benefits of the research, and to inform participants of any risks involved.
    - Persons being observed must provide informed consent of their participation in the research and are normally afforded anonymity and confidentiality.
    - Individuals who are observed have the right to end an observation and should be debriefed after the research has ended to ensure that no mental, physical, or psychological injury has occurred.

Observations provide answers to questions being investigated.

Disseminating case study Research

To allow others to benefit from the research, case study researchers disseminate their finding in many ways. Two common means of doing so are through:

- Communications with colleagues and other stakeholders at professional conferences
- Publication in scholarly journals

Preparing a formal report of the outcomes of a case study research effort is similar to preparing a proposal to conduct the study.

Writers of case study research reports that are submitted for publication should pay particular attention to the expectations of the journal and its editors.

Articles published in journals include an *introduction,* a section describing the *method*, the study's *results*, a *discussion of what it all means*, and a presentation of *implications* of the work for improving the knowledge base and professional practice.

Introduction

- The introduction to the article makes the purpose, worth, and need for the research immediately clear.
- The introduction is usually not labeled as such but normally includes a succinct review of literature that directs the need, purpose, and importance of the study.
- A good introduction gives a reader a clear sense of what was done and why
- A number of questions are addressed:
    - What is the point of the study?
    - How do the questions and design relate to the problem?
    - What are the theoretical implications of the work and how does the work relate to previous research in the area?
    - What are the theoretical propositions tested and how were they arrived at?

Method

- The method section describes in detail how the study was conducted.
- Begin with an overview of the method that was used to conduct the study.
- A list of questions or a sentence outlining the purpose and objectives can also be used to introduce the method before a formal description of what was done in the study is provided.
    - Should provide the reader with sufficient information to evaluate the appropriateness and integrity of what was done as well as the credibility of the outcomes derived from doing it.

Results

- The results section summarizes the information collected and how it's used to address the case study's research questions.
- The main outcomes are typically presented first, with sufficient detail to justify conclusions with regard to primary and secondary questions.
- All relevant results, predicted ones as well as those that were not expected, should be addressed, including those that run counter to preconceived questions.
- Before you include a table or figure, try to decide if it contains vital information that helps to organize the presentation of findings.
- Tables and figures should augment rather than duplicate text, conveying essential facts without adding distracting details.
- If you use tables and figures, mention them in the text.
- Refer to all tables as *tables* and all charts, graphs, photographs, drawings, etc. as *figures*.
- Tables and figures supplement the text, they don't stand alone.
- Always tell the reader what to look for in the tables and figures and provide sufficient explanation to make the presentation easily comprehensible.

Discussion

- The discussion section ties the outcomes of the research to the literature and takes readers beyond the facts to the meaning they reflect, to the questions they raise, to the ideas to which they point, and to the practical uses and value they have for the extension of knowledge.
- Consider opening the discussion with a clear statement relating the findings to the original research questions.
    - Similarities and differences between the study's outcomes and those of the work of others are also useful beginnings.
- Be careful not to simply reformulate, rehash, and repeat points made earlier in the article.
- Don't overemphasize limitations and don't generalize beyond the outcomes of the study.
- Speculation is in order only if it's:
    - Identified as such
    - Related closely and logically to the information collected or theory discussed in the study
    - Expressed concisely

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