

Research Methodology

Final Project
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Lecture 4



- **Research method concept**
- **Types of research methods**
 1. Inductive Method
 2. Deductive Method
 3. Historical Method
 4. Experimental Method
 5. Descriptive Method

By the end of this chapter you will be able to understand the following knowledge:

- The concept of research method and its importance in scientific research.
- Identify the concept of both the Inductive and Deductive methods and their relationship to the field of administrative sciences.
- Identify the concept of the Historical method and its importance in the field of administrative sciences.
- Identify the concept of the Experimental method, its steps, and how to use it in the field of administrative sciences.
- Identify the concept of the Descriptive approach and its different methods in the field of administrative sciences.

By the end of this chapter you will possess the following Skills:

- The ability to identify and choose the appropriate research method and identify its strengths and weaknesses, and the tools necessary to use this method.

- ❑ Determining the scientific method used in the research process is one of the main elements that the researcher must identify in the early stages of the research process, because defining the research method will depend on it for the rest of the research process, and the basic elements of research are not completed without specifying a clear methodology.

- ❑ There is no single research approach that represents the only or best approach in research design, but it is expected to determine the appropriate approach according to the **purpose of the study and the nature of the available data about the phenomenon and the methods used in data analysis.**

There are several definitions of research method:

- ❖ “The method that is followed to reveal the facts using a set of general rules that are related to the collection and analysis of data until reaching tangible results.”
- ❖ “Organized investigation by following scientific methods and methods that identify scientific facts to verify their validity, modify them, or add new ones to them.”

- **There are also those who define the term research method:**

"The path leading to the disclosure of truth in sciences by means of a set of rules that dominate the functioning of the mind and determine its process until it reaches the desired result."

- **From the above, the research method can be defined as:**

"An organized method that a researcher uses to handle a specific problem he is studying. And scientific research is originally based on a fixed and specific method, governed by steps, which constitute rules, and principles that must be adhered to by the researcher.

Before choosing a scientific method, the following questions must be answered:

1. Is the research problem related to the past, the present, or the future?
2. Will the research be done through **the library and published** information sources, through **actual experience** by the researcher of the phenomenon and recording the changes that occur to it, or through **direct or indirect** investigation?
3. Does the aim of the research stop at the limit of description, or does it go beyond it to explain and reveal the causal relationship between the study variables?

Types of research methods:

- According to the intellectual framework, we can distinguish between two scientific approaches, *the Inductive approach and the Deductive approach*.
- According to the types of data and the researcher's method of data collection and analysis, it is divided into *Historical, Experimental, and Descriptive* methods.

- Research partial phenomena until it reaches general provisions.
- Observation and experience.
- **Qualitative analysis**, not quantitative analysis.
- It requires a researcher with distinctive characteristics and great experience.

For example, observing the relationship between changes in the prices of commodities and the extent to which individuals are willing to buy these commodities has led some economists to have an inverse relationship between the required quantities of the commodity (law of demand).

- Moving from the whole to the part or from the general to the particular.
- It is based on theories.
- It goes through three steps: the major logical introduction, the minor logical introduction, and the conclusion.

Example: “all institutions that apply strategic management thought have a high competitive ability” (a major logical introduction), and an institution was applying strategic management thought (a minor logical introduction), so it can be said that this institution, then, is an institution with the ability to highly competitive.

The deduction begins with laws in order to derive facts (a logical process).

Note

- ✓ Both the inductive method and the deductive method complete each other.
- ✓ Using the inductive approach in forming and formulating the intellectual framework for research and building theories, and then applying these intellectual frameworks to a specific field through the deductive method.

- Study of past phenomena and events
- The study of the present phenomena with reference to their origin and the developments that have passed through them.

Example: A study of the unemployment problem - a study of the evolution of university housing habits during the period from 2000 to 2020.

- The historical method is used when the objective of the research is to identify the beginning of the phenomenon, how it developed and the stages it passed through in the development process.

- Revealing the problems faced by business organizations in the past.
- Revealing the true origins of scientific theories.
- Determining the relationship between administrative phenomena or problems and the social, economic, and cultural environment that led to their emergence.
- Sources of information in the historical curriculum:

Primary sources (eyewitnesses - manuscripts..)

Secondary sources: (books - previous data - newspapers)

Negative aspects of the historical method:

- Change in information when transmitted from one person to another.
- The data may be subject to errors or intentional misrepresentations (impact from authority).
- Proving hypotheses in historical research may be tainted by inaccuracies and credibility.

- The experimental method involves the manipulation of variables to establish cause-and-effect relationships.
- The key features are controlled methods and the random allocation of participants into controlled and experimental groups.

An experiment is an investigation in which a hypothesis is scientifically tested. In an experiment, an independent variable (the cause) is manipulated and the dependent variable (the effect) is measured; any extraneous variables are controlled.

The foundations (elements) of the experimental method:

- The Independent variable
- The Dependent variable
- The Moderator variable
- The Controlling group
- Study groups

Single group method:

Measure the effect of a single experimental factor on the performance of the group of interest.

Example: Testing the effect of incentives on the productivity of employees in a company

1. Selection of the experimental group (e.g 10 employees in the organization).
2. Measure the productivity of the group (For example 1,000 units per day).
3. Enter the experimental variable (incentives) (10% of the salary.)
4. Measuring the productivity of the group after the introduction of the independent variable (1300 units per day).
5. Result analysis.

Two groups:

The researcher conducts the study on two homogeneous groups, exposing one group to the independent factor, which is called the experimental group, and avoiding exposing the other group (the controlling group) to the experimental factor. Then the researcher measures the result and compares the two groups.

❑ In the previous example

1. Select two homogeneous groups of workers (each group of 10 workers).
2. Exposing one of the two groups to the independent factor (the experimental group), which is a 10% incentive on the salary.
3. The other group (the control group) is not exposed to this stimulus.
4. Measure and Compare the productivity of the two groups of workers.
5. Result analysis]

Examples of experimental research in marketing research:

1. Examine the effect of a wrapper on the sales of a product.
2. Studying the effect of price on sales of a product.
3. Studying the impact of an advertising campaign or promotional offer on the sales of a product.

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- Describe specific phenomena or events, gather facts and information about them, describe their circumstances, and report their status as they exist in reality.
- It is also concerned with deciding how the phenomena should be.
- Using the qualitative or quantitative method to express, describe and analyze the phenomenon.

Types of descriptive research

A. Survey Studies

- Obtaining detailed and accurate information about the current state of the phenomenon.
- It Could be a comprehensive or sample survey.
- Examples of survey studies
 - Studying the reasons for low productivity in public sector institutions in.....
 - Studying the reasons for consumers' reluctance to buy a specific product in the market.

Differences between survey research from other research:

1. Survey research studies the phenomenon as it is in reality without any intervention by the researcher to influence it.
2. The survey focuses on the current reality and the current state of the phenomenon, while historical research focuses on ancient events
3. Case studies are more in-depth and analytical in the study of phenomena but focus on a limited number of cases, while survey studies are more comprehensive and less in-depth in analysis.

B. Case Study

- One existing case study (a person, a company, or a country).
- Gathering detailed information and data about the phenomenon under study in the current and previous situation of the phenomenon.
- Providing accurate and in-depth scientific knowledge and analyzing its parts and dimensions.

Example:

Studying the impact of job satisfaction on the performance of employees in private companies: A case study on Aramco.

Criticism:

- The Difficulty generalizing results.
- The subjectivity and personal judgment.
- Difficulty in quantitative and statistical analysis

C. Correlative Studies

- Describe the correlations between variables (the extent to which there is a relationship between the variables)
- Predicting the future of the phenomenon by recognizing the strength of the association between variables.
- Correlation coefficient $(-1, 0)$ $(1, 0)$

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- Correlational research is limited only to examining the extent of an association between variables but does not address the extent of a causal relationship.

Example:

- Studying the relationship between organizational loyalty, personal qualities, and job performance for employees.
- The association may be accidental without being causal.

D. Causal-Comparative Studies:

- Analyze the causal relationships between the variables.
- Explain how and why the phenomenon occurs
- Making comparisons between different phenomena to discover the factors that accompany a particular event

Example: Studying the effect of advertising and promotional work on the purchase habits and behavior of consumers.

Descriptive method evaluation:

The descriptive approach in administrative sciences aims to achieve two goals:

- 1. Applied objective:** Real information about the current state of various phenomena.
- 2. Scientific objective:** to add to knowledge.

Criticisms:

- False information from various sources.
- The researcher's bias in selecting the sample or formulating the questionnaire questions.
- The results of the study were affected by the type of sample.
- The results of the study were affected by the method of data collection.
- The difficulty of forecasting is due to the rapid change of administrative phenomena.



Thank You

