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## Research Methods in the Social Sciences: Philosophical Foundations, Methodological Frameworks, and Procedural Applications of Descriptive, Comparative, Quasi-Experimental, and Historical Approaches

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### Abstract

This paper provides a structured and critical overview of major research methods used in the social sciences, emphasizing the philosophical and epistemological bases that guide methodological choice and shape the production of scientific knowledge. It clarifies the conceptual distinctions among the methodological framework, theoretical paradigm, and theoretical approach, explaining how these intellectual references inform research design, problem formulation, and the selection of tools for data collection and analysis. The study highlights that social and organizational phenomena are diverse and multidimensional, and therefore cannot be adequately examined through a single methodological lens; instead, researchers may need to combine multiple strategies across different stages of inquiry. The paper focuses on procedural applications of four widely used approaches—descriptive, comparative, quasi-experimental, and historical—by presenting their concepts, characteristics, conditions of use, typical research questions, and sequential stages of implementation. The descriptive method is discussed as a systematic process for portraying phenomena and analyzing associated variables in their current state. The comparative method is presented as an analytical strategy for identifying similarities and differences across contexts and for producing contextualized explanations. Quasi-experimental methodology is highlighted as a practical alternative when random assignment is not feasible, allowing for the evaluation of interventions and causal tendencies under real-world constraints. Finally, the historical method is examined as a tool for reconstructing social processes over time and interpreting institutional and cultural transformations within specific temporal and spatial contexts. By synthesizing these methodologies and their logic of inference, the paper offers a clear reference for researchers and graduate students to enhance methodological rigor, strengthen validity, and align research procedures with the nature of the problem under study.

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### I. Introduction

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Scientific research relies on a methodology that suits the subject being addressed. This methodology is defined as a set of principles, rules and guidelines that researchers must adhere to throughout their study in order to reveal the fundamental relationships that govern the phenomena under investigation. These methodologies vary according to the diversity of phenomena, cases, problems, issues and circumstances in the field of research, whether concerning the individual, a group or society, and throughout the past, present and future.

Since problems — whether psychological, organizational, or social — are varied, each one requires its own research methodology. It is not possible to address or study problems using a single methodology; depending on its nature and the analysis of its dimensions, a single problem may require multiple methodologies. Therefore, researchers must be knowledgeable about various research methodologies to determine their appropriateness for the problem being studied. This may lead them to adopt more than one methodology at each stage of their research; some studies have utilised over five methodologies.

In this research paper, we will attempt to identify the most important methodologies in social science research, particularly in terms of procedural style. These include descriptive, comparative, quasi-experimental, and historical methodologies.

## II - Research Methodologies in the Social Sciences

### 1. Study concepts

#### 1.1 Scientific Methodology

The methodology represents the path leading to the search for truth. It consists of a set of rules, concepts and plans that the researcher follows to investigate a given topic, from choosing the research topic and writing the introduction to formulating the problem statement and research hypotheses, planning the research, selecting the appropriate methodology and tools, gathering theoretical and field data and presenting, analyzing and interpreting it. This culminates in research findings that address the research problem (Zrawati, 2007, p. 44).

Thus, the methodology includes a variety of methods and processes, each with different objectives and content. It consists of the actions used by the researcher to discover the truth and achieve the study's objectives. The method is an element of the overall methodology. The concept of methodology encompasses the formulation of concepts, hypotheses, measurements, procedures, experiments, analysis, interpretation and prediction.

#### 1.2 The term 'research methodology' and related terms (Angres, 2004, pp. 461-467)

##### 1.2.1 Methodological approach or framework

This represents a coherent and integrated system of thought that reflects the researcher's specific perceptions of the universe, humanity, society, history, historical processes, life and death, resurrection, wisdom, and the integration of revelation and observation (transmission and reason).

**1.2.2 Theoretical model (le paradigme):** This represents a set of concepts, values and practices that guide researchers according to their specialisms and the dominant schools of thought at that time. It thus serves as a higher reference, providing a set of theoretical and practical references defined by a conceptual system of beliefs, values and standards which determine intellectual direction and actual practices. These are reflected in common working methods shared by scientists during a specific period, enabling them to offer a unique perspective on reality and events within a particular scientific field.

Important theoretical models in the social sciences include the positivist model, the post-positivist model, the pragmatic constructivist model, and the interpretative model.

Every researcher must be aware of the theoretical model that informs their research, as it provides different representations of the phenomenon under study within a specific context. Therefore, it can be said that identifying the theoretical model is a crucial aspect of building the research project and defining its plans and methodologies.

##### 1.2.3 Approach (l'approche)

This is a non-traditional method of using scientific theory to derive insights. For example, if a researcher employs a Marxist approach, it suggests that they are inspired by Karl Marx and his followers when developing their theory. Similarly, a researcher who adopts a behavioral approach belongs to the behavioural school, which focuses on studying behaviors. This does not imply that the researcher follows the theory verbatim, but rather that they extract relevant insights from it and from other theories throughout all stages of scientific research, which are defined by a specific methodology.

Theoretical approaches vary according to field of research; each discipline and research area has its own approaches, schools and intellectual currents.

Thus, the methodological framework, theoretical model and theoretical approach can be considered intellectual concepts and scientific references that determine how we conceptualise the reality we wish to study through a set of variables. These references methodically guide the selection of the appropriate scientific methodology for any research project and determine how phenomena will be studied in reality. The methodology serves as a mediator between theoretical intellectual frameworks and practical reference frameworks when investigating a research topic. It is crucial

for every researcher to identify these intellectual references, as they form the basis of scientific philosophies that underpin the process of building scientific knowledge through a specific research project.

## 2. Importance of choosing the scientific method

The process of determining the methodology is the most crucial step in scientific research, as it underpins the credibility of the findings. If the methodology adopted is correct, the results will be valid.

The choice of methodology controls all the scientific procedures required for the research, from beginning to end. Furthermore, a researcher's proficiency in the procedural scientific trajectory of a given methodology enables them to complete their research in the shortest possible time with the least possible effort by effectively managing their research approach. Each methodology is defined in terms of both its theoretical and practical aspects.

The methodology is defined at the outset of the research, with the characteristics of the appropriate methodology for the study being determined by the nature of the problem statement. This statement is the fundamental pillar upon which the methodology for any study is defined. The methodology is closely linked to the quality of the problem formulation.

## 3. Characteristics of Scientific Methodologies

The most important characteristics of scientific research methodologies are: (Mustafa Alyan Rabhi, 2010, p. 54)

**- Organisation:** This involves having established rules and steps. These rules cover methods for identifying and defining the variables used, designing the study and examining the effects of one variable on another, or their relationships. This includes formulating the problem and hypotheses and following deductive and inductive reasoning methods.

**- Objectivity:** This involves maintaining an objective stance, free from personal bias, preferences and inclinations. It means that all researchers can arrive at the same results by following the same methodology when studying the phenomenon in question.

**- Flexibility and diversity:** Methodologies must be adaptable to fit the variety of scientific fields and research problems.

**- Generalizability of research results:** This refers to the ability to generalise findings from the research sample to the larger population from which it was drawn, thereby establishing general rules. However, this is more feasible in the natural sciences due to the homogeneity of basic natural phenomena. By contrast, in the human and social sciences, individuals differ in terms of personality, emotions and responses to various stimuli, which makes it difficult to obtain valid, generalisable results.

**- Verifiability of research results:** This implies that the phenomenon can be observed and verified at any time.

**- Predictive ability:** Scientific research methodologies can formulate predictions about the future state of the studied phenomenon.

## 4. Classifications of Scientific Methodologies in the Social Sciences

Some scholars of methodology classify scientific research methodologies as follows:

### 4.1 Classification based on thinking style

The classification of scientific research methodologies based on thinking style is one of the oldest, categorising them as inductive or deductive.

#### 4.1.1 Deductive method (méthode déductive)

This method stems from the rationalist approach, which is based on mental contemplation. In this method, the researcher connects premises and conclusions, as well as causes and effects, based on logic and reasoning. This approach begins with generalizations and moves to specific instances, whereby the researcher attempts to deduce that what holds true for the whole also holds true for its parts. Deductive thinking also involves verifying the validity of new knowledge by measuring it against existing knowledge and assuming the truth of the prior knowledge to find a relationship between the two (Zrawati, 2007, pp. 70-86).

The deductive thinking method involves two steps: the premise, which is based on previous knowledge, and the conclusion, which is based on subsequent knowledge. This method is only sound if we can ascertain with certainty that the premise is true. It has been used since the time of Aristotle and is therefore sometimes referred to as the 'Aristotelian method'. An example of the deductive method is: 'Metals expand with heat; gold is a metal; therefore, gold expands with heat (Aziz, 1991, p. 30).' In this instance, humans adopt certain metaphysical generalisations that they believe in and accept without dispute, using them to deduce specific occurrences. (Malhim, 2000, p. 338)

The deductive method relies on five principles: (Zrawati, 2007, pp. 71-72)

**- Principle of Identity:** This principle states that something is always itself; it cannot be confused with something else and cannot be anything other than itself.

**- Principle of Non-Contradiction:** This asserts that it is impossible for something to be both present and not present at the same time.

**- Principle of the Excluded Middle:** Also known as the middle eliminated, this principle states that there is no middle ground between two contradictory propositions.

**- Principle of Syllogism:** If "A" includes "B" and "B" includes "C", then "A" necessarily includes "C".

- Principle of Sufficient Reason: This principle implies identifying and verifying the sufficient cause to explain a known phenomenon.

#### 4.1.2 Inductive Method

Francis Bacon and David Hume are both considered to be the founders of the inductive method. This methodology is based on sensory experience and belongs to the empirical school of thought. It relies on the principle of verifying the validity of scientific results by testing formulated hypotheses. The validity of these hypotheses is tested through experimentation. This approach moves from specific instances to general laws. If a researcher can account for all individual cases within a specific category and verify their accuracy through direct sensory experience, they are said to have conducted a complete induction. However, as it is impossible for a researcher to account for every instance, they instead take a representative sample and derive a general conclusion expected to apply to similar cases. This process is referred to as partial induction. After establishing the validity of the hypothesis through experimentation, a general law can be deduced (Zrawati, 2007, pp. 71-72).

#### 4.1.3 Normative method

This methodology is based on standards that explain phenomena originating from doctrine (revelation).

### 4.2 Classification Based on Procedural Style

Research methodologies are classified based on procedural style into the following categories: the descriptive method; the comparative method; the quasi-experimental method; the historical method; the case study method; the content analysis method; the social survey method; the anthropological method; and the ethnological method.

However, there is disagreement among methodology scholars regarding this classification; some consider the case study and social survey methods to be merely techniques within the descriptive method rather than standalone methodologies.

This research will, however, detail each of the following methodologies: the descriptive method, the comparative method, the quasi-experimental method and the historical method.

#### 4.2.1 Descriptive method

##### 4.2.1.1 Concept of the Descriptive Method

The descriptive method is a way of describing and portraying a phenomenon in its current state in qualitative and quantitative terms. It essentially involves diagnosing the phenomenon by collecting theoretical information and data regarding the research problem. This involves classifying, analysing and understanding the causes and factors influencing the phenomenon in order to reach generalisable results. According to 'Hawthorne', it is the study of visible, prevailing facts relating to a specific phenomenon, situation, group of individuals, collection of events or particular set of conditions (Zrawati, 2007, p. 86).

##### 4.2.1.2 Rules of the Descriptive Method (Zrawati, 2007, p. 91)

Rule One: Define and delineate the dimensions of the research phenomenon. For example, when discussing 'the family', it can be broken down into its primary factors, such as the number of family members, the family's geographical environment, and the political system within which the family operates. These factors affect and are affected by the family.

Rule Two: Select an appropriate method for measuring the primary units that constitute the phenomenon quantitatively, as this strengthens the rationality of the qualitative measurements.

- Rule Three: Examine, analyse, justify and interpret the various elements that influence the phenomenon.

##### 4.2.1.3 Importance of the descriptive method

The importance of the descriptive method is defined by the following: (Kashroud, 2007, pp. 233-234)

When a researcher uses this approach to conduct a descriptive study on a particular topic, they are able to plan more effective and beneficial programmes for the phenomena under study. This enables researchers to move beyond mere description and take action to assess the current situation and offer suggestions for improvement.

The descriptive method and its associated techniques and approaches are significant due to their direct relevance to the issues and phenomena experienced by individuals in their daily lives. Data and information sources stem from people's lived reality, making the results both practically and scientifically valuable. Consequently, individuals can benefit from the findings to develop and improve their situations.

The depth of descriptive research varies depending on the collection of information and data, and the description of the phenomenon under study. It may extend to understanding the relationships between the phenomenon's variables, factors and components, resulting in an in-depth study of the phenomenon under examination.

##### 4.2.1.4 Stages of the Descriptive Method

The key steps of the descriptive method include: (Malhim S. M., 2010, p. 372)

1. Conducting a thorough examination of the research problem, which involves analysing the problematic situation.
2. Defining the problem to be studied.
3. Formulating specific hypotheses and identifying the assumptions or premises on which they and the procedures are based.

4. Selecting the research sample and clarifying its size and selection method.
5. Selecting suitable, accurate and valid data collection methods (e.g. questionnaires, interviews, tests and observations).
6. Gathering the necessary data.
7. Developing a classification system for the data to be obtained that is aligned with the study's objectives in order to facilitate the identification of differences, similarities and general relationships.
8. Describe, analyse and interpret the results in clear and precise terms.
9. Formulating research recommendations.

#### **4.2.2 Comparative Method**

##### **4.2.2.1 Concept of the Comparative Method**

The comparative method is an approach to studying similarities and differences, involving asking why and how these exist. A comparative study is conducted through presentation, analysis, interpretation, justification and synthesis in order to reach generalisable results. Using the comparative method enables researchers to achieve depth and precision in their study and control certain aspects of the research topic. Mohamed Ali defines it broadly as follows: 'A comparison between certain variables, which also has the meaning of a plan, referring to the study of the distribution of social phenomena in different societies, or even the comparison of entire communities with one another, or the comparison of major social systems in terms of their continuity, development, and the changes they undergo.' (Zrawati, 2007, pp. 97-98)

##### **4.2.2.2 Objectives of the comparative method** (Zrawati, 2007, p. 102)

The objectives of the comparative method are to:

- conduct a comparative study of social, psychological or human phenomena that require comparison rather than description, experimentation or any other research method to arrive at a solution to the issue at hand;
- To gather as much theoretical and/or empirical material as possible related to the phenomenon under study.
- Compare the phenomenon under study with other similar or comparable phenomena, or compare certain dimensions of the phenomenon under study with other phenomena.

Utilise the propositions and opinions of the individuals or officials being researched in relation to the phenomenon under study, and conduct a comparison among them.

- Connecting the relationship between social and human phenomena and comparing them with one another.

##### **4.2.2.3: Fields of the Comparative Method** (Zrawati, 2007, p. 98)

Studying the similarities and differences among social phenomena by analysing major behavioural patterns, such as crime rates and types, across different communities or societies.

Examining the similarities and differences in the growth and development of various personality types or attitudes in different regions within the same country or across different countries.

Investigating the similarities and differences among various models of political, economic, social, cultural, administrative, military or security organisations within society.

Analysing the similarities and differences in social systems such as the family and kinship systems and the evolutionary processes affecting these systems.

Studying the similarities and differences in various societies, taking into account their cultures.

##### **4.2.2.4 Steps of the Comparative Method** (Zrawati, 2007, pp. 100-101)

1. Identification of the Phenomenon: Recognizing that the phenomenon presents an issue that needs to be studied and seeking solutions.
2. Observation: Observing the presence of the phenomenon and determining its persistence, dimensions, developments and negative impacts.
3. Defining dimensions: Identifying the dimensions, causes and perspectives through which the problem can be studied.
4. Data collection: Gathering theoretical information and field data about the phenomenon.
5. Organisation: Structuring, arranging and classifying the theoretical and field data to facilitate comparison.
6. Comparative analysis: The researcher compares differences between two or more variables, phenomena or contexts, and specifies how and why these differences exist. It is important to establish whether the differences are total or partial, and the circumstances in which they prevail. Similarly, the researcher compares points of agreement, asking how and why such agreements exist and whether they are total or partial. The researcher also identifies the circumstances under which they are prevalent.
7. Scientific Validity: In order to ensure that comparisons are scientific and objective, the phenomena and issues being compared must be similar, with a focus on the economic, political, educational, legal and psychological domains. Comparisons should adhere to the philosophies and ideologies that govern public systems, and be contextualised within the historical period and prevailing culture at the time the comparative research is conducted. This allows us to understand the evolution of the phenomenon and its pace by considering both the historical dimension (time) and the environmental dimension (place).

8. Analysis: Conduct quantitative and qualitative analyses, interpretations, justifications and syntheses with theoretical and statistical significance. Provide explanatory models that relate the comparison to all aspects of the research.

9. Conclusions and recommendations: Based on the analysis, draw conclusions and make suggestions.

10. Generalizability of results: Evaluating the potential to generalise the results.

11. Predictive capacity: Assessing the ability to make predictions based on the study.

#### 4.2.3 Quasi-experimental method

##### 4.2.3.1 Concept of the Quasi-Experimental Method

The quasi-experimental method is defined as follows: 'a method that studies causal relationships by examining the effect of one variable (the independent variable) on another variable (the dependent variable).' It is based on a set of procedures through which the impact of a natural event on a phenomenon or research topic is studied. This event is not under the researcher's control. For example, consider the effect of family deprivation on children's television viewing habits. For cultural, social and ethical reasons, it is not possible to separate a group of children from their families. However, the researcher can study two groups of children: one group lives with their biological families and the other resides in care homes. Children are distributed into these groups based on existing circumstances, not by the researcher, meaning the independent variable is a natural occurrence. (Aziz B. A., 2012, pp. 39-42.)

##### 4.2.3.2 Nature of the Quasi-Experimental Method

One characteristic of this method is that the researcher does not simply describe a situation or phenomenon under specific conditions or outline its characteristics, whether in the present or past. Instead, they attempt to manipulate a set of factors under precisely controlled experimental conditions to ascertain how a particular event occurred by identifying the causes that led to it. This requires the researcher to control all the variables involved in the experiment, except for one. Essentially, experimentation involves intentionally and controllably changing the conditions and circumstances specified by the researcher while observing and interpreting the resulting changes to the event. (Kashroud, 2007, p. 253)

##### 4.2.3.3 Characteristics of Quasi-Experimental Research (Zaitoun, 2007, pp. 171-172.)

This type of research is characterised by four essential features: control; management of changes; observation; and repetition.

A. Control: This involves managing all variables that could affect the experiment's conduct, either directly or indirectly, as well as the accuracy of the causal relationship, except for the independent variable.

Specific control procedures include:

- Matching or homologation: This involves comparing sample members to achieve maximum similarity.
- Random assignment: Sample members are randomly distributed into control and experimental groups to ensure an equal opportunity for each member to participate in the experiment.

B. Management of changes: This refers to the researcher intentionally adjusting conditions. Unlike the descriptive method, where conditions are observed as they occur naturally, the quasi-experimental method involves the researcher establishing a phase for the occurrence of the variable under study in conditions where all other complicating factors are controlled. Here, a set of varied and predetermined conditions is imposed on the subjects selected for the experiment. One of these conditions is the independent variable, also known as the treatment variable, which imposes two or more values that may differ in nature, either quantitatively or qualitatively. Examples of independent variables in psychology include gender, learning styles, thought processes, economic status, social status, classroom environment, personality traits and motivation patterns.

C. Observation: The researcher studies the effect of modifications to the independent variable on the dependent variable by measuring performance, for example through test scores. The dependent variable refers to specific behavioural characteristics of the subjects used in the experiment, as observed or measured through a particular test.

D. Repetition: In addition to controlling for extraneous variables using various methods, some variations that affect the results of the experiment remain. These variations can be addressed through repeated observations, which involve conducting several sub-experiments within the framework of the overall experimental design.

##### 4.2.3.4 Rules of the quasi-experimental method (Kashroud, 2007, pp. 264-265)

The quasi-experimental method is underpinned by several rules, including:

A. Causality Rule: This rule states that the relationship between the independent and dependent variables is causal. To infer this relationship, the following evidence must be present:

- Evidence of covariation: This is the strongest indication of a causal relationship between the independent and dependent variables, meaning that each causally affects the other.

- Evidence of temporal order of events: This means that the causal variable (the independent variable) must precede the dependent variable (the effect) in time. The independent variable cannot be considered as the cause unless it precedes the dependent variable.

- Evidence of excluding other causal variables: This evidence demonstrates that the independent variable has indeed affected the dependent variable after all other potential variables that could lead to the dependent variable have been isolated.

**B. Control rule:** This refers to controlling all variables that may directly or indirectly influence the conduct of the experiment. Control is achieved through matching and random assignment. It also involves fixing characteristics related to the research situation that may arise when studying the relationship between the independent and dependent variables.

**C. Experimental Design Rule:** This involves designing the experiment based on the study's requirements and objectives in order to test and manipulate the variables under investigation, determining the causal relationship between the independent and dependent variables. This is achieved by taking pre-test and post-test measurements of both the control and experimental groups.

#### **4.2.3.5 Types of experimental research**

There are two types of experimental research: (Zrawati, 2007, p. 123.)

**1. Laboratory experiments:** These are experiments conducted in laboratories or factories, which are designed, arranged and prepared in advance. Several experiments have been conducted in this area, such as those involving the release of atomic energy using simple and uncomplicated devices. Cameras may also be used during the experiment to capture images, such as eye movement while reading, in order to discover the most effective teaching methods.

**2. Experiments on social situations and individuals:** This refers to experiments in the human and social sciences where it is difficult to apply traditional experimental methods, so researchers use quasi-experimental methods instead. Such experiments in these fields involve three elements:

The variable to be measured, or the phenomenon under study, is referred to as the dependent variable. This represents a natural event that the researcher cannot control, nor can they assign subjects to different treatments. The researcher examines the effect of the variable as it occurs naturally.

The independent variable is the variable whose effect on the phenomenon is to be understood.

- Confounding factors in the phenomenon are known as extraneous variables.

In this type of experiment, quasi-experimental designs are employed.

#### **4.2.3.6 Considerations for applying the quasi-experimental method and its steps**

##### **Considerations for application**

The considerations include the following: (Kashroud, 2007, pp. 270-273)

- Objective observation of actions that occur under precisely defined conditions.

- Formulating the hypothesis in a way that allows it to be tested so that the experiment either confirms or refutes it.

Changing the independent variable while keeping other potentially influential variables constant.

- Recording any changes that occur while controlling for other variables that might affect the dependent variable. Previous studies are a primary source of information about the extraneous variables that need to be controlled in the experiment.

##### **Steps for application**

The key steps of the quasi-experimental method are as follows:

**1. Identifying the problem:** This involves specifying and defining the problem, highlighting its ambiguities and outlining its components. The researcher must identify the factors that led to the problem, stemming from a sense of difficulty causing discomfort or unease.

**2. Formulating hypotheses:** These are ideas revolving around the topic that the researcher is investigating. A hypothesis is a preliminary judgement about the existence of a relationship between two phenomena. It is an initial, speculative attempt to explain a phenomenon which may or may not be validated by the experiment. Examples include:

- Exceptional students are more introverted.

- The impact of video on students' learning outcomes.

- The relationship between professional inclinations and socio-economic background.

**3. Identifying independent and dependent variables:** Clearly define the operational definitions of these variables so that they can be tested and measured.

**4. Developing a Quasi-Experimental Design:** This involves creating an experimental plan and identifying the independent (experimental) and dependent variables, and defining them operationally. At this stage, the quasi-experimental design enables the hypothesis to be either rejected or accepted and measures the extent to which the dependent variable changes due to variations in the independent variable, while controlling for other variables. Key steps in establishing an experimental design include:

- identifying the experimental variables that may have a positive or negative effect on the experiment, and determining the necessary procedures to control them.

- Selecting an appropriate quasi-experimental design for the study topic. There are generally four types of quasi-experimental design through which researchers examine the results of a natural event (the independent variable) that is presumed to affect individuals. In such cases, the experiment happens to individuals rather than being conducted on them. These designs include the control group design with pre- and post-test measurements; the time-series experimental design; the time-series design with a control group; and the equivalent time samples design. Further details can be provided in subsequent research.

5. Selecting the sample: Determine the sample on which the experiment will be conducted and categorise them into homogeneous groups, specifying the role of each group in the experiment.

6. Choosing the measurement tools: Select the tools that will measure the results of the experiment. Conduct exploratory studies to address any shortcomings in these instruments or the experimental design, or develop new measurement tools that are valid and reliable.

7. Determining the location and timing of the experiment: Specify where the experiment will take place, when it will occur and how long it will last.

8. Identifying statistical methods and treatments: Select statistical methods, such as factor analysis, to analyse the data and understand the impact of each variable on the others. Also assess the confidence level in the results based on statistical significance tests.

9. Conducting the experiment and gathering data: Conduct the experiment and collect the relevant data.

10. Organising and summarising the data: Organise and summarise the data so that the researcher can objectively and impartially assess and interpret the results, transforming the facts of the experiment into ideas at specific levels of abstraction upon which theories can be built.

#### 4.2.4 Historical method

##### 4.2.4.1 Concept of the Historical Method

The historical method is a process of investigating various aspects of past social phenomena through study and analysis in order to discover the laws that govern them, with the aim of predicting some of their future effects. (Zrawati, 2007, p. 107) (citing Mahmoud Abdel Halim Mansi, 2000, p. 239).

It is defined as follows: 'a method of historical research that relies on analysing facts related to human problems and the social forces that have shaped the present'. (Kashk, 1996, p. 285)

It is also described as: 'a method of research aimed at understanding the present and predicting the future in light of past experiences and events, as well as understanding the conditions, causes, circumstances, experiences and situations that humans have encountered since the beginning of their existence'. (Al-Eisawi, 1980, p. 243)

##### 4.2.4.2 Objectives of the Historical Method

The objectives of the historical method can be summarised as follows: (Al-Eisawi, 1980, pp. 108-109)

- Collecting information, data and historical evidence.

- analyse historical material objectively and verify the accuracy of past events;

- To reach conclusions supported by historical evidence.

##### 4.2.4.3 Features of the Historical Method

The historical method is characterised by two main features: (Aqil, 1999, pp. 60-61)

1. Temporal feature: This refers to the researcher basing their study on a chronological tracking method. This feature is divided into two parts:

Part One: Studying a historical phenomenon or event from the past to the present, involving a chronological study.

- Part Two: Examining the phenomenon from the present to the past, involving tracing the study back from the present to the past and reviewing events in the order they occurred.

2. Subject Matter Feature: This involves studying the connections between the research subject and other topics, examining the relationships between similar historical events.

##### 4.2.4.4 Steps of the Historical Method (Aqil, 1999, pp. 109-112)

Step One: Select a problem and define the research question for the historical study.

Step Two: Collect historical scientific material. Sources for gathering historical scientific material in research can be categorised as follows:

Primary sources: This includes:

- Statements from individuals who witnessed past events first-hand or heard about them directly.

- Actual artefacts used in the past that can be examined and verified directly. These tangible items include remnants of structures, tools, utensils, coins, weapons, drawings, pyramids, temples, statues, ancient tombs, and printed materials such as books, records, contracts, attendance sheets and manuscripts containing myths, proverbs, folk tales and common fables.

Personal records include diaries, autobiographies, wills, contracts, speeches and articles.

- Official records, such as constitutions, laws, reports and manuscripts.

Visual records include drawings, studies, photographs, films and postage stamps.

- Audio recordings, including sound recordings on discs and various other audio formats.

**Secondary sources:** This category includes everything related to historical events as reported by others, as well as everything written about primary sources. History books and encyclopaedias written by individuals distanced from the original narrative and direct observation are considered secondary sources in historical scientific material. Therefore, scholars of methodology recommend studying, critiquing and analysing these secondary materials to uncover the truth and nature of historical events, and to verify the authenticity of historical scientific data.

There are two ways to conduct a critique:

1. **External critique of sources:** This involves analysing the historical document and verifying the author's identity by understanding the location, time and social, political and historical circumstances in which the document was written. Ascertaining the author's identity is essential, since the author's name is sometimes omitted, concealed, or attributed to a pseudonym, which may involve forgery of the material contained in the document. The authenticity of historical scientific material must be verified by examining the source and content of the document, comparing it with original documents and understanding what is original about the historical event. It is also important to ensure that the document does not contain false information that serves specific personal or political agendas during a certain period. This information is intended to obscure awareness and maintain certain conditions and incidents, thus distorting historical facts.

2. **Internal critique of sources:** This involves critiquing the scientific content of the document itself. The researcher asks questions such as whether people at that time could have acted as described by the author of the document. Are the figures mentioned reasonable, given the circumstances at that time? Could the events described in the document have occurred given the political, historical and social conditions of that period? Are there any contradictions in the historical material presented in the document?

Step Three: Present, classify, organise and analyse the historical scientific material.

Step Four: Presenting the results of the historical research.

#### 4.2.4.5 Utilising the historical method

The historical method is employed as follows: (Aqil, 1999, p. 119.)

Justify the choice of the historical method as the research approach over other methods.

- Clarifying that the historical method covers the research axes thoroughly.

Accurately state and define the research axes that require the historical method. It should be noted that the historical background to the research, or to some of its chapters, does not necessitate the use of the historical method, since it involves historical coverage rather than historical investigation, which demands the use of the historical method.

- Identify the techniques of the historical method in the research.

Presenting the historical material.

Clarify the sources of historical material collection in the research, including primary and secondary sources.

Establish criteria for verifying the authenticity of sources (internal and external critique).

Specifying tools for collecting historical scientific material in the research.

Identifying techniques for synthesising historical material in the research.

- Indicating methods to address gaps and shortcomings that may arise in some areas of the research.

- Relying on quantitative and qualitative analysis techniques wherever necessary.

### III - Conclusion

Scientific research requires the adoption of a precise methodology, which is the approach that the researcher uses to achieve the research objectives relating to the study variables. This determines the methodological approaches adopted throughout the various stages of the research topic, providing a comprehensive view of the research process and enabling the issues presented to be decoded and the theoretical frameworks tested.

Therefore, researchers must exercise caution when selecting the most appropriate research method to avoid contradictions between the aim and the means, as these could negatively impact the research findings. Consequently, the research contribution may hold little value in advancing scientific knowledge.

### Ethical Considerations

This article is theoretical and methodological in nature and does not involve clinical trials, laboratory experiments, vulnerable populations, or medical interventions. Where illustrative examples or references to field practices are included, they are presented in an educational manner without reporting identifiable participant data. No personally identifiable information was collected, processed, or disclosed in the preparation of this manuscript. Accordingly, formal ethical committee approval was not required for this methodological review paper.

### Author Contributions

**Dr. Ghezal Hayette:** Conceptualization; literature development; drafting of the methodological framework and descriptive/comparative sections; critical revision.

**Dr. Meriem Chergui:** Methodological structuring; drafting of the quasi-experimental and historical sections; editing

and refinement of procedural stages; final review and validation.  
All authors read and approved the final version of the manuscript.

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#### Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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