Ministry of Higher Education and Scientific Research

University Center Si El Haouas – Barika

Institute of Economics, Business and Management Sciences

Department of Finance and Accounting

Pedagogical publication on a scale:

Methodology for preparing a master's thesis

Cours destinés aux étudiants de première année de master - Spécialisation : comptabilité et audit

Course professor: Dr Bouaziz brahim

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بسم الله الرحمن الرحيم

Course Title: Methodology for preparing a master's thesis

Level: First-Year Master / Second Semester

Coefficient: *2*

Credits: *6*

Course Description:

The course Advanced Financial Accounting II is designed for third-year undergraduate students majoring in Accounting and Auditing. It consists of one lecture per week, supplemented by tutorial sessions whose number varies according to the number of student groups during the sixth semester.

Learning Objectives:

This course aims to familiarize students with the fundamental steps required for the preparation of a master's dissertation. It seeks to develop the student's ability to think scientifically and logically about the different components of the research process—beginning with the identification of the research problem and the formulation of hypotheses, and culminating in the proper scientific documentation and presentation of the research findings.

Prerequisites:

To effectively engage with the content of this course, students are expected to have a solid grasp of the competencies acquired in the Research Methodology course (second year of the Bachelor's program) and in the Bachelor's Graduation Project course (third year of the Bachelor's program).a

Introduction

Introduction :

Accounting operations are divided into two main categories: tasks performed by the accountant during the accounting cycle and other procedures carried out at the end of the cycle. Both categories contribute to determining the balances of various accounts, which serve as the foundation for preparing the financial statements. The transparency and reliability of the accounting information presented in these statements depend largely on the accountant's adherence to the accounting principles outlined in the conceptual framework of the Financial Accounting System. Among the most critical principles, particularly for year-end operations, are the principles of prudence and conservatism, the independence of accounting periods, the matching of expenses and revenues (and vice versa), and the prevalence of substance over form.

In addition, it is essential to highlight the new concept introduced by the International Accounting Standards — the fair value — and its impact on accounting treatment at year-end. All these principles, along with the theoretical and practical aspects addressed throughout this textbook, are applied and explained comprehensively. We have made every effort to present the theoretical framework in a clear and detailed manner, while each lesson concludes with a set of applied exercises encompassing all the topics covered. These exercises are designed to help students develop the analytical and practical skills necessary to successfully respond to various evaluation and examination questions.

This textbook is specifically aligned with the official ministerial syllabus for the sixth semester of all programs within the Department of Finance and Accounting, presented in the following order:

Course Content

Course Content: Methodology for Master's Thesis Preparation

***Section** 1: Scientific Research Methodology – A Review of Fundamental Principles*

- *The meaning of research*
- *Definitions of research*
- *Objectives of research*
- *Motivation in conducting research*
- *General characteristics of scientific research*
- *Criteria of sound research*
- *Types of research*
- *The specific nature of research in finance and accounting sciences*

Section 2: The Research Problem in Scientific Inquiry

- *Scientific thinking*
- *What constitutes a research problem*
- *Selecting the research problem*
- *Sources of the research problem*
- *Defining and delimiting the problem*
- *Evaluating the research problem*

***Section** 3: Research Hypotheses in Scientific Studies*

- *The meaning and definitions of a hypothesis*

- *The nature and functions of hypotheses*
- *The importance of hypotheses in scientific research*
- *Types of hypotheses*
- *Characteristics of a good hypothesis*
- *Variables in a hypothesis*
- *Designing the conceptual model of the study*
- *Formulating hypotheses*
- *Hypothesis testing*

Section 4: Literature Review

- *The meaning of a literature review*
- *The need for reviewing existing literature*
- *Objectives of a literature review*
- *Sources of literature*
- *Functions of the literature review*
- *How to conduct an effective literature review*

Section 5: Formal and Methodological Requirements for Writing and Editing a Master's Thesis

- *Structural and formatting standards*
- *Methodological coherence and referencing norms*

Section 6: Citation, Referencing, and the Use of Academic Sources

- *Principles of citation*
- *In-text referencing techniques*
- *Bibliographic standards and referencing styles*

*Section*01: Generalities about the scientific research method

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Introduction:

Students often begin their research journey feeling hesitant and confused, especially when faced with the task of choosing a topic for their study or research. In the early stages of their academic development, they find themselves torn between several topics that catch their attention, especially if some universities impose a specific field of knowledge or a particular specialisation that they are required to adhere to. This is where the importance of students identifying the field closest to their inclinations and abilities from the outset becomes apparent, because choosing a topic that matches their interests makes them more capable of delving deeper into it and less prone to hardship while completing it.

However, reality shows that a number of students tend to choose a topic that is acceptable to their academic supervisor, especially when the number of professors in some scientific fields is limited. Students also face a multitude of possible topics, which requires them to make a decisive decision and determine the topic that they have the ability to prepare and complete accurately. Scientific research does not begin definitively, but is built gradually through stages of thinking, writing, and revision, leading to a clear final formulation of the topic. Therefore, students must make a conscious effort to prepare a

comprehensive research project that can be successfully implemented and discussed.

As Albert Einstein said: If we knew what we were doing, it would not be called research, would it?"

'If we knew what it was we were doing, it would not be called research, would it?'

1/Definition of Scientific Research:

The term scientific research is composed of two words: "research," which linguistically denotes the act of seeking, searching, or inquiring into a certain fact or matter; and "scientific," which relates to science, meaning knowledge, understanding, and awareness of facts. Science also implies mastery and comprehensive familiarity with truths and all that pertains to them.

Scientific research is defined as "a systematic and organized inquiry or investigation conducted to discover new facts, verify existing ones, and identify the relationships among them or the laws governing such relationships." Research, therefore, is a means rather than an end in itself, as the researcher employs it to study a particular phenomenon or problem, analyze the factors that have led to its occurrence, and ultimately seek an appropriate solution.

Moreover, scientific research can be defined as "a structured and methodical process that follows specific scientific procedures and stages, aiming to collect, document, and analyze information—both quantitatively and qualitatively—in order to reach objective and logical conclusions regarding a specific topic, with the purpose of

solving defined problems or answering certain questions or hypotheses that are testable and open to critique."

It is also described as "a systematic and precise means of inquiry and investigation undertaken by the researcher with the aim of discovering new information or relationships, as well as developing, correcting, or verifying existing knowledge, while adhering to the rigorous steps of the scientific method."

Scientific research may further be understood as an attempt to answer questions, solve problems, or uncover new knowledge, inventions, or innovations previously unknown, through the application of systematic scientific procedures and logical steps. This process involves the pursuit of knowledge, the collection and analysis of information, and the interpretation of results to generate new insights or understanding.

In the field of economic sciences, scientific research seeks to establish the relationship between two or more variables—one dependent and the other independent—and to apply this relationship to a specific field of study, which may include an enterprise, an economic unit, a research sample, or an entire economic sector.

From the various definitions of scientific research presented above, it is evident that they collectively emphasize several essential characteristics and attributes of research: accuracy, objectivity, novelty, and verifiability of results. These features ensure the validity of findings through methodological rigor and enable prediction of outcomes when similar results are applied to new contexts.

Despite the diversity of these definitions, they converge on several fundamental points:

– It is a systematic endeavor, based on scientific methods.

– It enhances human knowledge by expanding the body of known facts.

– It tests knowledge, relationships, and phenomena.

– It is comprehensive and applicable across various social, economic, and other domains.

2. Objectives of Scientific Research:

Every scientific research study—whether academic or professional in nature possesses its own specific objectives that vary according to the nature of the problem under investigation and the characteristics of the selected topic. In general terms, the objectives of scientific research can be summarized as follows:

2/1.Attaining new facts: One of the primary aims of scientific research is to enable the researcher to uncover new facts through the systematic application of scientific methods.

– **Description:** Scientific description constitutes a central objective of academic research, particularly when dealing with variables that are difficult to manipulate experimentally. In this case, research focuses on describing the phenomenon under study, its structure, and its explicit and latent components.

– **Prediction of the future:** This objective involves forecasting the occurrence of a phenomenon in the future based on reference data related to its past behavior. In this respect, scientific research converges with planning and strategic analysis.

– **Providing effective solutions to problems:** Scientific research assists the researcher in proposing strong and practical solutions to challenges that hinder human progress or decision-making.

– **Innovation and renewal:** Scientific contributions and innovations emerge from systematic and well-structured research endeavors in which researchers invest considerable time and apply rigorous scientific principles. The outcomes of such research often lead to inventions and discoveries. Renewal, on the other hand, is achieved when the researcher identifies existing knowledge gaps and seeks to propose more modern and suitable solutions that correspond to the evolving nature of the research problem.

– **Knowledge acquisition:** Humanity has turned to scientific research as a means of obtaining accurate and reliable knowledge across all fields of inquiry.

– **Explanation:** This objective seeks to establish relationships among phenomena, particularly *causal relationships*, which represent the most common and significant type of connection explored in scientific inquiry.

- ✓ Furthermore, scientific research aims to:
- ✓ Arrive at the optimal solution to a given problem through a sound methodological process.
- ✓ Conduct in-depth analysis and rigorous examination of the problem, identifying the relationships among its various variables.
- ✓ Derive meaningful results from solving the problem and attempt to generalize these findings to similar phenomena.

- ✓ Employ description as a means to achieve new innovations and creative outputs, by systematically collecting, classifying, and organizing data related to the studied phenomenon.
- ✓ Link causes to effects and inputs to outputs, since understanding phenomena and identifying their underlying causes depend on interpretation, analysis, comparison, and the interrelation of diverse elements. This process raises essential questions such as *Why? How? What is...?*
- ✓ After reaching the desired results by addressing the research problem, scientific inquiry also seeks to *forecast future occurrences*, such as predicting inflation and unemployment rates, or estimating future sales volumes.

  Exercise control over the factors that influence or determine the occurrence of phenomena. Mastery, regulation, and control of studied phenomena represent the *ultimate objective* of scientific research, enhancing the researcher's ability to manipulate, adapt, and understand the interrelations among variables.
- ✓ Finally, scientific research aspires to contribute to *progress, development, and continuous growth* within institutions and societies, while ensuring the sustainability of such advancement.

3.Motivations for Scientific Research:

The undertaking of scientific research is driven by multiple motivations, which may stem from the researcher's own interests, the intrinsic nature of the research to be conducted, or the needs of the

entity benefiting from its outcomes. These motivations can be summarized as follows:

- *The desire to contribute to societal development** by studying existing or potential problems and proposing viable and effective solutions.*
- *The pursuit of discovering the unknown** and identifying the underlying causes that lead to specific outcomes—that is, the quest for new knowledge and understanding.*
- *The exploration of new scientific methods and approaches** aimed at addressing the challenges faced by society through innovative and evidence-based problem-solving techniques.*
- *The enhancement of intellectual or academic standing, whether for personal academic advancement (such as obtaining an academic degree), or for the benefit of the community or the organization involved.*
- *The aspiration to create favorable conditions for conducting scientific*

research, including improving the research environment, resources, and institutional support.

- *The psychological satisfaction and intellectual fulfillment experienced by individuals engaged in the research process, derived from the joy of discovery, creativity, and contribution to the advancement of knowledge.*

4. General Characteristics of Scientific Research:

Scientific research is distinguished by the following characteristics:

– ***Objectivity:*** *Scientific research is characterized by impartiality and detachment from personal bias. The researcher must remain neutral and avoid favoring a predetermined outcome. The study should progress naturally without interference at any stage, whether during data collection, data analysis, or the process of deriving conclusions.*

– ***Generality (Generalizability):*** *Most contemporary research relies on selecting a properly representative sample of the population and conducting experiments or tests on that sample. If the sample is accurately chosen to reflect the population's characteristics, then the results obtained from the sample can be legitimately generalized to the entire population.*

– ***Verifiability:*** *Scientific research must be verifiable at all times. The process of verification is directly linked to the research's credibility and the precision of its findings. Moreover, the ability to replicate results under identical conditions reinforces the validity and reliability of the research outcomes.*

– ***Predictability:*** *Research results should inherently contain elements that allow for forecasting future occurrences of the studied phenomenon. Predictability tends to be more precise in the natural sciences than in the social sciences, as social phenomena are more susceptible to change over time and under varying circumstances.*

– ***Dependability (Logical Sequencing):*** *Every step in scientific research depends on the preceding one and simultaneously forms the foundation for the following step. There exists a logical and*

systematic sequence in the research process: the researcher collects data, analyzes it, and then draws conclusions based on that analysis. This interdependence ensures coherence, methodological rigor, and scientific consistency throughout the study.

– ***The driving force behind all innovations:*** *In essence, every form of advancement or renewal in the world—whether incremental improvements or major paradigm shifts in knowledge—is fundamentally grounded in scientific research.*

– ***Rapidly evolving:*** *The field of scientific research advances at a remarkably fast pace; each day brings forth new discoveries. What was deemed acceptable or valid last year may change today based on the latest findings obtained by researchers.*

– ***Goal-oriented:*** *Research begins as a question in search of an answer. According to the anthropologist Zora Hurston, "Scientific research is formalized curiosity—it is probing and inquisitiveness directed toward a purpose."*

– ***Precise and rigorous:*** *It is built upon a solid foundation and executed through a carefully designed methodology. The process involves identifying an issue of interest, noting observations and reflections, determining possible actions, and conducting experiments to validate the researcher's perspective. It is, therefore, a highly meticulous endeavor grounded in systematic and disciplined steps.*

– ***Hypothesis-based:*** *Scientific research is structured around formulating a hypothesis. The researcher identifies a problem, proposes a tentative explanation, and determines the procedures required to test and answer the underlying question.*

– ***Reliable:*** *The findings of scientific research are expected to achieve a degree of accuracy of approximately 95%, with an error margin of about 5%. In statistical terms, this corresponds to defining the level of significance of experiments, while the confidence interval indicates the probability with which the researcher can trust the obtained results.*

– ***Universal:*** *The broader the applicability of research results on a global scale, the greater their impact. For instance, if research is related to technological innovation, it attracts global demand; similarly, if it addresses a disease and develops an effective treatment, it will be adopted and utilized worldwide.*

– ***Transgenerational:*** *Scientific knowledge is cumulative and transmitted across generations. Researchers publish their findings, which later serve as a foundation for future scholars who build upon and expand these results. As the astronomer Edwin Hubble aptly stated, "Science is that human endeavor which advances gradually, and the essence of true science is handed down from generation to generation."*

5. Difficulties of Scientific Research:

Scientific research faces numerous challenges across different fields of study, and these difficulties vary from one discipline to another. Among the most significant obstacles are financial constraints or the limited availability of financial resources for researchers.

The more capable a researcher is of conducting a scientifically sound study with adequate financial support, the more thorough, accurate, and methodologically robust the research will be. This is because

high-quality research often requires access to reliable data and information regardless of cost. Therefore, countries that aspire to advance their scientific research systems must pay close attention to the financial and material conditions of researchers, providing consistent support and improving these conditions over time so that researchers remain focused on their work rather than being distracted by external concerns.

Another major difficulty, particularly in developing countries, lies in the limited and inconsistent availability of information. When such information exists, it is often unreliable, making the process of conducting scientific research exceedingly difficult. Consequently, even when research is completed, its results tend to lack precision and accuracy, since they are based on uncertain or incomplete data. To address this issue, nations and research organizations should give paramount importance to ensuring the accessibility and credibility of research data. This can be achieved by establishing more research centers and consultancy institutions, as well as developing public statistical offices that cover a wide range of disciplines.

Furthermore, one of the persistent challenges facing scientific research—especially in developing nations is the lack of recognition and appreciation afforded to researchers as key contributors to national progress. In many such contexts, there is no established culture of respect for researchers, despite the fact that they represent the cornerstone of development, growth, progress, and stability within their societies.

6. Standards of High-Quality Scientific Research:

A sound and effective research study that fulfills its intended purpose must meet a set of essential methodological and academic criteria, which can be summarized as follows:

– The research methodology should be comprehensive and coherent, clearly defining both the objectives and the scope of the study.

– The researcher must possess adequate knowledge and understanding of the research topic and its appropriate methodological framework.

– The researcher should allocate sufficient time to thoroughly engage with and explore the subject matter.

– The study must be based on authentic, well-documented, and verifiable references and opinions.

– The title of the research should be formulated clearly and comprehensively, reflecting the full essence of the study.

– The researcher's writing style should be clear, engaging, and capable of maintaining the reader's interest throughout the research report.

– There must be logical coherence and consistency among all sections of the research, ensuring a systematic and connected flow of ideas.

– The research topic should contribute new insights or knowledge to the existing body of literature within the field of specialization.

– Adequate sources and data must be available to support the research topic and to ensure the credibility of the findings.

– The study must maintain objectivity and impartiality, avoiding any form of bias in the analysis or interpretation of results.

– The research should demonstrate linguistic precision and accuracy in its expressions, terminology, and academic writing style.

Types of Scientific Research:

Scientific research can be classified according to its purpose into the following categories:

*– **Theoretical Research:** This type focuses on the scientific aspects from which verified theories and laws are derived. It contributes to the expansion of knowledge, supports academic studies, and provides a documented foundation for applied sciences. Theoretical research is also referred to as pure or fundamental research. Universities and scientific research institutions serve as the primary incubators for such studies, which are essential as they establish the intellectual and methodological base for industrial and technological development within a given country.*

*– **Applied Research:** Applied research is practical in nature and characterized by more specific and targeted objectives than theoretical research. It is typically directed toward solving real-world problems or discovering new knowledge that can be immediately utilized in practical contexts—such as within institutions, specific regions, or by individuals—to address concrete issues or enhance existing practices.*

Scientific research can also be categorized according to its methodological approach as follows:

*– **Exploratory Research:** This type of research aims to identify and define a problem that is new or has not been previously investigated. It is conducted when available data and information about the*

phenomenon are scarce or insufficient. The researcher seeks to explore the issue in depth to establish an initial understanding that may guide future studies.

– ***Descriptive-Diagnostic Research:***

This form of research focuses on describing an existing phenomenon, either through quantitative methods or qualitative techniques. It assesses current conditions and identifies the attributes of a given situation as they exist in reality. Moreover, it provides recommendations and corrective measures intended to improve the current state, based on established criteria and values that should be implemented to achieve the desired situation.

– ***Historical Research:*** *This research adopts a descriptive approach but deals with past events and phenomena. It involves analyzing the consequences and implications of historical occurrences to derive lessons and develop strategies to avoid past shortcomings, while also providing insights for predicting future developments.*

– ***Experimental Research:*** *This type analyzes problems and phenomena using the experimental method, which relies on observation, hypothesis formulation, and the controlled testing of variables to verify their validity and actual existence. Experimental research thus represents the most rigorous form of scientific inquiry, as it establishes causal relationships through empirical verification.*

- ***Classification According to Academic Nature:***

– ***Short Research Paper:***

The purpose of this type of research is to train students in the effective use of sources and references, as well as in the processes of collecting, organizing, and summarizing information. Its primary objective is to enhance the student's understanding of a specific

subject and to develop their academic competencies. The short research paper generally forms part of the student's continuous assessment and typically ranges between ***15 and 20 pages*** *in length.*

– ***Internship Report or Bachelor's Thesis:***

This form of research constitutes an introductory or experimental study designed to familiarize the student with research methods and scientific writing techniques. The objective is not to produce original findings but rather to encourage the student to explore a specific topic in depth, identify and utilize relevant references, ensure logical sequencing, and correctly handle citations, among other research skills. The typical length of such work ranges between ***40 and 70 pages****.*

– ***Master's Dissertation:***

This represents the initial stage of scientific research. At this level, the student is not required to make an original scientific contribution; instead, the focus lies on exploration and analysis as preparatory steps toward developing a genuine contribution at the doctoral level. The dissertation generally ranges between ***60 and 90 pages****.*

– ***Doctoral Thesis:***

The doctoral thesis is a comprehensive and advanced research work characterized by ***originality, innovation, and scholarly rigor****. It serves as documentation of an independent scientific endeavor and represents a substantial contribution to the field of specialization. Typically, the thesis exceeds* ***100 pages*** *as a substantive personal contribution, excluding the theoretical framework, appendices, references, and indexes.*

7. The Specificity of Scientific Research in the Field of Economic and Administrative Sciences:

Economic sciences are considered a branch of the social and human sciences. By their very nature, social sciences are characterized by interdependence and overlap among their fields. Consequently, researchers in economics and management encounter a set of inherent difficulties, which can be summarized as follows:

*– **The complexity of economic phenomena,** which are inherently social and closely linked to human behavior, making them highly influenced by various political, social, and cultural variables.*

*– **The researcher's involvement as part of the study population:** economists themselves belong to the same society they study, and therefore hold particular opinions and positions regarding its functioning and the measures necessary for improvement. This leads to implicit—and at times explicit—subjectivity embedded within many economic theories.*

*– **Influence of the researcher's intellectual and ideological background** on the interpretation of economic facts and data, which may shape both the analytical approach and the conclusions drawn.*

*– **The methodological difficulty of economic research,** which lies in attempting to understand relationships between individuals—relationships that are inherently complex and cannot be accurately reduced to interactions among a limited number of measurable variables. This renders experimental validation in economics particularly challenging.*

– ***Instability and contextual specificity of economic relationships:*** *when identified, relationships between variables tend to be neither universal nor permanent, as they evolve over time and differ across societies due to the continuous process of social and economic development. This variability makes generalization of findings difficult.*

– ***Dependence on samples and case studies:*** *most economic research relies on samples drawn from the broader population or on specific case studies. Consequently, conducting the same study on a different sample or set of cases may yield divergent results, thus complicating the reliability and reproducibility of conclusions.*

Section 2: The Research Problem

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Introduction:

Selecting a research topic and defining its problem constitutes the first and most pivotal stage in any systematic scientific endeavor. This stage serves as the foundation upon which all subsequent phases of the research process are constructed. Through it, the scientific trajectory of the study takes shape—beginning with the formulation of the research problem and the establishment of hypotheses, followed by determining the type of study and the methodological framework adopted, and culminating in identifying the necessary data and the appropriate tools for their collection.

The stage of topic selection acquires particular significance due to its complexity. Identifying a suitable topic and formulating a precise research problem are far from simple tasks; they require substantial effort on the part of the researcher, as well as a comprehensive understanding of the relevant scientific sources that enable the proper conceptualization of the chosen theme. This process also demands adherence to a set of scientific and methodological criteria governing the selection and formulation of the research problem.

Once the topic has been finalized and its problem delineated, the researcher proceeds to articulate it in a clear and scientifically coherent manner, with the aim of defining the essence of the problem and its intersections with other issues or domains, while also sketching an initial framework for addressing it or answering its guiding questions. This stage is referred to as the formulation of the research problem. From this problem emerge the hypotheses, which are

proposed as tentative explanations or provisional solutions to the phenomenon under investigation, in a methodological continuum linking all stages of the research process and ultimately leading to precise and reliable findings.

Accordingly, the construction and formulation of the research problem and hypotheses require the researcher to adhere strictly to recognized scientific standards and to possess a solid command of the methodological principles underpinning this process, ensuring the rigor of the study and the accuracy of its outcomes.

1. Definition of the Research Problem:

The concept of a research problem varies according to scientific schools and theoretical orientations. It is commonly viewed as a fundamental scientific question that calls for inquiry and analysis, representing the essence of an issue that the researcher seeks to understand or resolve. Typically, this question is expressed in the form of a relationship between variables or phenomena, or between actors and events, thereby reflecting the key dimensions of the problem under investigation.

The research problem is regarded as a central question that expresses the relationship between two or more variables, and through answering it, the researcher seeks to fulfill the primary purpose of the study. It is both an art and a method, as it enables the researcher to distinguish between fundamental and secondary issues, guiding them toward formulating precise questions that contribute to clarifying the scientific objective of the research.

When attempting to define the concept of a research problem, it may be described as a comprehensive inquiry concerning a topic that captures the researcher's interest, which is then subdivided into sub-questions directing the epistemological trajectory of the study. Accordingly, the research problem encompasses everything that may raise a scientific question or require explanation, and its proper formulation necessitates delineating its dimensions and intellectual foundations so that it can be presented within a framework conducive to systematic analysis and investigation.

Moreover, defining the research problem requires precise and clear identification of the concepts and terminology used, as these constitute the scientific language upon which the researcher relies throughout the study. This precision helps avoid ambiguity and ensures the construction of a coherent scientific discourse. Therefore, such concepts must be used consistently in accordance with their previously defined meanings, establishing a shared language between the researcher and the reader or examiner.

Some scholars argue that the research problem is intrinsically linked to the theoretical framework adopted by the researcher in addressing the topic, as it rests upon a conceptual and methodological structure that guides the research design and shapes its interpretative model. Furthermore, the selection and formulation of the research problem represent a critical stage, as they determine the course the researcher will follow and enable the construction of hypotheses aligned with the central question, with

the ultimate aim of elaborating the topic and validating or refuting its underlying assumptions.

There is no universally agreed-upon definition of a research problem or research question; however, several definitions have been proposed, among which are the following:

✓The research problem is defined as: "a set of questions posed by the researcher that require answers or explanations concerning a particular phenomenon or issue."

✓It also refers to the notion that: "a research problem arises when a situation or condition stimulates the researcher's curiosity and motivates them to investigate and explore it, with the aim of clarifying the ambiguity surrounding it, identifying its underlying causes, and proposing suitable remedies or solutions."

A research problem may take one or more of the following forms:

– A question that requires clarification or an evidence-based answer supported by logical reasoning and empirical proof.

– An ambiguous situation that needs sufficient explanation (for example: the low utilization of an institution's services despite the high quality of its employees).

– An unmet need or unsatisfied demand (for instance: a service failing to meet customer preferences and expectations).

✓The research problem is also defined as: "a set of inquiries that emerge in the researcher's mind upon perceiving the existence of a certain phenomenon, ambiguity, or deficiency within a specific aspect of societal activity or within the operations of its

institutions. The researcher seeks to investigate this deficiency, uncover its causes, and study one or more of its dimensions."

2.Selecting the Research Problem:

Choosing a research topic is one of the initial challenges faced by students or researchers when beginning their graduation thesis, whether at the master's or doctoral level. This step represents the cornerstone of the research process, as it has a direct impact on the progress and quality of the study. Consequently, this choice requires a high level of precision and discernment. A researcher's success in selecting a clear and relevant topic helps to avoid numerous methodological difficulties later on, whereas a hasty or vague selection often leads to complexities in the research process and a waste of time and effort without tangible outcomes.

The ability to define the research topic accurately is among the most essential scientific skills that students should possess or seek to develop, as it constitutes the foundation for understanding the research problem, delineating its boundaries, and identifying its variables with precision. The more specific and well-defined the topic is in the researcher's mind, the easier it becomes to collect appropriate data and to adhere to the framework of the study without deviation, which in turn facilitates a sound interpretation of the phenomenon under investigation and the attainment of scientifically valid results.

1.2. Awareness of the Research Topic and Mechanisms for Its Identification

Scientific research often begins with a state of ambiguity or questioning encountered by the researcher, who, through observation, experience, daily practice, or extensive reading, realizes the existence of a phenomenon that is not fully understood or requires further clarification and explanation. This awareness of a gap or deficiency in understanding constitutes the initial moment that prompts the research endeavor.

The first stage in the emergence of a research problem represents the initial spark that motivates the researcher to question the causes of ambiguity and to search for possible explanations.

This awareness of the problem marks the starting point in formulating the research topic, as the researcher develops a specific interest in a given field that drives them to delve into the roots of the related issues, eventually leading to a precise definition of the research subject. This stage follows the process of collecting information and reviewing previous studies to comprehend the various dimensions of the phenomenon under investigation, with the ultimate aim of articulating it clearly and accurately.

Accordingly, the research topic can be defined as the problem that the researcher seeks to address through a series of systematic and organized methodological steps, ultimately leading to scientific results that facilitate the discovery of solutions or explanations for the studied phenomena. It thus represents the phenomenon that the researcher intends to analyze and interpret, in order to understand

the interrelations among its variables and reach a sound scientific understanding.

The identification of the research problem is a crucial stage that requires a high degree of clarity and precision, as it constitutes the foundation upon which all subsequent research steps are built—from selecting the methodological approach, to defining research tools, and determining the types of data required. However, this task is far from simple, given the complexity of phenomena and the interplay of social, political, and economic factors influencing them. Hence, the researcher must possess extensive experience and knowledge, acquired through scientific practice and in-depth engagement with the relevant academic literature.

The researcher may derive the research problem from various sources, including:

- *The field of specialization and academic expertise.*
- *Fieldwork experience.*
- *Direct observation.*
- *Personal and intellectual interests.*
- *Incidental or spontaneous observations.*
- *Review of scholarly references and prior studies.*

During the selection of the research topic, several criteria must be observed—some relating to the scientific value of the research and its contribution to the advancement of knowledge, and others concerning the researcher's own interests and abilities—as well as practical considerations such as feasibility and the availability of data and information sources.

3. Formulating the Research Problem

After the researcher selects the topic of study and precisely defines the problem to be addressed, the next stage involves articulating the research problem statement in a linguistically accurate and scientifically coherent manner. This step is a fundamental stage in the methodological process of scientific research, as it requires clarity, precision, and conciseness while highlighting the scope, content, significance, and adopted methodological framework of the study. The formulation of the research problem is not a mere formal procedure; rather, it is an analytical process that demands a profound understanding of the subject and the ability to express the problem within a logically structured framework. Consequently, it constitutes a critical phase in constructing the research and guiding its direction.

4. Criteria for Formulating the Research Problem

The formulation of a research problem follows a set of rigorous methodological principles that the researcher must observe.

Among the most important are:

1. **Clarity and precision of expression:** *The research problem should be articulated in clear, direct language that is easily understood by the reader. It must be presented as a central question that reflects the core of the issue. Furthermore, the wording should employ accurate scientific terminology, avoiding ambiguity, complexity, or colloquial expressions, in order to ensure conceptual clarity and precision.*

2. **Emphasizing the relationship between variables:** *The research problem should demonstrate the relationship between two or more variables related to the studied phenomenon. These variables must be clearly defined, measurable, and analytically assessable within the context of the research.*
3. **Researchability and analytical feasibility:** *The research problem should be formulated in a way that allows it to be subjected to scientific investigation—through the development of hypotheses, data collection, and empirical analysis—ultimately leading to valid solutions or results.*
4. **Scientific neutrality:** *The researcher must maintain objectivity in formulating the research problem by avoiding the use of the first person or any expression of personal opinion. This ensures the preservation of an impartial and academically rigorous character throughout the research formulation process.*

5. Fundamental Pillars in Formulating the Research Problem

• Clarity of the research topic:

The researcher must possess thorough knowledge of the subject of study and demonstrate mastery of its theoretical and conceptual foundations. The topic should be selected within the researcher's field of specialization, ensuring a comprehensive understanding of all its dimensions and contextual variables.

• Precise definition of the problem:

The researcher identifies the main problem and formulates it in the form of a central question that reflects the underlying inquiries guiding the study. This process requires the delineation of both

temporal and spatial boundaries of the problem to facilitate focused analysis and avoid dispersion in research efforts.

• Clarification of key terms:

It is essential to provide clear and explicit definitions of the core concepts and terminology used in the research problem. This ensures that readers share a unified understanding of the terms employed, thereby preventing ambiguity or misinterpretation in conceptual analysis.

• Consistency between the problem, the topic, and the title:

The research problem must emerge logically from the essence of the topic and align coherently with the title of the study, as the title represents a concise reflection of the study's guiding questions. The more clearly the researcher perceives the gap or deficiency within the topic, the more precise, coherent, and profound the formulation of the research problem will be.

Criteria for a Sound Research Problem in Scientific Inquiry

The process of defining the research topic and formulating its problem statement represents the first and most fundamental methodological step in any scientific endeavor that seeks to interpret phenomena or address specific issues. This stage establishes the conceptual and procedural framework upon which the remaining components of the study are constructed—ranging from its objectives and significance to the formulation of the title, hypotheses, appropriate methodologies, and the techniques and tools for data collection. The main standards governing the selection of a research problem can be summarized as follows:

6.1. Novelty and Originality of the Topic

The research should address a new or insufficiently explored issue that has not been thoroughly analyzed, and it must contribute genuine intellectual and scientific value to the existing body of knowledge. A diligent researcher does not replicate previous works but rather builds upon prior efforts, grounding their study in a comprehensive and critical review of specialized literature. If the topic has been addressed before, the researcher must clearly define the novelty of their contribution, whether by approaching the issue from a new analytical perspective, developing a critical or comparative insight, or testing untreated hypotheses.

Originality in research implies avoiding mere paraphrasing or replication and striving instead to present a substantive and innovative contribution that enriches scientific understanding and expands disciplinary knowledge.

6.2. Scientific Significance

The scientific dimension constitutes one of the principal motivations for selecting a research topic, as the researcher must orient their inquiry toward issues of academic or societal relevance. The greater the local or international significance of the problem, the higher the research's value and scholarly utility.

This significance manifests in two complementary dimensions:

- *Theoretical significance: by contributing to the development of concepts and theories and enhancing the scientific understanding of the studied phenomenon.*

- *Practical significance: through proposing applicable and feasible solutions aimed at addressing a real-world issue or improving existing practices.*

6.3. Relevance to Contemporary Issues

It is essential that the research topic be linked to a current and pressing issue affecting society or emerging within contemporary reality. The researcher should aim to analyze, interpret, or anticipate the outcomes of this issue, or to propose mechanisms and strategies for addressing it. Such a connection endows the research with practical significance, whether by clarifying ambiguities, testing the validity of a theory, or uncovering new facts that contribute to social and economic development.

6.4. Clarity of Scope and Precision in Definition

The research topic must be well-defined and clearly delimited, neither so broad that it exceeds the researcher's analytical capacity nor so narrow that it prevents the derivation of meaningful conclusions. A well-delimited problem allows for a coherent and in-depth study, avoiding superficial analysis or deviation from the scientific framework.

The true value of scientific research lies in its capacity to generate knowledge, expand intellectual horizons, and contribute to solving societal challenges. For this reason, nations that have advanced scientifically and technologically have always prioritized supporting research, recognizing its vital role in development and progress. Thus,

selecting the research problem is not a mere procedural step, but rather the core and foundation of the entire research process.

Consequently, choosing the right problem is among the most critical and challenging stages in any research endeavor. Researchers often find themselves faced with multiple potential issues, uncertain about which to select. Therefore, they must consider a set of criteria and guiding principles to ensure the appropriate and effective choice of a research problem, such as:

- *Novelty of the problem.*
- *Scientific importance and value.*
- *Researcher's interest and capacity to study and resolve the issue.*
- *Availability of expertise and analytical competence relevant to the topic.*
- *Accessibility of sufficient data and information from reliable sources.*
- *Adequate time availability to conduct the research effectively.*
- *Availability of necessary material and administrative resources to complete the study.*

❖ ***To define the research problem accurately, the researcher may be guided by the following questions:***

- What is the intensity or magnitude of the problem (or phenomenon)?

- What is the historical background or timeline of the emergence of this problem or phenomenon?

- Are there sufficient indicators that can be clearly identified despite possible administrative or environmental complexities?

- Will the expected benefits or revenues resulting from the implementation of the study's recommendations outweigh the costs of conducting the research?

- Is it feasible to carry out this study, and are the necessary scientific and technical competencies available?

- Are there previous studies on the same problem or phenomenon that could be obtained at a lower cost and within a reasonable timeframe?

***b**. Compatibility of the researcher's capabilities and qualifications with the complexity of the problem, especially if it involves multiple dimensions and requires sophisticated analytical treatment.*

***c**. Availability of the required data and information to conduct an in-depth study of the problem.*

***d.** Availability of administrative and logistical support, particularly in facilitating the researcher's access to necessary information, especially in field-based investigations.*

Example: granting the researcher permission to interview employees and practitioners in the field of study, to obtain appropriate responses to questionnaires, and to benefit from other similar forms of facilitation.

***e**. The scientific value of the problem, meaning that the issue should be significant and meaningful, revolving around an important topic with clear scientific and social relevance if studied properly.*

f. *The novelty of the research problem, implying that it should contribute new knowledge within the field of specialization by addressing an unexplored or rarely studied topic, or by providing a complementary perspective to previous research, while avoiding unnecessary repetition whenever possible.*

7.Sources of the Research Problem:

1.7. The Work Environment and Scientific Experience:

Some research problems emerge naturally from the researcher's professional and scientific experience, as daily practices and accumulated expertise often raise questions about certain issues that lack clear explanations or reveal gaps worthy of systematic inquiry.

Example: An employee working in radio or television may conduct a study on linguistic or technical errors and their impact on the audience of listeners and viewers.

2.7. Extensive and Critical Reading:

Wide-ranging and critical engagement with books, journals, and newspapers often stimulates a set of questions or ideas that may develop into research problems, which the researcher can later investigate when the opportunity arises.

3.7. Previous Research:

Researchers frequently conclude their studies with recommendations aimed at addressing specific problems or issues encountered during

their work. Such recommendations often inspire other scholars to explore these issues further and conduct follow-up studies.

4.7. Institutional Assignment:

At times, the research problem stems from a formal or informal commission by an organization seeking to identify and solve particular issues through scientific diagnosis and analysis. Similarly, universities and academic institutions often assign graduate students (in master's or doctoral programs) specific topics derived from existing problems for further investigation.

The main sources of research problems can thus be summarized as follows:

– The field of specialization, which provides the researcher with expertise, awareness of scientific achievements, and knowledge of both resolved and persisting issues requiring further study.

– Graduate programs, including seminars, coursework, and research methodology modules.

– Professional and field experience gained through work or institutional engagement.

– Survey studies of previous and ongoing research.

– Academic theses and dissertations (Master's and Doctoral).

– Reports and statistical publications.

– Conference papers and scientific symposia.

– Articles in specialized journals.

– Books and academic references.

– Personal communication with experts and specialists in the field.

– The academic supervisor or faculty mentor.

– The institution or organization in which the researcher works.

– Colleagues and professional peers within the same domain.

8. Specifications of a Good Research Problem:

The key characteristics of a well-formulated research problem can be summarized as follows:

- *It should capture the researcher's genuine interest and intellectual curiosity.*
- *It must possess scientific value within the researcher's specific field of specialization.*
- *It should have practical significance, meaning that the results obtained can be applied to real-world situations.*
- *The problem must be current, with observable and ongoing effects, or one that poses a potential risk of recurrence.*
- *It should demonstrate novelty, in the sense that it is neither duplicated nor merely replicated from previous studies.*
- *The research problem should be realistic rather than hypothetical or purely imaginative.*
- *It must represent a clearly defined and delimited topic that can be systematically studied, rather than an overly broad or diffuse issue that is difficult to address comprehensively.*
- *The problem should be researchable, meaning that adequate data, resources, and facilities are available to support its investigation.*
- *It must be feasible for the researcher to handle, aligning with his or her competencies and available means.*

- *Reliable and accessible sources of information should exist to enable the researcher to gather relevant data about the problem.*

10. Stages of Constructing the Research Problem

The process of formulating a research problem in scientific inquiry is generally divided into three fundamental stages, as follows:

First Stage: Formulating the Main Research Question

At this stage, the researcher seeks to clarify a general idea that constitutes the initial foundation of the study. The research topic does not begin as a direct question but rather emerges initially as a set of broad concepts. To select the central question of the study, the researcher must rely on diverse sources, particularly previously completed theses and specialized scholarly articles in the relevant field. This step aims to develop a comprehensive understanding of aspects that have already been addressed and those still requiring investigation, ensuring the originality of the study and avoiding duplication of prior work. The researcher also draws on personal experiences, observations, and real-world issues encountered in practice to enrich the formulation of the research question.

Second Stage: Analyzing the Main Research Question

This stage aims to construct an integrated view of the available data related to the general question by examining what previous researchers have contributed to the same or similar problem. The analysis proceeds through a series of systematic steps, including:

- ✓ ***Deepening the general question through qualitative sub-questions:*** *exploring the phenomenon or topic under study by raising a set of inquiries that help to grasp its various dimensions.*
- ✓ ***Identifying variables and relationships:*** *recognizing the key elements within the studied problem and defining the nature of the links that connect them.*
- ✓ ***Structuring variables and relationships:*** *once identified, these elements are organized within a methodological framework that reveals their interactions, as explained through relevant theoretical models.*
- ✓ ***Defining key concepts:*** *the researcher must precisely and clearly define the core concepts upon which the study is built, as these form the basis of the theoretical framework and ensure conceptual and scientific coherence.*
- ✓ ***Third Stage: Formulating a Specific Research Question***

  After defining the general research question and identifying its related variables, relationships, and concepts, the final stage involves articulating a specific, focused question that accurately reflects the essence of the scientific problem to be investigated. This question should be formulated according to rigorous methodological standards that ensure its clarity, analytical relevance, and research feasibility.

Section 03: Research Hypotheses

Section 03: Research Hypotheses

Introduction:

After defining the research problem according to a set of criteria previously clarified, the subsequent stage involves the formulation of hypotheses (Hypothesis). Researchers often face a lack of sufficient information about the characteristics of the population or phenomenon under study, which compels them to rely on a sample that represents the entire population. The research is then conducted on this sample, and from its results, generalizations are made and decisions are formulated accordingly.

To achieve this, the researcher formulates hypotheses that serve as preliminary scientific assumptions or tentative explanations for the studied phenomenon. These hypotheses also represent the researcher's prior expectations regarding the study's potential results or provisional answers to the posed research questions. The hypothesis thus constitutes a fundamental instrument for achieving scientific knowledge, as it requires the researcher to approach all proposed explanations with methodological skepticism, subjecting them to experimentation and verification to assess their validity. In essence, the scientist's role lies in constructing hypotheses about phenomena, their causes, and their effects, followed by careful observation and empirical verification. Consequently, what is hypothesized at the outset remains merely a possibility until scientific evidence either confirms or refutes it through systematic inquiry.

1. *Definition of the Hypothesis:*

Hypotheses are considered preliminary answers or provisional solutions proposed by the researcher to explain the questions raised within the study. These hypotheses must emerge directly from the research problem and possess the capacity to interpret the data of the problem in a systematic and scientific manner. Their formulation, moreover, requires adherence to rigorous methodological standards and the application of clear criteria for their selection and validation, ultimately leading to the construction of a definitive scientific solution to the problem under investigation.

The linguistic roots of the term hypothesis trace back to the Greek origin, where it signifies primary principles that the human intellect accepts as axioms—self-evident truths that cannot be directly demonstrated due to their abstract and universal nature. Aristotle regarded the hypothesis as the foundation of all knowledge acquired by humankind and as the point of departure for logical reasoning, serving as a general premise within syllogistic structures to reach demonstrable conclusions.

Hypotheses are also understood as anticipations or conceptual frameworks that researchers employ to uncover relationships between causes and their effects. They constitute preliminary interpretations of phenomena which, upon verification, may evolve into general laws capable of explaining analogous phenomena. Conversely, if their inaccuracy is established, they must be abandoned in favor of alternative explanations better suited to revealing the actual law governing the studied phenomena.

Scholars have offered diverse definitions of hypotheses. For instance, ***Ali Abdel Razzaq Jalabi*** *and others define a hypothesis as a temporary explanation of the relationship between two variables, where one serves as the independent variable and the other as the dependent one. These scholars emphasize the necessity of meeting a set of essential conditions in hypothesis formulation to ensure its scientific soundness and empirical testability.*

The Hypothesis as an Integral Component of the Theoretical Framework

The hypothesis, as an essential and integrated part of the theoretical structure, must fulfill several key criteria—chief among them are verifiability, precision of formulation using clearly defined terminology, and logical consistency among the hypotheses themselves. The principal hypothesis, in particular, should represent the highest level of abstraction, implicitly encompassing the subsidiary hypotheses derived from it.

Some scholars, however, approach the definition of hypotheses by clarifying their meaning and typology as methodological constructs. They view the hypothesis as a functional relationship between two or more variables—one being independent and the other dependent—or as a propositional statement implying the existence of a relationship between two phenomena that may be either true or false. Such a statement must be articulated in a way that allows for the derivation of additional testable propositions.

Other researchers consider the scientific hypothesis to be a probable answer or a temporary solution to the problem under investigation. A

sound formulation of a hypothesis requires adherence to a set of methodological principles, foremost among them: its effectiveness as a guiding tool for determining the procedures needed to test its validity in addressing the research problem; its clarity and internal coherence; its consistency with established scientific facts; and its simplicity, ensuring that the variables it contains can be subjected to operational testing and empirical verification.

In summary, hypotheses may be simplified conceptually as provisional answers, expressed either in affirmative or negative form, to the questions raised within the research problem.

2/ The Importance of Hypotheses :

The significance of hypotheses in scientific research lies in their pivotal role in guiding the researcher toward achieving the study's objectives, transforming the research process from mere random observation into a purposeful and systematic endeavor. In this regard, several scholars in political science emphasize that hypotheses constitute a fundamental tool for orienting the researcher and for determining the type of data to be collected. This, in turn, helps reduce the time and effort that might otherwise be wasted in gathering excessive or low-value information unrelated to the core subject of the study.

Professor Raja Wahid Douidri highlights that a hypothesis is subject to testing and verification to determine its validity or error, unlike established facts that are not open to debate or empirical examination. She also considers hypotheses as an effective instrument

for generating knowledge, enabling the researcher to transcend the limits of personal experience and derive broader conceptual insights. Similarly, social psychologist Abd al-Rahman Muhammad Al-Issawi and his colleagues underscore the importance of hypotheses by identifying several key functions they perform within scientific inquiry, notably:

• Stimulating intellectual curiosity and motivating the researcher to engage in systematic analysis, thereby organizing the research process and contributing to the construction of a theoretical framework that explains the studied phenomenon.

• Revealing relationships between variables and linking previously established laws in a manner that supports theory-building.

• Rationalizing research efforts by saving time, establishing priorities, and directing the researcher's focus toward achieving the immediate objectives of the study.

Despite this acknowledged importance, the hypothesis has faced criticism, notably from the British philosopher John Stuart Mill, who deemed it unproductive and invalid. Furthermore, Stanley Jevons argued in his logical writings that teaching hypotheses was detrimental to youth education, while simultaneously criticizing Mill's internal inconsistencies. Nevertheless, it remains firmly established that the hypothesis constitutes a critical element of the scientific research process, for the following reasons:

• Directing the researcher's effort and organizing the process of collecting relevant data.

• Identifying appropriate procedures and methods for selecting

optimal solutions.

• Providing a provisional explanation of the relationships existing among variables.

• Contributing significantly to the advancement of scientific knowledge by serving as the transitional bridge between mere description and comprehensive explanation, shifting inquiry from the observation of external manifestations to the discovery of underlying causal mechanisms.

3/ Characteristics of Scientific Hypotheses:

When formulating hypotheses in academic research, it becomes evident that they possess a set of distinctive characteristics that underscore their vital role in constructing theoretical frameworks and supporting methodological rigor. Numerous scholars, including social psychologists, have emphasized the importance of these attributes in guiding the scientific research process. The most salient characteristics include:

• The outcomes derived from the hypothesis must be consistent with observable facts and demonstrably linked to empirical reality.

• A hypothesis should not be founded on random assumptions or unfounded imaginative conjectures.

• It must exhibit clarity, simplicity, and precision, with its terms explicitly and unambiguously defined.

• It should possess explanatory power, enabling it to account for the phenomena it was formulated to elucidate, while remaining self-sufficient in offering coherent interpretation.

Testability represents one of the most essential attributes of scientific hypotheses, as it requires the establishment of a systematic relationship between the hypothesis, the research questions, and the empirical reality of the phenomenon under study. To ensure the quality and validity of hypotheses, researchers must adhere to several key considerations, including:

• The hypothesis should, whenever possible, be expressed as a relationship among variables, since it reflects a predicted association between two or more elements.

• It must provide a rational and coherent explanation of the research problem, avoiding inconsistencies or detachment from the core subject of the study.

• Its interpretation should be verifiable through measurable and experimentally testable formulations, avoiding vague or ambiguous terminology that undermines its scientific value.

• The hypothesis should align with established theoretical frameworks, thereby enhancing its credibility and contributing to the advancement of knowledge while facilitating interpretation of results in light of the theoretical background.

• Simplicity must be observed, favoring hypotheses that explain phenomena with the least degree of complexity.

• The research population should be clearly specified within the hypothesis to ensure that the targeted sample or category is explicitly identified, a condition that constitutes a fundamental criterion of sound scientific hypotheses.

4/ Determinants and Conditions for Formulating Hypotheses

Scientific research is intrinsically linked to hypotheses, as they elevate the study to a level of systematic scientific analysis. A hypothesis represents a theoretical proposition subject to verification, proposed to explain the causes and multidimensional aspects of a given problem. Hypotheses constitute the core of the research process, since the study aims either to confirm or refute them. Thus, their formulation is a precise and complex stage that requires a deep understanding of the research problem under investigation.

Before a researcher begins formulating hypotheses, the research problem must be clearly defined, as hypotheses are directly derived from it. Logical reasoning and the identification of relationships between the study's variables — independent and dependent — facilitate the construction of analyzable hypotheses by determining influencing factors and possible interrelations. Deconstructing the main research question into subsidiary ones, along with consulting relevant prior studies, are essential tools that enable the researcher to formulate appropriate hypotheses, ensuring they can be tested within the methodological and empirical resources available.

Accordingly, research hypotheses are closely tied to the problem statement and to well-structured research questions. They are presented as theoretical propositions open to verification, aiming to explain the dimensions, causes, and possible solutions of the research problem. Essentially, a hypothesis is a preliminary attempt to identify causal or explanatory factors through clarifying potential relationships between an independent variable (cause) and a dependent variable (effect). It is, in essence, a statement predicting a

possible relationship between two or more variables that can be measured and tested, forming a provisional answer to the research question, subject to empirical or theoretical validation.

Researchers generally agree that a sound hypothesis should exhibit the following characteristics:

• It must be concise and clearly formulated, incorporating measurable and analyzable variables that explicitly reflect the objectives of the study, while avoiding speculative, contradictory, or unrelated assumptions.

• It should be founded on realistic, theoretical, and rational bases encompassing the various dimensions of the problem and must be testable and scientifically verifiable.

• It must allow for empirical examination and data collection to assess its measurability and validity.

• The variables involved in the hypothesis should align with findings from previous relevant studies.

• Clarity and simplicity in formulation are essential, with an emphasis on avoiding ambiguity and unnecessary complexity.

• The hypothesis must not conflict with other hypotheses addressing the same problem nor with established scientific principles and theories.

• It should adequately cover the main aspects and potential expectations of the research problem.

• The hypothesis should be expressed in a general, testable, and verifiable form, maintaining either an explanatory or predictive nature without being absolute.

• Imperative expressions such as "must" or "should" should be avoided; instead, the hypothesis ought to be articulated as a tentative, declarative statement indicating a possible relationship between variables.

• Example: The effectiveness of a political system tends to increase with the growing participation of women in political life.

5. Types of Hypotheses

Hypotheses in scientific research are generally divided into two main categories:

1. The Affirmative or Alternative Hypothesis (H1):

This type of hypothesis posits the existence of a causal relationship between the study variables, indicating that one or more independent variables have an effect on the dependent variable—often within a framework of positive or direct influence. For instance, one might hypothesize a strong correlation between political participation and the consolidation of democratic practices, or that a decline in voter turnout is due to the weakness of the political system.

2. The Null Hypothesis (H0):

This hypothesis assumes the absence of any causal relationship between variables. It states that there is no significant effect or correlation among the variables under study. For example, it may posit that no relationship exists between political participation and the strengthening of democracy.

A researcher is not required to formulate a large number of hypotheses; their number depends on the nature of the research

problem, the study's objectives, and the methodological tools available for testing them. Hypotheses may also be categorized into ***main*** *and* ***sub-hypotheses****.*

The ***main hypothesis*** *expresses the overall effect of the independent variable on the dependent variable, treating the latter as a function of the former.*

The ***sub-hypotheses*** *decompose the main one, addressing, for example, the effect of the independent variable on a specific dimension of the dependent variable, or the influence of a particular component of the independent variable on the overall dependent variable, or even the impact of one specific aspect of the independent variable on a particular aspect of the dependent variable.*

In general, hypotheses are formulated based on the early stages of research—particularly after identifying the problem and reviewing prior literature—so as to present testable theoretical propositions that explain the causes, dimensions, and potential solutions of the studied phenomenon. Hence, a hypothesis represents a preliminary conception or a tentative interpretation of the research problem.

Some scholars have expanded the classification of hypotheses into multiple types. Among them, Mohamed Mahmoud Rabie and his colleagues in the Encyclopedia of Political Science identified four main categories:

- ***First: The Null Hypothesis****, which assumes that the expected result equals zero, meaning that the claim it contains is incorrect or lacks a statistically significant relationship. However, rejecting or disproving this hypothesis does not*

undermine its scientific value; rather, its refutation constitutes a meaningful epistemological contribution in itself.

- ***Second: The Correlational Hypothesis****, which is based on the existence of an associative relationship between two variables. Through quantitative analysis, the researcher seeks to verify and measure this relationship, thereby identifying both its nature and its statistical strength.*
- ***Third: The Directional Hypothesis****, which is linked to hypotheses that assume two variables move in opposite directions—such that an increase in one leads to a decrease in the other. For example, there is a statistically significant relationship between educational level and drug consumption: the higher the educational attainment, the lower the tendency toward substance use.*
- ***Fourth: The Causal Hypothesis****, which aims to establish a cause–effect relationship between the independent and dependent variables. In other words, the existence of the first necessarily entails the emergence of the second. For instance, there is a relationship between psychological needs and social behavior—whenever a particular need arises, the corresponding behavior manifests accordingly.*
- **Fifth :Hypothesis in Mathematical Sciences** : *In mathematical sciences, hypotheses are employed in a manner distinct from that used in experimental sciences. A mathematician constructs theoretical frameworks based on a set of axioms or postulates that are accepted as true without the*

need for direct empirical verification. Scholars generally classify mathematical hypotheses into three fundamental categories:

- **Philosophical Hypothesis**
- **Scientific Hypothesis**
- **Practical Hypothesis**

A clear example of the practical application of these hypotheses can be observed in the work of an investigator seeking to identify a perpetrator in a criminal case. The investigator begins by formulating a set of assumptions, gathering information from witnesses, examining the crime scene, and comparing potential suspects. Each hypothesis is then tested individually to verify its validity, and subsequent investigations may reveal that one or more of these hypotheses are invalid with respect to certain suspects. When doubt arises regarding the identity of the offender, the suspect must be replaced by other possible candidates until the truth is established—ensuring that only the true perpetrator is held accountable, without injustice to others. Within the domain of academic research, it is commonly accepted that hypotheses are divided into two principal types: negative hypotheses and affirmative (positive)

hypotheses, also known respectively as null and alternative hypotheses. This means that a researcher may formulate hypotheses that presume the existence of a specific relationship between variables and then seek to verify their validity scientifically. Conversely, the researcher may also construct hypotheses that deny the existence of such a relationship, subjecting them to empirical testing and validation or refutation based on evidence.

Ultimately, both types of hypotheses may be employed concurrently within the same study, depending on the research design, the nature of the problem under investigation, and the methodological objectives pursued.

Section 04: Literature Review

Section 04: Literature Review

Introduction:

Previous studies represent a fundamental component of research methodology. The process of constructing this section requires a comprehensive and analytical review of all scientific works related to the research topic—whether master's or doctoral theses, peer-reviewed journal articles, or scholarly papers presented at specialized academic conferences. The aim of this review is to gain a thorough understanding of the ideas, theories, and findings addressed in prior research that intersect with the current study's problem.

Conducting a systematic survey and analysis of previous studies constitutes a pivotal methodological step that enables the researcher to grasp what has been written within his or her academic field. It also provides access to diverse ideas and perspectives that contribute to a deeper conceptualization of the research problem. Accordingly, this section discusses various aspects related to previous studies and their significance within the framework of scientific research.

The literature review represents a crucial stage in the preparation of a research proposal. Once the problem has been clearly identified, the researcher requires relevant information to proceed with its investigation—information that is obtained through an in-depth review of the existing literature and previous studies.

1. The Meaning of Literature Review:

The examination of previous studies is one of the most

critical stages in the development of scientific research, as no study can be considered complete without reference to earlier works that address the same topic or related areas.

Many scholars have investigated similar issues using varied scientific approaches; therefore, it is essential that the researcher commence his or her work at the point where others have concluded, while focusing on analyzing the topic from new, deeper, and more distinctive perspectives. The researcher must also identify the similarities and differences between the present study and prior research in the same domain.

Previous studies refer to scientific investigations conducted by other researchers within the same field or in closely related areas. They constitute a primary source for deriving research questions and constructing the theoretical framework. In a broader sense, they encompass all scholarly works carried out across different research domains—whether within universities, research centers, or through papers presented at specialized scientific conferences and symposia.

The literature review also entails preliminary or exploratory readings and an extensive, in-depth, and comprehensive

review of writings in the relevant field and area of specialization.

2.Purpose of the Literature Review (Why):

The review of previous studies aims to extract and synthesize the key findings reached by earlier research related to the topic under investigation. This process is grounded in a scientific inferential approach that integrates deductive reasoning, based on theoretical analysis, with inductive reasoning, derived from observation and empirical inference.

The fundamental objectives of reviewing prior research can be summarized as follows:

• Defining the Research Problem:

A systematic review of previous studies enables the researcher to dispel ambiguity surrounding the research problem, allowing for its precise and clear formulation within a rigorous scientific framework. This review also helps clarify the fundamental concepts and scientific terminology associated with the study's topic, thereby reinforcing the theoretical framework and conceptual coherence of the research.

• Understanding and Interpreting Contradictions in Previous Studies:

An in-depth examination of previous literature often reveals discrepancies or inconsistencies in the findings of earlier research—a phenomenon considered constructive within the scientific field. Such divergences reflect the diversity of analytical perspectives and methodological approaches, which may stem from variations in how researchers address their topics, differences in data collection tools,

or the methodologies employed in analysis. Consequently, the researcher faces a scientific challenge: to seek a logical explanation for these contradictions by conducting a more precise and comprehensive study aimed at resolving such disparities and enriching the body of scientific knowledge in the field.

• ***Avoiding Unintentional Duplication of Previous Research:***

A thorough review of earlier studies prevents the researcher from redundantly addressing topics that have already been investigated and analyzed. This process helps identify areas that have been adequately studied and others that still require further exploration and analytical depth. In such cases, conducting a new study represents a legitimate and valuable extension that contributes to knowledge enrichment by offering an innovative addition to existing literature and fostering cumulative scientific advancement.

• ***Selecting the Appropriate Methodology for the Research Problem:***

By examining previous studies, the researcher develops a deeper understanding of the research topic through critical analysis of earlier works. This enables the evaluation of their methodological rigor and scientific relevance. Moreover, this analytical process may allow the researcher to identify the most appropriate methodological design for the specific nature and objectives of the study.

Proposing Alternative Methodologies or More Appropriate Procedures and Tools for the Research Problem:

Through the process of reviewing previous studies, the researcher may identify alternative methodologies, procedures, or tools that are more suited to addressing the research problem under investigation. This contributes to enhancing the accuracy of results and increasing their scientific credibility, thereby reinforcing the epistemic value of the new research and granting it originality and objectivity.

Selecting Data Collection Tools Appropriate to the Nature of the Research Problem:

By critically reviewing and analyzing prior studies, the researcher gains access to a wide spectrum of data collection tools and instruments that other scholars have employed in their research endeavors. This enables a deeper understanding of the effectiveness of such tools in addressing similar research topics, and assists the researcher in assessing the suitability of each tool for his specific research problem. Consequently, the researcher can select the most accurate and efficient instruments to ensure the reliability and scientific validity of the findings.

Linking the Discussion of Findings with Existing Knowledge and Proposing Future Research:

The review of prior studies enables the researcher to extract their results and compare them with those of the current study, particularly those that have addressed the same issue or related aspects. Such comparison helps in identifying points of convergence and divergence between the present research and earlier works, thereby highlighting the added value and novelty of the researcher's contributions. Moreover, this process assists in proposing future studies that could enrich the scientific field under investigation, in addition to enabling the researcher to offer sound and logical interpretations of his findings through a systematic connection between existing knowledge and the new empirical data yielded by his study.

3/Sources of Literature:

Researchers may obtain relevant literature through the following means:

- *Visiting university libraries and consulting reference catalogs, research works, and academic theses available therein.*
- *Visiting information centers and national libraries to explore directories of theses and dissertations across various disciplines.*
- *Using online search engines and browsing the electronic websites of libraries.*

- *Reviewing peer-reviewed academic journals that publish research pertinent to the study topic.*
- *Accessing research-oriented websites that disseminate the outcomes of refereed scientific conference papers within the field of specialization.*

4/Benefits of Literature Review:

The process of reviewing literature yields several key benefits, including:

- *Expanding the researcher's knowledge base and information resources concerning the topic under study, thereby enabling a clearer and more comprehensive understanding of the subject matter.*
- *Confirming the significance of the topic and distinguishing it from other research subjects.*

❖ *Formulating and Clarifying the Research Problem:*

The literature review assists the researcher in refining the research problem he has chosen and in defining its dimensions with greater clarity and precision.

❖ *Providing the Researcher with New Ideas and Procedures: Previous studies supply the researcher with innovative ideas, methods, and procedures that can be applied in his own study. They also help him select or design an appropriate research instrument similar to those successfully utilized in earlier works..*

- *Helping the Researcher Avoid Shortcomings and Pitfalls of Previous Studies:The examination of earlier research enables the scholar to recognize the errors and limitations encountered by previous researchers, as well as the challenges they faced and the strategies they employed to overcome them.*
- *Utilizing the Results of Previous Studies in Developing New Hypotheses:*

  Insights gained from prior research findings assist the researcher in formulating new and more refined hypotheses that build upon established empirical evidence.

- *Completing the Aspects Left Unaddressed by Earlier Research:*

  By addressing the dimensions that previous studies have overlooked or only partially explored, the researcher contributes to the continuity and integration of scientific inquiry within his field of specialization.

- *Formulating a Comprehensive, Meaningful, and Clear Research Title:*

  The process of reviewing related literature ultimately aids the researcher in selecting a research title that is comprehensive in scope, precise in meaning, and characterized by clarity and relevance.

6/Procedural Aspects in the Literature Review Section

The practical procedures that the researcher undertakes when conducting the literature review can be outlined as follows:

- ***Identifying the Number of Previous Studies:***

  The researcher should determine the total number of studies that have been conducted on the topic under investigation.

- **Presenting Each Study Individually as Follows:**

➢ *Writing the title of the study.*

➢ *Stating the author of the study.*

➢ *Specifying the type of study (Master's thesis, Doctoral dissertation, conference paper, or peer-reviewed journal article).*

➢ *Indicating the date and country of publication.*

➢ *Summarizing the objectives of the study.*

➢ *Presenting the tools and instruments employed for data collection and the analytical methods adopted in the study.*

➢ *Highlighting the main findings reached by the previous study, and identifying the points of similarity and difference between the current research and prior works*.

Section 05: Formal and Methodological Requirements for Writing and Editing a Master's Thesis

Section 05: Formal and Methodological Requirements for Writing and Editing a Master's Thesis

1. *Technical Guidelines for Writing a Master's Thesis According to the IMRAD Structure:*

The master's thesis must be prepared on high-quality, A4-sized paper, printed on one side only, while strictly adhering to the academic formatting standards for page margins. Specifically, the top margin should be ***2.5 cm****, the bottom margin* ***3 cm****, and the right margin* ***4 to 3 cm****—particularly in theses written in* ***Arabic****, as part of the right margin is reserved for binding. The* ***left margin*** *should be* ***2.5 cm****.*
It is important to note that the final determination of margin dimensions often depends on the ***guidelines established by the scientific committee*** *of the faculty or the relevant administrative body, in accordance with the internal regulations of each university.*
The ***title page*** *must include the following elements, arranged in their academic order:*

- *The name of the department, faculty, and university to which the thesis is submitted;*
- *The full title of the thesis;*
- *The full name of the student;*
- *The academic degree for which the research is submitted;*
- *The name of the academic supervisor (or supervisors, in the case of*

multiple advisors);

• The Gregorian year in which the degree is awarded.

*When entering this information, it should be **centered** between the page margins without the use of punctuation marks. The **title of the thesis** should be written in **bold font (large size)**. If the title extends beyond one line, its components should be arranged in an **inverted pyramid form**. The **title page** does not include a page number. Regarding the **writing format**, the thesis should follow the **academic font style** officially adopted by the university or faculty. Typically, the **Traditional Arabic** font is used in **14-point size**, or an equivalent approved typeface, while maintaining uniformity in both font style and size throughout all sections of the thesis.*

Example of a Master's Thesis Title Page:

(An illustrative layout would be provided showing the hierarchical placement of the university name, faculty, department, thesis title, student name, supervisor's name, degree designation, and academic year.)

Ministry of Higher Education and Scientific Research
Si Hawas University Centre
Institute of Economics, Business and Management Sciences
Department of Finance and Accounting
Thesis submitted in partial fulfilment of the requirements for the Master's degree in Finance and Accounting

Title (Independent Variable - Dependent Variable) - Field Study

Name and Surname of the	***Academic Rank***	***Role***
Prepared by the students : *-First student's : name and surname* *-Second student's : name and surname* ……..	**Under the supervision of Professor**: Dr. Bouaziz Ibrahim	...
…… ……..	***Associate Professor "A"***	***Examiner***

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2/Table of Contents:

The Table of Contents is allocated either a single page or several pages depending on the length of the dissertation. It includes the titles of chapters and subheadings exactly as they appear in the main body of the research, maintaining the same wording and order without alteration. Ideally, each title should be written on a single line whenever possible to facilitate readability and organization.

At the end of the list, references and appendices—if available—should also be indicated. The subjects are arranged on the right side of the page according to the sequence of chapters and subheadings, while the corresponding page numbers are aligned to the left side. This can be done either directly or within a formatted table to ensure a consistent visual presentation and to enhance navigational clarity.

3/List of Figures, Tables, and Appendices:

This section should be organized according to the following model, clearly presenting the required data:

List of Tables:

Number	title of Table	Page

List of Figures:

No	Title of Figure	Page

List of Appendices:

No	Title of Appendix	Page

List of Symbols and Abbreviations:

No	Title	Page

General introduction

4/ General introduction

It is the last section written in the research process, yet it serves as the true introduction to the study, as it must provide a clear and concise overview of the entire work.

- ***Preface:***

  This part serves as an introductory transition to the general introduction, moving from the general to the specific in order to contextualize and lead toward the research problem.

- ***Research Problem:***

  It is presented in the form of a main question that highlights the relationship between the dependent and independent variables.

- ***Sub-questions:***

  These questions break down the main research problem and are usually formulated around the secondary variables of the study. They should not be expressed as questions of essence or definition.

❖ ***Research Hypotheses:***

They are formulated as provisional answers to the sub-questions. Hypotheses should not be proposed for questions that have not been previously raised, nor should they concern self-evident or axiomatic matters.

❖ ***Research Model:***

Based on the review of relevant literature and existing models addressing the study's variables, and in light of the research problem and its delimitations, a conceptual model is developed to serve the study's objectives and facilitate the achievement of its aims. This model should clearly identify the independent variables, mediating or moderating variables (if any), and dependent variables.

❖ ***Significance of the Study:***

This section explains the study's position within its broader academic field and the added value it seeks to contribute. It should specify, in detail, the significance of the research from three perspectives: for the researcher, for society and policymakers, and for academic and scientific institutions.

❖ ***Objectives of the Study:***

The primary objective is to answer the research problem and propose appropriate solutions to it.

❖ ***Motivations and Justifications for Choosing the Topic:***

Several reasons may justify the choice of the research topic. Some are subjective, related to the researcher's personal or academic interests, while others are objective, connected to the scientific importance and relevance of the topic itself. These justifications should be presented succinctly.

❖ ***Research Delimitations:***

These include:

- ***Scientific Delimitations:*** *Specify the variables included in the study and those excluded from it.*
- ***Temporal Delimitations:*** *Define the time frame covered by the study—this may refer to a specific period, historical era, or the timeframe of fieldwork.*
- ***Spatial Delimitations:*** *Indicate the geographical scope of the study, such as the country, region, community, or target group investigated.*
- ***Human Delimitations:*** *Describe the characteristics of the population and sample under study.*

- ***Research Methodology and Study Tools:***

  This section outlines the methodological approach adopted in the description and analysis of the phenomenon under investigation (the research method), as well as the various tools employed in the collection of scientific material, data, and primary information.

- ***Previous Studies:***

  Previous studies constitute an essential component of any scientific research. It is generally expected that every study includes a section titled "Previous Studies", in which the researcher presents the most relevant works that have addressed the variables of the current study—either wholly or partially. This section should also summarize the key findings and recommendations derived from those studies.

Such prior works represent the raw intellectual material upon which the researcher builds the theoretical framework of the study. They serve as a foundational reference that allows for identifying both the points of convergence—which reflect the researcher's academic rigor and capacity for synthesis—and the points of divergence—which reveal the originality and creative contribution of the researcher through the introduction of new perspectives and the expansion of scientific knowledge.

In organizing this section, previous studies should be presented in the following order: ***foreign studies****, followed by* ***Arab studies****, and finally* ***local (Algerian) studies****, arranged chronologically from the* ***oldest to the most recent****.*

Afterward, the researcher should highlight the main distinctions between the current study and the previous ones mentioned above (to the best of the researcher's knowledge), emphasizing how these differences justify the novelty, originality, and added scientific value of the present research.

5/General Conclusion:

The general conclusion represents the essence and ultimate outcome of the research. It appears at the end of the study, typically on a separate page, and encapsulates the final results reached by the researcher. This section enables the reader to identify and understand the following elements:

- *A reminder of the main research problem addressed;*
- *The principal findings obtained and their comparison with the results of previous studies;*
- *The verification or refutation of the research hypotheses;*
- *The recommendations and prospects of the study, namely: the measures, procedures, and solutions that should be implemented by decision-makers at the level of the institution, university, administration, or state, as well as the aspects that future researchers might explore in greater depth—either because they were briefly addressed or not covered at all in the present study;*
- *Self-assessment or self-critique, identifying the theoretical and practical limitations of the research.*
- ***Findings:***

First: Theoretical Findings

This section presents the results derived from previous studies, the opinions of prominent scholars and researchers in the relevant field, and the researcher's own convictions and conceptual conclusions.

Second: Empirical (Applied) Findings

This part includes the outcomes of the analysis of the study variables, the results of hypothesis testing, and the final model or framework developed for the study.

- ***Recommendations:***

Here, the researcher outlines a set of proposals deemed appropriate to address the research problem. These recommendations may reflect either the researcher's personal perspective or that of specialists in the field—whose contributions should, of course, be duly cited.

- ***Study Difficulties:***

  Only objective and factual difficulties encountered during the preparation of the study should be mentioned, without referring to personal constraints such as the unavailability of references in Arabic (as this reflects a personal limitation of the researcher rather than a deficiency in the topic itself), or difficulties in data collection, and similar reasons that ought to have been anticipated prior to initiating the research.

- ***Study Perspectives (Future Research Avenues):***

  This section should highlight the gaps, variables, or dimensions that the current study could not address but which merit further investigation. Such omissions may be due to time constraints,

limitations inherent in the research design, or the methodological framework adopted.

List of Sources and References:

The references should be organized according to the following order:

In Arabic:

1. ***Books:***

   Arranged alphabetically.
2. ***Dissertations and Theses:***
3. ***Articles:***
4. ***Conference Papers:***
5. ***Newspapers and Periodicals:***
6. ***Electronic Sources:***

In Foreign Languages:

(Same structure and order as above should be followed for non-Arabic references.)

5 .Study Annexes (Appendices):

If annexes are included, they should be placed immediately after the conclusion, as they constitute supplementary materials that may distract the reader if inserted within the main body of the report, such as interview transcripts, copies of correspondence, questionnaires, and interview tables. When numerous, they should be classified into groups, numbered, and listed in the table of contents.

Appendices are considered additional pages typically positioned before the list of references, since the researcher may rely on sources in their preparation within the scope of the study. However, some

researchers prefer integrating them into the main text at the point of analysis and discussion.

This arrangement aims to prevent distracting the reader while consulting them, as appendices may contain detailed data and information closely related to the research topic, which the researcher deems more appropriate to separate from the main narrative.

These appendices may include questionnaire models in field studies, content analysis sheets, operational definitions guides, as well as statistical tables, graphs, images, maps, and other supporting data.

In brief, appendices encompass all materials that enhance the clarity of the research at certain stages and provide further explanation for concepts that require additional elaboration.

Appendices must follow a rigorous methodological organization to effectively fulfill their scientific function, and should be limited to documents directly relevant to the research topic.

The number of documents included in the appendices varies depending on the nature of the study; however, excessive inclusion should be avoided, as it may lead to unnecessary padding without adding substantive scientific value.

- Appendices are numbered and titled according to their sequence of appearance and their relevance to the study content; for example: Appendix No. (01): Field Study Questionnaire.
- Appendices are either written or reproduced as exact copies of the original documents, especially when they are lengthy, with an emphasis on clarity and readability.

- Appendices are referenced within the main text using the expression (see Appendix No. …), allowing accurate and efficient consultation.
- Each appendix is presented on a separate page.
- Although appendices constitute supplementary explanatory materials that detail aspects of the research, their organization should not be neglected, as they enhance conceptual clarity.
- They also contribute to strengthening the scientific credibility of the study and serve as valuable references for subsequent researchers.
- Furthermore, they may be utilized in future studies addressing the same phenomenon from different analytical perspectives.

- Appendices refer to all materials attached to the scientific research, including essential data and information that support interpretation and clarification.
- They are placed immediately after the conclusion and are accompanied by a dedicated index outlining their contents.
- An appendix must be complementary and supportive to the research, providing methodological and scientific added value to the topic.
- It is excluded from the main body if it is excessively long or disrupts the logical flow, in order to preserve coherence in the presentation of ideas.
- This contributes both to improving the scientific writing style and maintaining the structural and thematic balance of the research.

- The researcher is required to number the appendices, assign appropriate titles, and accurately cite their sources.
- Appendices should also be referenced within the text at the appropriate contextual position, for example: (see Appendix No. 01, p. …).
- Typically, appendices include illustrative maps, statistical tables, data lists, questionnaire templates, or interview questions.
- **References List and Its Organization:**

The researcher relies, in conducting an academic study, on a considerable body of information drawn from diverse sources and references. Despite their heterogeneity, these materials are generally classified into primary sources and references. Before addressing the methodological procedures for organizing them at the end of the dissertation, it is necessary to distinguish between these two concepts.

A source refers to the original and foundational texts from which subsequent studies and scholarly works have emerged, which are commonly referred to as references in academic terminology. In this sense, the source represents the primary epistemological origin of information.

Linguistically, a source denotes the place from which original data are derived, implying precedence in the treatment of a given subject. Examples of primary sources include the Holy Qur'an and prophetic traditions (Hadith).

A reference, on the other hand, is any scholarly work that draws upon earlier sources or studies, addressing a topic or a specific aspect of it

through analysis, interpretation, or synthesis of existing knowledge. It is used to obtain structured and targeted information within a methodological framework.

Although a conceptual distinction exists between sources and references, their semantic proximity makes both suitable for academic use, as they ultimately serve the same purpose of supporting scientific research with relevant information.

A research work is incomplete without a properly structured references list, which serves as a strong indicator of the study's quality, rigor, and scholarly integrity. Moreover, the value of academic research is often assessed through the diversity and reliability of the references employed.

The organization of references at the end of a research paper constitutes an extension of the footnote documentation function. On the one hand, it reflects the researcher's commitment to scientific integrity through the proper attribution of information to its original sources; on the other hand, it facilitates access for subsequent researchers to relevant sources with minimal effort, whether related to the same topic or to other studies within a similar context.

The structuring of the reference list at the end of the research is governed by a set of methodological rules and requirements, as follows:

The researcher must include all references used in the study (excluding footnote citations) that were cited in the main text and referenced in the notes.

References are classified into two main categories: Arabic-language

references and foreign-language references.

Within each category, references are further organized into subcategories: books, scientific articles, theses and dissertations, dictionaries and lexicons, official documents, conference and seminar proceedings, websites, and electronic sources. Additional categories may be introduced depending on the nature of the scholarly material.

It is not required to indicate page numbers in the reference list, unlike in footnotes. References are arranged either alphabetically or in alphabetical order according to the authors' surnames.

References are written in the same format used in footnotes, beginning with the author's surname followed by the first name. For example: Ayyad, Nasser Eddine, Mass Communication and Society, Algeria: Dar El-Qasbah Publishing, 1990.

The proper management of references in scientific research is a fundamental methodological component due to its role in enriching the study in a precise and systematic manner. Its importance can be summarized as follows:

References constitute an essential knowledge base for other researchers, saving considerable time and effort in tracing prior studies.

They represent a key link connecting a phenomenon to its historical development over time.

They also reflect the quality, originality, and recency of the research, as well as the researcher's level of expertise in the field of study.

Furthermore, they contribute to fostering a rigorous approach to reading and analyzing research problems.

Moreover, references indicate the level of scientific advancement achieved in a given discipline and the researcher’s capacity to deconstruct complex scientific issues.

Finally, they embody the cumulative nature of scientific knowledge, which is reflected through the systematic use of sources and references in academic research

Section 06: Quotation, Referencing, and the Use of Sources

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The process of ***referencing*** *constitutes one of the most essential indicators of adherence to academic integrity in scholarly research. It reflects the researcher's honesty in attributing ideas and information to their original authors and in avoiding the inclusion of sources that were not actually consulted during the study. Scientific documentation is thus a* ***core academic practice*** *that ensures transparency and enhances the* ***credibility*** *of the research work.*

There exist several ***referencing styles*** *that vary according to disciplines and methodological orientations. However, what truly matters for the researcher is not the specific system adopted, but rather its* ***clarity***, ***applicability***, *and* ***consistency*** *throughout the entire research process—from the introduction to the conclusion. Before addressing the principal citation systems, it is essential first to clarify the* ***concept and types of quotation***.

The term ***quotation*** *refers to the use of other scholars' and authors' ideas or statements to support a scientific argument, refute an opposing view, or clarify a concept or term that requires further explanation.*

Quotations are generally divided into two main types:

1/Direct Quotation:

This refers to the ***verbatim reproduction*** *of a specific passage from an original source, provided that it does not exceed five lines, and must be enclosed within quotation marks ("…"). Longer quotations are*

preferably presented as separate indented paragraphs without quotation marks. If the researcher omits part of the quoted text, the omission must be indicated by three dots (...) to signal the deletion. However, when an entire paragraph is omitted, it should be replaced by a dotted line, as in the following example:

"....."

2/Indirect Quotation (Paraphrasing):

This involves ***rephrasing*** *the original author's ideas in the researcher's own language and style, without altering the intended meaning or distorting the fundamental idea. In this case, the paraphrased text must retain its original scientific significance, and the source must still be cited to uphold the principles of* ***academic honesty***.

3/Rules of Quotation

The process of scholarly quotation is governed by a set of principles that reflect the researcher's commitment to intellectual integrity and ensure the accuracy and authenticity of academic content, safeguarding it from distortion or plagiarism. Among the most essential of these rules is the explicit acknowledgment of the source of every quotation, in respect of authors' intellectual rights, while maintaining precision in transcription so that the original meaning of the cited text remains intact and unaltered. The researcher must also demonstrate objectivity by presenting not only viewpoints that support his or her position but also opposing perspectives, thereby fostering a balanced and critical scientific discussion.

Moderation in the use of quotations is highly recommended so that the research does not degenerate into a mere compilation of excerpts from multiple sources without analytical effort or intellectual contribution. Furthermore, the researcher must adhere to the legal and ethical legitimacy of quotation, ensuring that the reproduced material falls within the boundaries permitted by copyright and fair use standards. It is equally important to avoid redundancy, unnecessary repetition, and overreliance on unreliable or academically non-credible sources. Conversely, the use of primary and authoritative references within the relevant scientific field is always preferable, as it strengthens the validity and scholarly depth of the research.

There are several internationally recognized styles for referencing and citing sources in academic research, theses, and scholarly publications. Among the most prominent is the ***Modern Language Association (MLA)*** *style, developed in the United States and first published in 1985. Over time, this guide has become a globally adopted reference among authors, publishers, researchers, and university students. It is particularly widespread in the humanities—especially in literature, linguistics, and cultural studies.*

4/Citation According to the APA Style:

In this system, the researcher places sequential numerical references enclosed in parentheses at the end of each quotation, with the numbering continuing consecutively throughout the entire research.

When applying this approach, the researcher may choose between two main methods:

First, inserting the bibliographic details of each quoted source at the bottom of the same page where the quotation appears—indicating the author's name, the title of the book, and the exact page number from which the text was taken.

Example: *Ahmad, Badr, Public Opinion, p. 35.*

At the end of the study, the researcher compiles all sources in ***alphabetical order****, providing* ***complete bibliographic details*** *for each reference used in the research.*

Alternatively, the researcher may choose to number the citations ***sequentially*** *throughout the study and then consolidate them in a* ***single reference list*** *arranged according to their order of appearance in the text, including full publication details for each source. This documentation style is commonly employed in* ***scientific journals*** *and* ***academic articles****, which generally range between 15 and 25 pages. Conversely, in books, it is often preferable to place* ***footnotes at the end of each chapter*** *rather than at the end of the entire manuscript. Accordingly, when citing from books, the researcher must provide the following details: the author's name, the title of the work, the publishing house, the place of publication, the year of issue, and the specific page number cited.*

The bibliographic reference should follow a ***standardized sequence****, beginning with the author's surname and first name, followed by the full title of the book, the edition number (if applicable), the place of publication, the name of the publishing house or distributor, the year*

of publication or date of issue, and finally, the page number from which the citation was taken.

5. Detailed Explanation of Citation and Reference Methods According to Their Ordering in the Reference List

For example:

– Hilal Darhmoun, Al-Asas fi Manhajiyat Tahlil al-Nuzum al-Siyasiyya [The Foundation of the Methodology of Political Systems Analysis]. Algiers: Kounouz for Production, Publishing and Distribution, 2011, p. 59.

*If the **same reference** is used in multiple locations within the study, it is sufficient to cite it as:*

– Hilal Darhmoun, previously cited reference, p. …

*However, if the **same source** is cited **more than once on the same page** without any intervening reference, the citation should read:*

– Ibid., p. …

*If the **same reference** is cited **again on the same page** but another source intervenes between the two citations, it should be written as:*

– Hilal Darhmoun, ibid., p. …

***Regarding Foreign References**, the documentation should be formatted as follows:*

Monte Palmer, The Interdisciplinary Study of Politics. New York: Harper and Row Publishers, 1974, p. 7.

When citing the same source again within the same page but in non-consecutive instances, the Latin abbreviation Op. cit., followed by the page number, is used:

Op. cit., p. 10.

If the same reference is cited later in different sections of the research, it should appear as:

Monte Palmer, Op. cit., p. 19.

*When referencing **Qur'anic verses**, the citation should be presented in the following form:*

The Holy Qur'an, Surah Al-Isra, Verses: 5–8.

6/Citing a Book Chapter:

When quoting from a chapter within an edited volume, the reference should follow this format:

Full name of the chapter's author, "Title of the Chapter in Quotation Marks," followed by the name of the editor or coordinator, Full Title of the Book, Place of Publication: Publishing House, Year of Publication, page cited.

Example:

Ben Moussa, Samia, "The Evolution of Parliament's Role in Shaping Public Policies," in: Abdelkader Bouchama (ed.), Political Governance in the Arab World, Beirut: Center for Arab Unity Studies, 2019, p. 84.

7/Citing Journal Articles:

When citing from scholarly journals, the reference should be formatted as follows:

Author's full name, "Full Title of the Article," Title of the Journal (in italics or bold), Volume or Issue Number, Date of Publication (month and year), and page numbers.

Examples:

Mourad, Leila, "Transformations of the Digital Economy in Africa," Journal of Contemporary Economic Studies, No. 12, December 2021, pp. 44–59.

Benali, Karim, "Public Budget Transparency in Emerging Economies," International Journal of Public Finance, Vol. 7, No. 2, June 2020, pp. 112–127.

8/Quoting from Academic Theses and Dissertations:

When citing from university theses or dissertations, the reference must include the following elements:

The author's full name, the complete title of the thesis, its type (Master's or Doctoral dissertation), the university, faculty, department, year of defense, and the page number.

Example:

Zeroual, Fatima. Governance of Public Institutions in Algeria: An Analytical and Comparative Study. Doctoral Dissertation, University of Algiers 3, Faculty of Economic Sciences, Department of Business Administration, 2020, p. __.

9/ Quoting from University Lectures:

Such citations are documented as follows:

The lecturer's name, "Title of the lecture," its nature and timing (for example: lectures addressed to third-year students,

specialization in International Relations, University of Constantine, academic year 2022–2023).

Example:

Hamidi, Nour El-Din. "Public Administration in the Context of Digital Transformation." Lectures delivered to Master's students specializing in Governance and Public Administration, Faculty of Economic Sciences, University of Constantine, Algeria, 2023.

10/ Quoting from Newspapers or Press Articles:

The citation should include the following elements:

The name of the author (if available), "Title of the article," name of the newspaper, issue number, date (day, month, year), and page number.

Example:

Saleh, Abdelghani. "The Transformation of the Political Landscape in North Africa after 2020." El Khabar Newspaper, Issue No. 18245, January 15, 2024, p. 3.

11/ Quoting from Proceedings of National or International Conferences:

The documentation should include the presenter's full name, "Title of the paper presented," name of the scientific event, and the place and date of the conference.

Example:

Kara, Abdelrahim. "Digital Transformation in Algerian Public

Administration." International Conference on Digital Governance, University of Constantine 3, March 10–11, 2024.

12/ Quoting from Legal Texts and Decrees:

The citation should include the issuing authority, the title of the source in bold, the reference or decree number, the country, and the date of publication.

Example:

People's Democratic Republic of Algeria. ***Executive Decree No. 20-45 on the Regulation of Public Procurement,*** *Algeria, February 12, 2020.*

13/ Official Journal of the People's Democratic Republic of Algeria, ***Executive*** *Decree No. 23-150 concerning Financial Oversight, Algeria, June 15, 2023.*

ϖ Electronic sources should be cited as follows:

• Websites (Web): Author or institutional owner of the site, "Title of the page or subject", date of access, and the full website link without placing a period at the end.

Example:

Organisation for Economic Co-operation and Development (OECD), "Economic Growth Indicators 2024", Accessed on: September 15, 2025, www.oecd.org/economic-growth

References

References :

1. *Diab, H. Q. (2019). Al-tajawuz lil-nazariyat al-manhajiyya fi al-bahth al-'ilmi [Transcending Methodological Theories in Scientific Research]. Beirut: Dar Al-Nahda Al-Arabiya.*
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4. *Musaad, A. R. Z. (2007). Manhaj al-bahth al-'ilmi fi al-'ulum al-qanuniyya [Scientific Research Method in Legal Sciences]. Cairo: Dar Al-Kitab Al-Qanuni.*
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7. *Latad, L., et al. (2019). Manhajiyyat al-bahth al-'ilmi wa taqniyatihi fi al-'ulum al-ijtima'iyya [Scientific Research Methodology and Its Techniques in Social Sciences]. Berlin: Arab Democratic Center.*
8. *Maraed, S., et al. (2018). Dalil siyaghat al-atrohat wa al-rasa'il al-jami'iyya al-'arabiyya: Al-akhlaqiyyat, al-tanzim wa*

al-istishhad al-marja'i [Guide to Writing Arab Theses and Dissertations: Ethics, Organization, and Referencing] (6th ed.). Beirut: Arab Educational Information Network (Shamaa).

9. *Saeed Ashour, N. (2017). Manhajiyyat al-bahth al-'ilmi fi al-'ulum al-ijtima'iyya [Scientific Research Methodology in Social Sciences]. Algiers: Hussein Ras Al-Jabal Foundation for Publishing and Distribution.*
10. *Fousekis, P., Katrakilidis, C., & Trachanas, E. (2016). Vertical price transmission in the US beef sector: Evidence from the nonlinear ARDL model. Economic Modelling, 52, 499–506.*
11. *Francq, C., & Zakoian, J.-M. (2019). GARCH models: Structure, statistical inference and financial applications. John Wiley & Sons.*
12. *Franses, P. H. (1998). Time series models for business and economic forecasting. Cambridge University Press.*
13. *Frees, E. W. (2003). Longitudinal and panel data: Analysis and applications for the social sciences. Cambridge University Press.*
14. *Granger, C. W. J., & Yoon, G. (2002). Hidden cointegration. Department of Economics, UC San Diego.*
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16. *Gujarati, D. N., & Porter, D. (2009). Basic econometrics. McGraw-Hill International Edition.*

مراجع باللغة العربية:

1- - ابراهيم بختي، الدليل المنهجي في إعداد وتنظيم البحوث العلمية، جامعة ورقلة، .2007-2006. بتصرف

2- الهاشمي بن واضح، مطبوعة في مقياس منهجية إعداد بحوث الدراسات العليا، قسم محاسبة ومالية، جامعة محمد بوضياف المسيلة، 2016. بتصرف

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4- عبد المجيد قدي، أسس البحث العلمي في العلوم الاقتصادية والإدارية، ط 1، دار الأبحاث، 2009. بتصرف

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