The Algerian Historical Journal
ISSN: 2572-0023 / EISSN: 2716-9065
https://www.asjp.cerist.dz/en/PresentationRevue/664
Volume: 08, N°: 01 (2024), p47 - 56

Methodological and procedural errors related to academic research questions and ways to correct them

✍ **Difel Samiha**
Laboratory of History, Heritage and Society
University of Constantine 02 (Algeria)
Samiha.difel@univ-constantine2.dz

Abstract:

Each of us has his own way of reaching the goal he seeks to achieve, but science has a special way of achieving the goal, and this method has always been overlooked by many researchers and students, which makes it difficult for them to reach good results in their research. Therefore, we seek, through this presented research paper, to highlight the technical methodological and procedural errors in this dissertation. Especially the errors related to the questions asked, and the way they are presented, and we will try to provide some solutions that have proven successful during our course in training doctoral and master's students in order to bring them to safety in their research.

Article info

Received: 28/02/2024
Accepted: 03/04/2024

Key words:

- ✓ Scientific research
- ✓ Research questions
- ✓ Study methodology
- ✓ Research methods

Introduction

Every year we discuss a lot of graduation thesis in various fields. However, we rarely find dissertations without any methodological errors and written with correct scientific methods. Despite the efforts of professors from the training teams supervising the educational process and those supervising students to reduce, even by a certain percentage, the formal and methodological errors related to their research, and although some departments and universities seek to create a unified guide for writing graduation dissertations in order to practice the correct scientific methods in writing thesis. However, these attempts remain few in comparison to the reality we live in every year during the discussions.

We have listed some of the mistakes that students unanimously agreed upon; which consist of asking research questions relevant to the subject of the study. These errors would make the work vulnerable to criticism and have negative effects on the scientific content of the dissertation.

Problematic

Based on what was presented previously, we can assume that the main reason for creating this issue is the lack of time. The student does not have the skills and tools that would make him able to translate his work correctly and formulating his ideas in terms of questions that serve his research. This problem begins from defining hypotheses and formulating it in order to achieve the goal. Therefore, through this proposition, the main questions are: **What are the methodological and procedural errors related to a research questions that we counted in the study sample, and what are the ways to correct them?**

Aim of the study

In order to raise the methodological performance of our students effectively, we aim through this research paper to clarify the most important errors related to defining and formulating the problem of academic research and correct them methodologically. Thus, the future student should not rely on it as previous studies; which can lead him to make the same errors as previous student did.

Our research paper based on two main axes: the first shows the most important mistakes that students make in defining the research problem. The second axis is about the mistakes that are made in formulating the research problem, focusing on models that we obtained through discussing the master's dissertations in the field of archeology - at the University of Constantine 2. It represents the study sample. We also followed the descriptive and analytical approach to examine and analyze carefully the reasons, and give solutions that can adjust the work.

First: Introducing the terms of the study

1. Research definition

The word **research** means investigation. It is an in-depth study, in addition to diving into ideas and addressing near and far meanings. It also means questioning or asking about something, or a topic of particular importance (Ben Amera, 2012, p. 19). In other words, reaching new information about a subject in the field of the specialty in an honest scientific way, and presented it in a clearly logical manner (Fattah, 2006, p. 9).

2. Scientific research definition

Scientific research is an investigation, examination, and inquiry. Furthermore, it is a comprehensive, systematic, accurate and critical investigation of all variables and evidence related

AHJ المجلة التاريخية الجزائرية
The Algerian Historical Journal
EISSN: 2716-9065 / ISSN: 2572-0023

to problems, phenomena, or topics that arise and confuse individuals, communities and institutions in accordance with orderly steps and a specific scientific approaches (Ben Amera, 2012, p. 19).

After the researcher's opinion settles on a specific topic, he has to delve deeper into his initial idea until it becomes very clear in front of him. This is only done through reading the most important of what was written about his subject. The process of reading on the subject and collecting its sources and references continues until the researcher is convinced that he has understood the subject, and can determine the problem of his research accurately (Ben Amera, 2012, pp. 66-67)**.**

3. Questions and the problem of research

In principle, if there is no question, you will not be able to reach an answer. The research questions are a fundamental pillar of any research project. The question works on evacuating the target from the research project and, on the other hand, contributes to guiding the student's path throughout the research process. These questions begin when the student starts to think about turning his research ideas into words. Once you start thinking about your topic, a large number of different questions will clearly appear to you, which you can ask about a particular topic. The student will therefore feel that he needs to decide to place these questions specifically for the subject he intends to study (Bob Matiouz, 2016, pp. 145-146). When this is accomplished, he will begin to formulate the problem of research either in a report sentence (see comment 1), or in a question sentence, because it is necessary to have a problem that has aroused the curiosity of the researcher to answer it and investigate it in a way that allows to identify its dimensions and secure the solutions proposed for it. This is due to the fact that the problem is considered as the backbone of any scientific research. The general problem boils down to a question that needs to be clarified and answered, or to a vague situation that needs to be explained, or to unmet and saturated need. (Gharabah, 2017, p. 51). Initially, it is broad and largely general, often directly related to the title. Once it is focused, corrected and fragmented into its sub-elements, or more specific sub-questions, these research questions become the basis of all the decisions made concerning the design of the research (Bob Matiouz, 2016, pp. 145-146).

4. How to identify and design the research questions

When we usually study a particular effect, whether it's architecture, art, decoration or a particular social phenomenon, we work to understand and explain how it became what it is in the current image or the image it was in the past, why it exists and how it is made or built. Thus, we usually start the research questions with: What? Who? Where? When? How? And why?

5. Types of research questions

We always start the questions with: What? From where? When? How? And why? There are four types of research questions:

• Exploratory question: It represents an attempt to understand or clarify the phenomenon studied (when you or individuals have limited prior understanding of the subject matter of the thesis you intend to study).

• Descriptive question: This type of question arises from the exploratory questions that have already been asked. Descriptive questions are usually concerned with measuring the quantitative

AHJ المجلة التاريخية الجزائرية
The Algerian Historical Journal
EISSN: 2716-9065 / ISSN: 2572-0023

dimensions of the field, issues or phenomena to be studied, such as how large? How many/much? Where is it? What is its impact ratio?

• Interpretive question: This question is usually raised in the form of a question of reason or reasons (why?) It looks for causes and results or effects, such as: Why did it happen? How did it happen? What are the actors in this?

• Evaluative question: The evaluative question is concerned with knowing the value of a practice or the impact studied by asking such questions: how well is it preserved or maintained? How effective is it or how much attention does it take? This research is dominated by recommendations on how to improve or change a particular matter, which must be included in the research questions (Bob Matiouz, 2016, p. 147).

Second: Methodological mistakes in determining the research problem

The process of identifying the research problem is one of the most important steps of scientific research that the researcher should give it the utmost importance. The failure of many scientific studies to achieve the desired results is undoubtedly due to the student's failure to clearly identify the research problem (Gharabah, 2017, p. 55)by determining the causes that led to the problem on the one hand, and the constituent dimensions of the problem itself on the other (Mohamed Ubaidat, 1999, p. 94).

Therefore, the student must take into account that research problem is similar to the nervous system in the body, as it has an effect in all axes. Hence, the sound scientific problem leads to sound scientific research. Good and successful research depends on a good and accurate identification of the research problem.

The stages of the problem formulation in the humanities and social sciences vary from country to country, from university to university, from department to department, and even from specialty to specialty in the same department. However, these differences are governed by systematic controls due to the school of the researcher's study, whether American, British or French, and the type of the topic also controls these differences.

There are those who begin by introducing the topic and then identifying and formulating the problem in the form of a main question, and then placing (the importance of the study, the reasons for choosing the topic, and the objectives) in the form of secondary points after asking the main question (Roger & Raoul, n.d, p. 17). This is the methodology used by most Algerian researchers as the French methodology (Boukhari, 2015, p. 59).

There are also those who begin by introducing the topic, its importance and then the reasons for choosing the topic. Next, they would summarize the stages of definition, identification and formulation in a major question only, and then present the objectives and hypotheses of the study as it is done in the American, British and Middle East studies (Boukhari, 2015, p. 59). No matter how many ways to present the problem, the general foundations for introducing and formulating a problem remain well and clear.

Through a direct examination of the Master's memoir, whether as a supervisor or a discussant in the field of archaeology, many of them make the following mistakes:

AHJ المجلة التاريخية الجزائرية
The Algerian Historical Journal
EISSN: 2716-9065 / ISSN: 2572-0023

-One of the common mistakes among students is to present the research problem in the form of a set of questions that they answer within the research:

Example: The topic of **"The Mashrabiya (Window) in the houses of Constantine city"**. The question of the problem is: among the many problems included in the subject of the research are:

- Is the manufacture of the Mashrabiya subject to the techniques and methods used in the wood industry?

- Does the Mashrabiya have a special aesthetic that distinguishes it from other architectural elements?

- Are there any new effects on the decoration of the Mashrabiya?

- Did social and religious reality have an impact on the popularity of such architectural elements?

Thus, we say that the **main problem** must be in the form of a report formulation, or a **central question** about which the subject of the research is based on and the sub questions derive from. The latter will help you identify the elements of your subject more accurately, allowing you to focus on them in your research. The sub-questions will also show you more clearly the quality of the information and data that the student will collect.

In asking the general problem in the form of a central or major question, we say: **What is the artistic, aesthetic and architectural value of the Mashrabiya (Window)?** To answer this question, some of the sub-questions need to be addressed:

- Is the manufacture of the Mashrabiya subject to the techniques and methods used in the wood industry?

- How did the Mashrabiya distinguish from other architectural elements?

- Where does the new influences lie on the decoration of the Mashrabiya?

- What is the impact of the social and religious factor on the popularity of such architectural elements?

- **One of the circulating mistakes among students and researchers is to ask the question directly under the heading of <u>research problem</u>** without addressing the definition of the problem, its seriousness or its importance in the form of a preface in two or three lines.

Example: On the topic of **"Animal elements on Ottoman artifacts"**, we do not ask the question directly under the heading of the problem: In order to reach meaningful results, we raised a general problem of the subject: What are the most important animals that the Ottomans have painted on their artifacts?

AHJ المجلة التاريخية الجزائرية
The Algerian Historical Journal
EISSN: 2716-9065 / ISSN: 2572-0023

It is better to say after the title of the problem: due to the artistic value of the animal element in Ottoman art, we chose the subject of the study entitled **"Animal elements on Ottoman artifacts…"**, and in order to reach valuable and meaningful results, we have raised a general problem: **what are the most important animals that the Ottomans have painted on their artifacts?**

- The student also raises questions about the general or central problem without explaining to the reader that the topic has several aspects contribute to his study. He must only identify the aspects that he wants to study. This identification is called the aspects of the study and therefore must be present in the research.

For instance, the researcher may ask himself: What do we know so far? through assessing his information about the problem, his knowledge about the sources and references, and how previous researches were carried out. This method enables him to possess actual, interpretive, theoretical and systematic information concerning the formulation of the research problem.

Example: Do ceramics taken in different locations allow the outlines of their development to be traced through the successive rule of countries over the Middle Maghreb?

We say: The study of porcelain in a scientific accurate way is not easy, especially if we know that most of the pieces that reached us through different ages do not bear the signature of the maker nor determine the place and time of their manufacture, in addition to the random excavations, so comparisons remain the only way to bind the pieces together.

- Confusion between the definition of the study problem and the definition of the subject.

The student often draw literal definitions from books and references to define the problem.

Example: Dyes are organic and chemical substances and compounds, whose sources are varied from plants such as indigo dye and turmeric dye, animal dye such as scarlet worm dye, and minerals such as iron sulfate dye and red mercury oxide.

We say: The dyes used by Muslims in their textiles have varied, and their sources have multiplied

- The biggest mistake which the student makes is to answer the main question while identifying the problem. The student presents a **theory** from a researcher or a historian without paying attention to the most important methodological mistake; addressing these theoretical quoted ideas is the answer to the main question or sub-questions, whether by support or disapproval.

Example: He says: The humidity factor is one of the most damaging causes of monuments, especially plant ones. Then, he poses the question: What are the most important environmental factors causing damage to monuments?

- Neglecting one of the element of the study (which is one of the words that make up the title) at the expense of another

AHJ المجلة التاريخية الجزائرية
The Algerian Historical Journal
EISSN: 2716-9065 / ISSN: 2572-0023

Example: We find the researcher presents two or three questions about the first and second chapter, and puts one question about the third chapter. Sometimes we find no question about one of the chapters that deals with one variable or more. This is a methodological mistake in which many students make by maximizing a variable at the expense of another variable, and thus neglecting an important element of the title.

- Absence of logical and chronological order of the study variables or the aspects surrounding the topic. We find the student asking sub-questions in a chaotic way that is untidy and incoherent with the chapters of the research. This is a systematic mistake in which the logical order of the subject events or dimensions needs to be taken into account. The student takes into consideration the questions from the oldest to the most recent if the topic is related to evolution and change.

Example: Topic is entitled **"Plant dyes used in textiles during the ottoman era"**.
The sub questions of the topic:

- **What are the most important plant dyes used by the Ottomans in their textiles?**
- **What are the most prominent techniques used in dyeing on textiles?**
- **What are the most important raw materials used in Ottoman textiles?**
- **What are the additives during the dyeing process?**
- **Did Muslims know the use of plant dyes in the early Islamic times?**
- **Can the craft of the past be restored by returning to natural plant dyes in today's products?**

We arrange them logically and chronologically:

- **Did Muslims know the use of plant dyes in the early Islamic times?**
- **What are the most important raw materials used in Ottoman textiles?**
- **What are the most important plant dyes used by the Ottomans in their textiles?**
- **What are the most prominent techniques used in dyeing on textiles?**
- **What are the additives during the dyeing process?**
- **Can the craft of the past be restored by returning to natural plant dyes in today's products?**

Third: Mistakes in the formulation of the study's problem:

The problem is a conceptual design method formulated by the researcher to address a particular issue during the embodiment of an appropriate special point of view, and it is presented in an interactive manner between the various variables of the study in the form of a question or a report sentence (Elhadj, 2016, p. 10). It appears in the form of general-to-specific questions, in which the material studied, its location and its fundamental variables are accurately defined. It also reflects the researcher's view of the issue at hand; a view that varies from one researcher to another (Elhadj, 2016, p. 11).

After the phase of identifying the research problem, it comes the pivotal phase, which is the stage of formulating the research problem. It is the most important element in the research steps. It usually begins with editorial paragraphs dealing with the importance of the topic and its location

AHJ المجلة التاريخية الجزائرية
The Algerian Historical Journal
EISSN: 2716-9065 / ISSN: 2572-0023

in the field of the researcher specialty, and then moves to highlight the dimensions of the problem studied, the value of the variables and its relationships with each other (Gharabah, 2017, p. 56).

- Many students do not include one of the components of the title in their problem formulation (which is an essential component of the title).

• **For example:** if the study is about **(construction materials and techniques in desert palaces)**, the researcher asks the following question: **What are the methods and techniques used in the construction of desert palaces?** One of the main components of the title is neglected here, namely **(construction materials)** which vary.

- The student's use of some approximate words in the formulation of the problem or sub-questions such as: **Can the diversity of materials lead to a multiplicity of construction techniques?** This formulation is not compatible with the scientific proposition of formulating the problem. It can be replaced by: **What are the most important techniques used on various construction materials for desert palaces? Do the materials used affect the desert construction pattern?**

3- We note here that it is a common mistake among students to put a question on the problem that is answered yes or no (closed question).

Example: Have the Ottomans been able to change the style of mosques planning in Algeria?

We say: What are the most important changes the Ottomans have made to the planning of mosques in Algeria?

- The student's reliance on exploratory or descriptive questions only.

So at least the student varies in questions: exploratory (where), descriptive (what, how many/much), interpretive (why, how), evaluative (how far).

Conclusion

The new teaching system has forced us in recent years (LMD) to reduce the time limit for the completion of graduation memoirs, which is a short period of no more than 4 months. This made the student unable to exploit this period with a systematic strategy that enables him to use time to his advantage. The latter also make the student fail to fully exploit the methodological knowledge he has been trained and accustomed to in his years of study. The correct scientific methodology in the writing of research and memoirs is an effective tool in the management of scientific research, and to bring it to positive results that evolve the level of scientific research at the level of our universities.

When you ask students about the reasons why they make such mistakes, they often answer that they found them written in another memoire. This is a mistake that justifies a mistake because the problem of the subject varies according to the type of topic, and according to the student's ability to understand his subject and the objectives to be learned behind the answer to these questions. This leads students to engage in many methodological mistakes that may ruin all the research as a result of the excessive imitation of what is written in previous memoirs or theses, whether of the same or higher degree.

This does not mean that the idea quoted from the original memoir is wrong, but that the master or doctoral student imitated what was written in the introduction and the elements contained in it, such as the problem and the way it is presented. Here the mistake has two aspects:

AHJ المجلة التاريخية الجزائرية
The Algerian Historical Journal
EISSN: 2716-9065 / ISSN: 2572-0023

The first aspect is the imbalance in the research level. The second aspect is that the nature of the subject contained in the original memoir requires the student to make points and questions that are appropriate to the nature of his subject, and not to be imitated by another unrelated researcher, or to misunderstand the original subject and then make mistakes later.

One of the reasons why a student falls into such methodological mistakes is because of the large number of textbooks, which differ in the way they present the scientific bases concerning writing the research in different disciplines. This makes the student confused about the use of different approaches in the presentation of his research. This is why he tends to pick from this and that without taking into account his specialty and the research tools required.

Most of the previous studies are based on a false methodology. Here we note that the main reason is that students deposit research, memoirs, dissertations and thesis to the library without adhering to the systematic corrections addressed to them during the discussion. This is why the student quotes from these memoirs and falls in the same mistake as his predecessors. The student's reliance on previous studies in the implementation of his research means relying on a previous methodology without ascertaining its scientific and methodological validity. In this way, he falls into the mistake of his predecessors (students and researchers). The repetition of this in many researches has created what are known as common methodological mistakes.

We also find that the student during the period of his completion of scientific research focuses most of his interest in the search for information related to his subject in order to obtain the scientific degree. Furthermore, the students do not think about the systematic way of writing the research. Sometimes they even resort to putting their representatives in the memoir graduation and urge to finish the research regardless of its quality.

We can also attribute the many methodological mistakes to the fact that the student is not used to prepare and present researches in the correct methodological way during the period of his training, especially in submitting his research. Making methodological mistakes is also due to his reliance on research copies as they are mini-researches on the memoir that can help him avoid some of the mistakes in the preparation of future memoir or thesis.

Bibliography List:

1. Bob Matiouz, and Liz Rose. (2016). **The Scientific Guide to Research Methods in Social Sciences**. (Mohamed El Juhari, Translators) Cairo: National Center for Translation.
2. Roger, A., & Raoul, K. (n.d). **Introduction to Research Methodology**.
3. Belkacem Elhadj. (2016). **Special publication on the scale of research training meetings in sociology.** Mohamed El Bachir El Ibrahimi University. Bordj Bou Arreridj.
4. Zakia Menzel Gharabah. (2017). **Printed in the scale of the research methodology in Islamic and human sciences.** Faculty of Sharia and Economics, University of Prince Abdelkader. Faculty of Sharia and Economics, Constantine: University of Prince Abdelkader.
5. Fayrouz Soula and Hicham Boukhari. (2015). **Common mistakes in preparing scientific research.** (Center for Scientific Research Generation, Editor) Intervention delivered at the Literary Research Strengthening Forum.

AHJ المجلة التاريخية الجزائرية
The Algerian Historical Journal
EISSN: 2716-9065 / ISSN: 2572-0023

6. Mohamed Ben Amera. (2012). **Historical research methodology**. Algeria: Dar Huma for Printing and Publishing.
7. Mohamed Hussam El-Din Ismail Abdel Fattah. (2006). **Research methodology in Islamic antiquities.** Cairo: Dar Al-Alam for Publishing and Distribution.
8. Mohamed Ubaidat, Abu Nasr Mohamed, and Mubaydin Aqlah. (1999). **Scientific research methodology,** rules, stages, and applications. Wael Publishing House.

AHJ المجلة التاريخية الجزائرية
The Algerian Historical Journal
EISSN: 2716-9065 / ISSN: 2572-0023