

How to Ground the Research Problem and Frame the Research Question

Fatiha Hammar^{1*} & Toufik Boukhedouni²

¹University of Tizi Ouzou, Tizi Ouzou, Algeria

²University of Jijel, Jijel, Algeria

*Email 1 (Corresponding author): fatiha.hammar@ummto.dz

Email 2: boukhedouni@univ-jijel.dz

ORCID iD 1 : 0009-0003-2150-9439

ORCID iD 2 : 0009-0008-8915-8686

Received	Accepted	Published online
11/3/2026	9/8/2026	10/8/2026

 : 10.63939/ajts.xp89re93

Cite this article as: Hammar, F., & Boukhedouni, T. (2026). How to Ground the Research Problem and Frame the Research Question. *Arabic Journal for Translation Studies*, 5(16). <https://doi.org/10.63939/ajts.xp89re93>

Abstract

This research paper aims to ground the research problem and clarify its fundamental dimensions by examining the theoretical and practical contexts related to the topic. It also seeks to direct the scientific question in a way that ensures precision and clarity in the research path, linking the research question to the study's objectives and its core components. This stage constitutes a clear methodological framework for the research problem, which helps in analyzing the results and drawing accurate scientific conclusions. It also enables the development of a comprehensive understanding of the factors influencing the problem under study.

Keywords: Research Problem, Research Questions, Problem Formulation, Research Methodology, Theoretical Framework, Research Variables

© 2026, Hammar & Boukhedouni, licensee Democratic Arabic Center. This article is published under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0), which permits non-commercial use of the material, appropriate credit, and indication if changes in the material were made. You can copy and redistribute the material in any medium or format as well as remix, transform, and build upon the material, provided the original work is properly cited.

1. Introduction

The process of **grounding the research problem and framing the research question** is one of the fundamental steps in any scientific study, as it provides the starting point for understanding the nature of the problem in all its theoretical and practical dimensions. This process typically begins by analysing the various contexts in which the problem has emerged-whether social, cultural, or epistemological-with a particular focus on the factors and foundations that shape the overall framework of the topic. Through this analysis, the relationships among the various variables associated with the problem can be explored, while distinguishing between factors that exert a direct influence and those whose influence is indirect. This contributes to developing a clear and precise understanding of the nature of the problem under investigation.

Framing the research question is a natural extension of grounding the problem, as it helps **identify the study's core themes** and areas of research focus. It also makes it possible to establish clear methodological foundations for the research process, ensuring that the research question is aligned with the nature of the problem and that the problem itself is amenable to analysis and investigation. This stage also involves reviewing the relevant literature and previous studies, which helps identify gaps in knowledge, clarify the scope of the problem, and explore appropriate approaches and methodologies for addressing it.

Furthermore, grounding the problem and framing the research question enable the researcher to understand the problem's **conceptual and operational dimensions**, including its key terms and related concepts, as well as the relationships among these concepts within the study's theoretical framework. On the basis of this understanding, the researcher can formulate precise and well-constructed research questions that systematically guide the research process, while maintaining coherence between the research problem and the research question and ensuring that the problem can be analysed objectively and rigorously.

2. Research Problem

In this context, the framework outlined above represents a crucial step before proceeding to data collection and analysis. It provides a solid foundation for understanding the phenomena and processes associated with the problem and helps organise the study in a coherent and systematic manner. It also enables the researcher to clarify the scope and boundaries of the research and identify the key variables to be analysed, thereby enhancing the ability to interpret the findings subsequently and relate them to the study's theoretical and empirical frameworks. Accordingly, our study seeks to answer the following questions:

- What are the key dimensions of the problem under investigation, and how can they be precisely defined?

- How do theoretical and practical contexts influence the formulation of the research problem?
- What factors and variables determine the scope of the problem under investigation?
- How can precise research questions be formulated in a manner consistent with the nature of the research problem?
- Which approaches and methodologies are appropriate for addressing the problem and analysing it objectively?

3. Research Problem

The significance of this study lies in its contribution to clarifying and systematically analysing the research problem, thereby facilitating an understanding of the factors and variables influencing the phenomenon under investigation. The study also provides a scientific framework that enables researchers and decision-makers to understand the nature of the problem and address it through carefully considered scientific approaches. Moreover, it contributes to developing future research questions and improving the methodological approaches adopted in research.

Thus, this study makes an important contribution to knowledge by enriching the scientific literature and guiding future research in the same field.

4. Objectives of the Study

- To analyse the research problem by examining its theoretical and practical dimensions and identifying the factors influencing it.
- To frame the research question so as to ensure a clear research direction and maintain its alignment with the problem under investigation.
- To identify the variables and the relationships among them in order to facilitate the systematic analysis of the phenomenon.
- To identify appropriate methodologies and tools for collecting and analysing data scientifically and objectively.
- To provide a comprehensive knowledge framework that helps researchers understand the phenomenon and relate the findings to their theoretical and practical contexts.

5. Definition of Terms

5.1. Research Problem

A research problem is a scientific issue or phenomenon that a researcher seeks to investigate and analyse in order to explain it and understand its various dimensions. It usually arises from identifying a gap in knowledge or ambiguity in the explanation of a particular phenomenon, prompting the researcher to formulate it as a research question that can be investigated using an appropriate scientific methodology (Ubaydat et al., 2017, p. 45).

Operationally: The research problem refers to the specific issue or phenomenon that the researcher seeks to analyse in this study and whose dimensions they aim to understand. This is achieved by formulating it as a set of clear research questions and examining it empirically through the collection of data from members of the study sample using the research tools and methodology adopted, with the aim of explaining the problem and identifying the factors associated with it.

5.2. Research Question

A research question is an interrogative formulation derived from the research problem, through which the researcher seeks to specify what the study aims to explain or uncover. The question must be clear, specific, and amenable to examination and investigation using a scientific method (Angers, 1996).

Operationally: In this study, the research question refers to the set of specific questions used by the researcher to guide the research process and analyse the phenomenon under investigation. These questions are formulated clearly and directly, enabling data to be collected and analysed in accordance with the adopted methodology in order to arrive at scientifically grounded answers that contribute to explaining the research problem.

6. The Key Dimensions of the Problem Under Investigation and How to Define Them Precisely

In scientific research, the research problem represents the starting point for understanding the phenomenon to be investigated and serves as the foundation upon which the remainder of the research is built. A research problem is not merely a general question; rather, it encompasses multiple dimensions that must be clearly defined for the research to be amenable to scientific investigation and analysis. The main dimensions include:

- **The conceptual dimension:** The researcher must precisely define the key concepts associated with the phenomenon under investigation, both linguistically and methodologically, in order to clarify the meanings of the terms used and explain how they relate to the study's overall subject (Bousilah, 2018, p. 12).
- **The relational dimension:** This dimension focuses on identifying the relationships among the key variables constituting the research problem. Understanding these relationships provides a clear view of what will be analysed in the study and how the independent and dependent variables, as well as mediating or moderating factors, can be identified (Chiboub, 2021, p. 8).
- **The contextual or applied dimension:** This dimension links the research problem to the real-world setting, community, or specific case to which it applies. This helps the researcher establish clear boundaries for the research and remain within the scope of the study.

These dimensions are generally defined precisely by reviewing previous literature to identify gaps in knowledge and inconsistencies, determining the relationships among the variables to be examined, and then formulating the research problem as a clear and specific problem statement that can subsequently be transformed into research questions or testable hypotheses. These methodological steps facilitate an understanding of the problem from multiple perspectives and prevent ambiguity or excessive generality in its formulation, thereby making the study more focused and scientifically rigorous (Bousilah, 2018, p. 15).

7. How Theoretical and Practical Contexts Influence the Formulation of the Research Problem

Theoretical and practical contexts play a pivotal role in shaping the research problem, as they provide the foundation for understanding the phenomenon in all its dimensions. The theoretical context provides the conceptual framework and key terminology upon which the researcher relies to define the problem precisely. It also helps identify gaps in knowledge within the existing literature, thereby determining what is novel and worthy of investigation (Neuman, 2011, p. 42).

Through this context, the researcher can establish connections among the key variables and explore the conceptual relationships between them, enabling the research problem to be formulated in a clear and scientifically rigorous manner that is consistent with previous studies.

The practical context, by contrast, relates to the social or applied reality of the phenomenon under investigation. It highlights the practical challenges and opportunities encountered when examining the problem and helps delimit the scope and boundaries of the study. For example, when investigating the influence of social media on social behaviour, the practical context provides an understanding of users' environments and real-world social interactions, thereby enhancing the applicability of the research and its amenability to analysis (Creswell, 2014, p. 36).

By drawing on both contexts, the researcher can ensure that the research problem is precisely formulated, encompasses both theoretical and practical dimensions, and is amenable to scientific analysis. These contexts also facilitate the design of an appropriate methodology for collecting and analysing data objectively.

8. Factors and Variables Determining the Scope of the Research Problem

Factors and variables are fundamental elements in determining the scope of the research problem, as they help clarify the boundaries of the study and identify what can be analysed and what should be excluded. These variables generally fall into three main categories:

- **Independent Variables:** These are the factors assumed to influence the phenomenon under investigation. For example, in a study examining the influence of social media on users' behaviour, the type of content or the amount of time spent

using social media platforms may be considered independent variables affecting the level of social interaction (Babbie, 2013, p. 88).

- **Dependent Variables:** These are the outcomes or phenomena affected by the independent variables and constitute the principal focus of measurement within the research problem. In the previous example, the level of social interaction or the quality of communication among individuals may be the dependent variable analysed in relation to the independent variables (Creswell, 2014, p. 52).
- **Mediating or Moderating Variables:** These are factors that may influence the relationship between the independent and dependent variables, such as users' age, culture, or technological experience. Understanding these variables helps interpret the findings more accurately and prevents unwarranted generalisations from the data (Neuman, 2011, p. 95).

In addition to classifying the variables, other contextual factors determine the scope of the research problem, including time, place, the characteristics of the target sample, and the nature of the population under investigation. Precisely identifying these factors and variables enables the researcher to establish clear boundaries for the research problem and transform it into research questions that are amenable to systematic analysis, thereby enhancing the credibility and applicability of the findings (Babbie, 2013, p. 92).

9. How to Formulate Precise Research Questions That Align with the Nature of the Research Problem

Formulating research questions is a pivotal step in scientific research, as it serves as a bridge between the research problem and the study's methodological framework. To be precise and effective, research questions must possess several key characteristics:

- **Clarity and precision:** The question must be specific and clear, leaving no room for ambiguity. For example, instead of asking a broad question such as, "What is the impact of social media?", it can be formulated more precisely as follows: "How does the use of Facebook affect the level of social interaction among university students?" (Creswell, 2014, p. 42).
- **Amenability to analysis or measurement:** Research questions must be answerable through empirical data or qualitative or quantitative analysis, thereby ensuring that objective and verifiable findings can be reached. This requires the independent and dependent variables and the relationships between them to be clearly identified (Babbie, 2013, p. 124).
- **Alignment with the research problem:** The questions must arise directly from the research problem and encompass all its theoretical and practical dimensions. Formulating questions in this manner ensures that every component of the research contributes to addressing the problem comprehensively (Neuman, 2011, p. 65).

- **Capacity to generate knowledge:** The questions should contribute to uncovering new aspects of the phenomenon under investigation, whether by confirming or challenging previous findings. This enriches the scientific literature and leads to a deeper understanding of the problem.

The researcher may also divide the main research problem into sub-questions, with each sub-question addressing a specific aspect of the problem. These sub-questions should be interconnected so that, collectively, they provide a comprehensive answer to the main research question. For example, if the problem concerns the influence of social media, sub-questions may address the nature of the content, duration of use, effects on social behaviour, and differences among age groups.

10. Appropriate Methods and Methodologies for Addressing the Research Problem and Analysing It Objectively

Selecting appropriate research methods and methodologies is one of the most important steps in ensuring objective analysis and accurate findings in any scientific study. This selection depends on the nature of the research problem, the type of data available, and the study's objectives. Although methodologies vary according to the type of research, they all require adherence to scientific standards to ensure the reliability of the findings.

- **Descriptive Method:** This method is used when a study aims to describe a phenomenon and analyse its characteristics without examining causal relationships in depth. It provides a comprehensive overview of the data and enables patterns and trends within the phenomenon to be identified (Babbie, 2013, p. 152).
- **Exploratory Method:** This method is used when investigating a new or insufficiently studied phenomenon. It enables the researcher to identify important variables and determine potential directions upon which subsequent research questions may be developed (Neuman, 2011, p. 102).
- **Quantitative Method:** This method relies on collecting data that can be measured statistically and is used to analyse relationships between independent and dependent variables. It enables scientific hypotheses to be tested rigorously, thereby enhancing the objectivity of the findings (Creswell, 2014, p. 67).
- **Qualitative Method:** This method focuses on understanding phenomena within the participants' social and cultural contexts. The researcher uses tools such as in-depth interviews and field observation to analyse textual data, thereby facilitating a comprehensive interpretation of human experiences and complex phenomena (Patton, 2015, p. 105).
- **Mixed Methods Approach:** This approach combines quantitative and qualitative methods, allowing for a comprehensive analysis of the phenomenon by drawing on the strengths of each. For example, questionnaires may be used quantitatively to

examine relationships between variables, followed by qualitative interviews to understand the underlying factors shaping those relationships (Tashakkori, 2010, p. 58).

When selecting a methodology, the researcher must also identify appropriate data-collection tools, such as questionnaires, interviews, document analysis, or observation, in a manner consistent with the nature of the research problem and conducive to objective analysis and accurate findings. Methodological planning at this stage is crucial before proceeding to data collection and analysis, as it determines the direction of the research and ensures consistency between the research problem and the methods employed.

Overall Conclusion of the Study

This study confirms that grounding the research problem and framing the research question constitute the cornerstone of any successful academic study. Understanding and analysing a phenomenon depend on the clarity of the research problem and the identification of its key dimensions, whether conceptual, relational, or contextual. It is also evident that theoretical and practical contexts play a pivotal role in shaping the research problem by providing a comprehensive conceptual framework and connecting it to its applied reality, thereby ensuring the formulation of precise research questions that are amenable to analysis.

The study has demonstrated that precisely identifying the relevant variables and influencing factors helps delimit the scope of the research and enhances the ability to interpret the findings systematically and objectively. Likewise, selecting appropriate research methodologies and tools-whether quantitative, qualitative, or mixed-is essential to ensuring objective analysis and accurate findings.

Accordingly, it may be concluded that the success of scientific research depends on coherence between the theoretical framework and its practical application, the alignment of the research questions with the nature of the problem, and the selection of an appropriate methodology. This leads to the production of precise and useful knowledge that enhances the understanding of the phenomena under investigation and paves the way for more in-depth future studies.

The study therefore highlights the importance of grounding the research problem and framing the research question as a pivotal step in ensuring the clarity and accurate analysis of the problem. The findings have shown that identifying the problem's key dimensions, understanding its theoretical and practical contexts, and determining the relevant variables and influencing factors are essential components of an integrated research framework. The analysis has also confirmed that formulating precise research questions and selecting appropriate quantitative, qualitative, or mixed methodologies enhance the objectivity of the research and the accuracy of its findings.

Accordingly, it may be concluded that successful scientific research depends on harmony between the theoretical framework and practical reality, the precise formulation

of research questions, and the suitability of the methodology to the characteristics of the problem, thereby contributing to the production of reliable scientific knowledge.

Conclusion

This study highlights the importance of grounding the research problem and framing the research question as a pivotal step in ensuring the clarity and accurate analysis of the problem. The findings have shown that identifying the problem's key dimensions, understanding its theoretical and practical contexts, and determining the relevant variables and influencing factors are essential components of an integrated research framework. The analysis has also confirmed that formulating precise research questions and selecting appropriate quantitative, qualitative, or mixed methodologies enhance the objectivity of the research and the accuracy of its findings.

It may therefore be concluded that successful scientific research depends on harmony between the theoretical framework and practical reality, the precise formulation of research questions, and the suitability of the methodology to the characteristics of the problem, thereby contributing to the production of reliable scientific knowledge.

Study Recommendations

- 1. Systematically grounding the research problem:** Researchers should carefully examine all dimensions of the research problem before formulating the research question in order to ensure a clear scientific perspective and avoid ambiguity.
- 2. Linking theory and practice:** Researchers are advised to integrate theoretical and practical contexts when examining any research phenomenon in order to develop a comprehensive understanding of the subject and produce findings that can be applied in real-world contexts.
- 3. Precisely defining the variables:** Independent, dependent, and mediating variables should be clearly identified to ensure accurate analysis of the findings and valid conclusions regarding the relationships among the phenomena under investigation.
- 4. Selecting an appropriate methodology:** Research methods and fieldwork tools should be selected in accordance with the nature of the research problem, whether the approach is quantitative, qualitative, or mixed, in order to ensure the objectivity and accuracy of the findings.
- 5. Developing precise and logically ordered research questions:** Researchers are advised to formulate clear main and sub-questions that are consistent with the research problem, encompass all its dimensions, and guide the research process in a systematic and coherent sequence.
- 6. Providing opportunities for future research:** Researchers should be encouraged to extend the study to different contexts or samples or to incorporate additional

variables in order to expand the body of knowledge and validate the findings more comprehensively.

Acknowledgements

The authors would like to thank the editorial team and the anonymous reviewers for their constructive comments and suggestions, which contributed to improving the quality of this article.

Ethical approval

This article presents a conceptual and literature-based study. It did not involve human participants, animals, personal data, or primary data collection. Therefore, ethical approval and informed consent were not required.

Author contributions

Fatiha Hammar contributed to the conceptualization of the study, the development of its methodology, the review of the relevant literature, and the preparation of the original manuscript.

Toufik Boukhedouni contributed to the conceptualization of the study, the critical analysis and validation of its content, and the review and editing of the manuscript.

Both authors read and approved the final version of the manuscript and agree to be accountable for its content.

Disclosure statement

The authors declare that they have no known financial or personal relationships that could have influenced the work reported in this article. No potential conflict of interest was reported by the authors.

Funding

The authors received no financial support for the research, authorship, or publication of this article.

About the authors

Fatiha Hammar is affiliated with the University of Tizi Ouzou, Algeria. Her academic interests focus on research methodology, the formulation of research problems and questions, and methodological approaches in the social and human sciences.

Toufik Boukhedouni is affiliated with the University of Jijel, Algeria. His academic interests include research design, the methodological foundations of scientific inquiry, and qualitative, quantitative, and mixed-methods approaches in the social and human sciences.

ORCID

Fatiha HAMMAR  <https://orcid.org/0009-0003-2150-9439>

Toufik BOUKHEDOUNI  <https://orcid.org/0009-0008-8915-8686>

Data Availability Statement

No original datasets were generated or analysed during this study. The article is based exclusively on previously published literature, and all the sources consulted are cited in the reference list. Therefore, data sharing is not applicable to this article.

References

- Angers, M. (1996). *Initiation pratique à la méthodologie des sciences humaines* (2nd Ed.). Les Éditions CEC.
- Babbie, E. R. (2013). *The practice of social research* (13th Ed.). Wadsworth Cengage Learning.
- Chiboub, I. (2021). *Formulating a research problem* [Lecture notes]. Department of English Language and Literature, Faculty of Letters and Foreign Languages, University of Batna 2-Mostefa Benboulaïd. https://en.univ-batna2.dz/sites/default/files/ang/files/ttu_groups_7_8_lecture_2.pdf
- Bousilah, M, A-G. (2018). *Mushkilat Al-Bahth Al-'Ilmi wa Tahdiduha* [Research Problem and its Definition]. University of Algiers.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th Ed.). SAGE Publications.
- Neuman, W. L. (2011). *Social research methods: Qualitative and quantitative approaches* (7th Ed.). Pearson Education.
- Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th Ed.). SAGE Publications.
- Tashakkori, A., & Teddlie, C. (Eds.). (2010). *SAGE handbook of mixed methods in social & behavioral research* (2nd Ed.). SAGE Publications.
- Ubaydat, M., Abu-Nassar, M., & Mubaydin, A. (2017). *Manhajiyyat Al-Bahth Al-'Ilmi: Al-Qawa'id wa Al-Marahil wa Al-Tatbiqat* [Scientific research methodology: Rules, stages, and applications]. Wael Publishing and Distribution House.