

Engineering the Title of Scientific Research: From Methodological Formulation to Quality Standards

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Abstract

Scientific research plays a crucial role in achieving progress and excellence at all levels in all societies and nations. This is achieved through its foundations, methodologies, means, and tools, which help solve problems in any field of life. Therefore, any society striving for progress and intellectual and social advancement must prioritize scientific research. Scientific research in general, and research in the humanities and social sciences in particular, is conducted according to an integrated system of methodological and epistemological structural steps. This system forms a self-contained scientific research project within specific frameworks. The content of a scientific research project is revealed in its title, which serves as the research's scientific identity and its most concise summary. Selecting and choosing an appropriate title is a vital step in the scientific research process, as it is the first thing that appears to the public and the reader. To explore this important step in scientific research (title selection), this research paper was written to examine its role in the quality of scientific research and to answer the following questions: What is a title? And what are the stages involved in selecting one? What are the requirements and specifications for a good title that accurately and clearly reflects the research?.

Keywords: Title, Quality, Research, Scientific Research.

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Introduction

Scientific research plays a fundamental role in the rise of civilizations and the construction of their monuments. Without it, societies throughout history would not have been able to raise the edifices of their civilizations and reach the pinnacle of their glory. It is no exaggeration to say that all the civilization, progress, and advancement humanity has achieved is due to scientific research. This does not refer to all scientific research, but rather to distinguished, high-quality research that reflects the level and nature of development in any country.

A developed country reflects the advancement and flourishing of its research, while an underdeveloped country is a true reflection of the weakness or low quality of its research. Excellence in scientific research is considered one of the most important criteria for academic evaluation, according to internationally recognized standards adopted by various universities, research centers, and institutions. Quality is one of the most important means and methods for improving the quality of education and raising its performance level in the current era, which some thinkers call the "Age of Quality." Quality is no longer a luxury that scientific institutions and research centers aspire to, nor an alternative they can adopt or discard. Rather, it has become an urgent necessity dictated by the dynamics of contemporary life, and a testament to the enduring spirit and vitality of scientific and research institutions and centers.

Because science is embodied in the research conducted by researchers and supervised by professors and experts, this scientific research is considered an attempt to discover and explore knowledge, and to work on developing, examining, and verifying it. Therefore, many countries today train their students and develop their researchers in the methodology of preparing and writing scientific research, starting with the scientific

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method of thinking, passing through all the steps of scientific research from the title to the results, and culminating in society benefiting from these results in solving its various problems.

One of the most important research steps that must be mentioned due to its importance in the quality of scientific research is the step of "determining the title," as all researchers must know the place of the title in any research and the stages of determining it, the conditions and specifications of a good title, some considerations that must be taken into account when choosing the most appropriate title for the research, and others that must be avoided during that.

The Concept of Scientific Research:

There are many definitions of scientific research, varying according to its objectives, fields, tools, and methodologies. However, most definitions converge on the emphasis on studying a problem with the intention of solving it, according to precise scientific principles. This fosters a kind of unity among scientific research, despite its varying degrees of objectivity and diverse types. Many researchers have addressed the concept of scientific research, and their approaches and perspectives on this concept have differed. Each researcher has viewed it from their own angle, according to their inclinations or scientific convictions.

If we attempt to analyze the term "scientific research," we find that it consists of two words: "research" and "scientific." The word "research" implies investigation, inquiry, and the search for something that perplexes one and stands as an obstacle in the path to understanding it (Boudawoud, 2009, p. 35). The word "science," on the other hand, is used in our time to denote a body of knowledge supported by sensory evidence, and the set of laws discovered to explain natural phenomena based on those established laws (Rashwan, 1982, p. 4).

Perhaps the most comprehensive definition of science and its essence is that of Sheikh Nasif al-Yaziji (1800-1871 CE), who states: "Science is the sum of issues and universal principles related to a particular subject, arranged in a specific system, or it is organized knowledge" (Sharoukh, 2003, p. 10). Al-Omrani (2019) added that the word "research" in Arabic means "seeking, searching, tracking, investigating, and exploring." In its technical sense, it refers to a study based on the investigation and tracking of a specific topic according to a particular methodology to achieve a specific goal, such as adding something new, compiling scattered information, or organizing disparate elements, among other objectives. Simply put, research is the answer to a specific question that has not been previously answered through human effort. Scientific research is defined as the process of arriving at independent solutions to a problem through the systematic and planned collection, analysis, and interpretation of data (Al-Omrani, 2019, p. 81). It can also be described as "a human activity that aims to understand various phenomena by discovering the relationships and laws that govern these phenomena, predicting phenomena and events, and finding appropriate methods to control and regulate them" (Al-Ubaidan, August 2019, p. 141).

Quality in Education:

The word "quality" in Arabic, according to the Al-Wasit Dictionary, is derived from the trilateral verb (جَدَّ) and its verbal noun is جُودَة or جَوْدَة, meaning "to become good." It is said, "The work was good," and its plural is جَيَادٌ or جَيَانُدٌ. "The man was good" means he produced something good in word or deed (Al-Tamimi, 2008, p. 13).

The Latin word for quality is derived from "qualities," referring to the nature of something or someone and the degree of solidity. Historically, it meant precision and perfection (Al-Daradka, 1436 AH, 2015 CE, p. 15). In its technical sense, Juran identifies two fundamental concepts of quality: the first refers to the idea of eliminating defects, meaning minimizing errors as much as possible at all stages of the process, striving to achieve zero defects; the second concept indicates that quality should reflect the product's attributes and characteristics that meet customer needs and expectations (Awda, October 2017, p. 29).

Quality in education is defined as: "A set of conditions and specifications that must be present in the educational process to meet the needs of its beneficiaries and produce competent graduates who can fulfill the requirements of society" (Al-Najjar, 1999, p. 73). It also means: "Judging the level of achievement of goals and the value of this achievement. This judgment is linked to activities or outputs that possess certain features and characteristics in light of certain agreed-upon standards and objectives" (Hussein, 2005, p. 15).

The Importance of Quality in Scientific Research:

The importance of scientific research is increasing today as countries, especially the leading ones, rely on it more heavily. They have all come to realize the vital role of scientific research in their continued progress and development. Scientific research always strives to provide society with knowledge and science and to contribute positively to finding solutions to its problems. This is clearly evident in scientific research and its various centers. Research is its primary mission, or it takes the form of a research department within one of the agencies of these centers, which conducts precise scientific research addressing important issues and problems and finding successful solutions for them (Al-Ta'i, 2012, p. 131). Ensuring the quality of scientific research is a clear national and regional necessity, as it is the foundation for all types of technological, economic, social, political, and cultural development, due to the connection between scientific research and priorities. Development plans. The quality of scientific research is also reflected in the satisfaction it fosters among both the researcher and the supervisor. (Fashar, 2018, p. 275).

Quality in scientific research is characterized by several factors, most notably: the selection of a specific and clear title, both semantically and temporally, that addresses a problem (avoiding selectivity), is not merely a symbol of entertainment or unquestioning acceptance, and is not shrouded in ambiguity. (Othman, 2014, p. 16).

Quality Standards in Scientific Research:

Quality standards in scientific research are not an intellectual luxury or a mere indulgence to burden the researcher. Rather, they are a practical necessity, more so than a theoretical one, to ensure the proper conduct of research. They facilitate the researcher's acquisition of their topic and their entry into it with methodological ease, guaranteeing a smooth research sequence leading to the desired results in the most efficient way. These standards are not limited to the research itself or its selection; there are important criteria related to the quality of the scientific researcher, others related to the person conducting or supervising the work, and still others related to the quality of the scientific research itself, which is what we are referring to in this study. Quality standards in scientific research are characterized by the availability of a set of elements, some of which relate to the title (Othman, 2014, p. 16).

The Nature of the Title:

- The Title in Language: Ibn Faris, in explaining the original meaning of this word from which its derivative meanings stem, says: "The letters 'ayn' and 'nun' have two root meanings, one indicating the appearance and visibility of something, and the other indicating confinement." Then, within his discussion of the first root meaning—the appearance and visibility of something—he says: "From this root comes the title of a book, because it highlights and reveals its main content" (Al-Awni, 1419 AH, p. 15).

As for its technical definition, the title of a research paper is defined as: "The wording that clarifies the content of the research." Some explain it more simply as the information that motivates another researcher to seek this information under this title. Dr. Ibrahim Salama likens the title to a signpost with an arrow placed at the beginning of a road to guide travelers so they do not lose their way. Others compare it to a mirror through which one can see what the researcher has included. The more the title possesses the necessary conditions and qualities of excellence, the more conclusive it is as evidence of the researcher's skill. Hence the saying, "A writer is one who excels at both the absolute and the specific" (Al-Rabee'ah, 1433 AH/2012 CE, p. 72).

The title is the scientific identity of the chosen research, defining its subject, framework, and boundaries, and even its timeframe in some cases. Researchers are often required to select a suitable title for their research, one that meets both formal and substantive requirements (Othman, 2014, p. 33).

The Role of the Title in Scientific Research:

"First impressions are powerful; therefore, the title should be carefully crafted to provide a definition and summary that indicates what is to come." (T. Clifford Allport)

When preparing a title for a scientific research paper, it is crucial to remember that the title will be read by thousands of people. Those who read the full text of the research are actually far fewer than those who read the title, whether in the original content or in one of the legal databases that indicate it (which provide indexing and abstracting services).

Besides the necessity of choosing words that combine effectively and expressively, grammatical errors are perhaps the most common mistake in short titles, or rather, the most detrimental to conveying meaning.

What is a good title? A good title is defined as: describing the research content in the fewest possible words, without being either too verbose or too concise.

Research without a good title is vulnerable to being lost, and may never reach its target audience (Gastel, 2008, pp. 67-68).

The Responsibility of Formulating the Title:

A systematic scientific study requires a clear and precise title that suggests the research's content and its potential benefits to the reader. Therefore, it is essential to consult specialists, such as qualified professors, to obtain their opinions and suggestions on the research title, discuss its meaning, and understand its implications. This increases the researcher's confidence by providing diverse perspectives.

Just as a researcher may sometimes need to modify their research topic, they may also need to modify their research title. This is a natural process, as researchers may delve deeper into their field of study if new aspects and implications become apparent. This can be frustrating for academic researchers, particularly Master's and PhD students. Therefore, it is advisable for them to minimize fluctuations in their research path to avoid frequent revisions (Dweidri, 2000, pp. 406-407).

Stages of Title Selection: The research title is of great importance because it serves an informative function regarding the research topic and its field. It guides the reader to the research's specific area of focus, and libraries rely on titles for classifying research papers. Given the title's importance, how is it determined?

The proper selection of a title typically involves five stages (Al-Sirafi, 2002, p. 2):- The stage of complete generality: At this stage, the research title is not entirely clear in the researcher's mind. For example, they might suggest "Evaluating the Administrative Policies Followed in the Egyptian Industrial Sector."

- The stage of specificity: Here, the researcher begins to narrow down their research topic, suggesting the following title: "Evaluating the Administrative Policies Followed in the Industrial Sector in the 6th of October City."

- The Limited General Stage: Here, the researcher begins a second phase of narrowing down the scope of their research. For example, they might suggest the following title: "Evaluating the Administrative Policies Followed in the Food Industries in the 6th of October City." - The Specific Title Stage: At this stage, the researcher's vision begins to take shape, leading them to present a specific topic. For instance, they might suggest: "Evaluating the Marketing Policies Followed in the Biscuit Industry in the 6th of October City." - The More Specific Title Stage (The Final Title): At this stage, the researcher has gained a thorough

understanding of their topic from all angles. They might then suggest the following title: "Evaluating the Pricing Policies Followed in the Al-Shamadani Biscuit Industry in the 6th of October City."

Characteristics of a Good Title:

- Conciseness: The title should be formulated in a single sentence or phrase, providing a comprehensive overview of the research's aspects and dimensions.
- Comprehensiveness: Conciseness should not compromise the necessity of mentioning the problem's elements, variables, the relationships between them, and the scope of application. These two characteristics necessitate that the title include the following:
 - The elements of the problem being studied or the governing variables.
 - The relationship between these elements. The variables the researcher aims to study.
 - The human framework of the research, which clarifies the research population or its human components.
 - The geographical framework of the research, which clarifies the field or location of application or experimentation.
 - The temporal framework, especially in historical studies.
 - The documentary framework, which clarifies the research population or its document components. For example, in journalism research, newspapers and their pages are considered the documentary framework of the study, and in radio and television, program recordings are considered as well.
- The principle of comprehensiveness does not necessarily mean that all these elements must be present in the title, as this depends on the nature and objectives of the research.
- The title should be structured according to both linguistic and methodological rules. Active elements or variables should not be delayed, nor should the field of application be presented before the relationships between the elements are established.
- Ambiguity in the title should be avoided. Reasons for ambiguity include linguistic factors such as inversion, the use of the passive voice, the use of rhetorical devices or complex vocabulary, or archaic words. Clear and explicit terminology and concepts should also be used.
- Avoid bias in establishing relationships or definitively stating conclusions: The title should indicate the methodology and objectives more than the results or generalizations.
- Consider ethical considerations and social norms when choosing words or constructing phrases.
- Eliminate unnecessary references to the meaning, method, tools, or samples in the title, such as descriptions like "Field Study," "Analytical Study," or "Comparative Study." The skill of title construction lies in conveying these aspects without explicitly stating them (Muhammad, 2000, pp. 89-90).

Phrases to avoid in the title:

- Do not place brackets around the title or a period at the end.

- The indexing and summarization of the research paper depend on the accuracy of the title. A research paper with an inappropriate title will lose its significance and will likely go unread. - The title should not contain abbreviations.

- Imperative verbs should not be used.

- The most important words should be placed at the beginning of the title so that the subject of the study can be identified at a glance.

- The title should include keywords or relevant terms that reflect the content of the research paper.

- The title should be specific and meaningful, not general.

- It should reflect the main and essential nature of the experiments and results.

- Many journals require a short title, or what is called a running title, to be printed at the top or bottom of each page of the article or research paper upon publication (Obaido, 2014, p. 275). 10- Methods for Choosing the Most Suitable Title:

Upon completion of the research and its components, a title must be chosen for the research – perhaps from the outset. The title is of particular importance as it is the first phrase one sees, and it is the key to engaging the research details, or conversely, the opposite. Therefore, great care should be taken in choosing the title. Some suggested methods include:

- First: Brainstorming and generating a set of proposals.

- Second: Applying the criteria matrix for choosing the most suitable title, following these steps:

a- Determine the score for each criterion, out of 10.

b- Assign the scores to each proposed title.

c- Add up the scores for each name.

- Third: Finally, the title that receives the highest score is the most suitable. Rely on God and adopt it. (Al-Hamili, 1434 AH/2013, page 28). The matrix is as follows:

Table (1): Represents the Criteria Matrix for Choosing the Most Suitable Title.

<i>Tille</i>	<i>Standards</i>			<i>Total</i>
	<i>short</i>	<i>related</i>	<i>attractive</i>	
Tille 1	*			/
Tille 2		*		/
Tille 3			*	/

(Al-Humaili, 1434 AH/2013, page 28)

Research Title Evaluation Model:

Table (2): Represents A Model for Evaluating the Research Title

1. Does the title accurately reflect the research topic? Yes No
2. Does the title clarify the research methodology? Yes No
3. How many words are in the title..... ?

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4. Are there any words in the title that could be interpreted in more than one way? Yes No
 5. Are there any words in the title that can be removed without affecting the title? Yes No
 6. How clear is the dependent variable in the title..... ?
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(Al-Sirafi, 2002, p. 8)

Conclusion

Scientific research is the means or path to acquiring knowledge and discovering information, ultimately leading to solutions for some of the problems facing humanity. This is achieved by following the scientific method. Scientific research appears in its final form in the document written by the researcher to present all the knowledge and sciences they have acquired. This process involves consulting various scientific sources, particularly those relevant to the research topic. The researcher includes all the necessary information and data in the research after taking appropriate scientific measures to verify its accuracy. This undoubtedly helps the researcher achieve the desired scientific objectives of writing the research and also explains why this particular research topic was chosen over others.

The process of acquiring this knowledge requires a series of systematic scientific steps that the researcher must understand to ensure the research meets the standards of high-quality scientific inquiry. Among the most important steps that every researcher must master is "choosing a title for their research," as it is the face of their work and a reflection of its quality. Therefore, in this research paper, we have discussed the nature of a title, its place in scientific research, its importance to the quality of the research, how to define it through various stages, and the conditions and specifications of a good title, etc. We have also addressed the considerations that must be taken into account when choosing a title, pitfalls to avoid, and methods for selecting the most suitable title when several appropriate formulations are available for the topic.

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