



## *The phases and techniques of making university dissertations and theses*

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### **Abstract:**

The scientific research is one of the factors that contribute to the scientific and technological progress in the human communities, as it helps solve and understand many phenomena and directs the human efforts and thought towards the exploration and validation of knowledge. Therefore, the humans could not study the phenomena and issues before the discovery of methodology, which covers different tools, methods, processes, etc. In this context, it was necessary to regulate the scientific research principles and identify its bases, landmarks, and steps.

The process of conducting a scientific research is very important because despite the researcher's possession of the cognitive theoretical concepts and frames, he must follow scientific steps and use academic techniques that facilitate the research and help shape the research in a methodological image. Based on what was said, this study aims at showing the main phases and techniques of making university dissertations and theses.

**Keywords:** scientific research; phases; dissertations; techniques; theses; methodology.

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## **I. INTRODUCTION**

Today, the scientific research plays a vital role in the scientific renaissance, as the researchers contribute to the human balance of knowledge with their innovations. In this context, the academic institutions are the main centers for this scientific activity thanks to their role in encouraging the scientific research and motivating students. If the researcher wants to achieve scientific logical and realistic results, he must be fully aware about the procedures and rules of this science, as their rejection undermines the work and results in a collection of information that cannot properly solve the problematic of the research. Thus, the scientific research requires a method that organizes the logical thinking to solve the problematic. In this regard, the dissertations and theses are aspects of the scientific research. Therefore, the researchers have to follow specific steps and exact techniques to yield a methodological work far from randomness.

### **2. The choice of the research topic:**

Choosing the topic is the first step in making a scientific research. It is a difficult step, mainly for the beginner, as it is surrounded by hesitation and perplex because the researcher wants to investigate new points in his field and add to the existing knowledge a work with an added scientific value that satisfies the readers and gets their appreciation. Choosing a topic that has been tackled is one of the worst mistakes for any researcher.

#### **2.1 The factors that help choose the topic:**

##### **2.1.1 The analytical critical reading:**

The critical reading of books, ideas, and theories raises different questions about their validity, giving the researcher a good focal point. Besides, the continuous reading of the intellectual productions and literature related to the field of interest introduces the researcher to new problems and researches (Al Mahmoudi, 2019, pp. 91-92).

##### **2.1.2 Literature review:**

The scientific researchers are overlapping and complementary. Therefore, the researcher can start from where the research of another stopped. In this regard, the conclusions of many studies point to potential future focal points they could not focus on due to time limitations or lack of potentials (Ibid., p. 2019, p. 92).

##### **2.1.3 The published papers:**

The papers are short and deal with topics from different angles. Hence, they pave the way towards new research topics.

##### **2.1.4 Exchange of ideas and views:**

The exchange of ideas with others is as important as the other methods of finding a research topic. The colleagues and friends may raise the researcher's interest by discussing points he did not notice. Consequently, ideas exchange opens new horizons (Angres, n.d., p. 124).

### **2.2 The conditions of choosing the research topic:**

Before choosing his topic, the research must respect the following points:

#### **2.2.1 The researcher's inclinations and interests:**

The research topic must be interesting for the researcher to avoid boredom and negligence, which may even lead to abandoning the research after spending time and making efforts. In this context, choosing an interesting topic helps reach better results

than when dealing with a topic he feels obliged to investigate (Abdel Karim & Abboud, 2010, p. 215). Therefore, if the researcher wants to make a good work, he must meet the objective desire and ask some questions, as Dr. Ahmed Chelbi puts, as such:

- Do I love and lean to my topic?
- Can I do this work?
- Is it possible to write a research on this topic?
- Does this topic deserve efforts?

If the answer is no, the researcher must change the topic to save time and effort and succeed.

### **2.2.2 Novelty and innovation:**

The topic must be new and unprecedented, and the researcher must make sure the research is not conducted by another to avoid wasting time and efforts. Therefore, he must read literature on his topic and survey the papers, periodicals, books, and indexes, ask experts of his field, and declare in specialized journals his conduct of a research. In this regard, if he finds out that another has started the same work before, he must change the topic or agree with the other to cover two different sides of the topic to ensure novelty and authenticity. However, the researchers can cover the same topic in competitions to solve difficult problems. The novelty of the topic is based on a set of criteria, including the following (Al Radini & Abboud, 2010, p. 216):

- Revealing a hidden fact
- Providing a new interpretation
- Completing a lacking side

### **2.2.3 The availability of sources and references:**

In order for the researcher to optimally carry out his research, the sources and references must be available (Al Khachab, n.d, p. 09). Therefore, the researcher must avoid the topics that have rare references so as not to waste time and effort. Besides, he can provide solutions from available scientific materials without doubt or intuition. In this regard, some scholars identify the scientific value of the research from the availability of the sources, mainly the primary ones, which are much read (Inaya, 2010, p. 216).

### **2.2.4 The limitation of the topic far from generality:**

The general topics do not serve the scientific research since they can be discussed in books, not academic works. The scientific research scholars state that it is necessary for the research topic to be in one point that can be investigated in depth. Usually, the beginner researchers choose very general topics, what makes them unable to reach results, such as the case of “the aesthetics of the place in the contemporary novel”, which is a very wide topic that cannot be carried out.

## **2.3 The methods of choosing the topic:**

We have two methods; the first is about the choice of the topic by the researcher while the second is about choosing it by the supervisor. The first method is the best because the researcher is the one specialized in his topic and lives with it in harmony. The topic is generally chosen during the university studies based on the extensive readings that supply the researcher with a scientific background. As for the second method, the researcher finds difficulty in the beginning of his career in choosing the

topic, mainly the researchers with weak scientific potentials and little time. In this regard, some researchers have a low balance of readings, and many topics have been already investigated. Thus, the researcher needs patience and long contemplation in investigating his topic. In this regard, the supervisor may have important topics, and some researchers prefer that the supervisor chooses the topic because he is more able to understand the students' mind and needs. Besides, the supervisor's choice of the topic pushes the researcher to committing to the topic, make discussions, and get beneficial answers related to the topic.

### **3. The title of the research:**

If the researcher chooses the topic, he must set a good and exact title because it is one of the important points in writing a research and is the gate of the topic. Thus, the researcher must take time in choosing his topic to get a title that covers all the topic points and sides and allows the reader to understand the nature and limits of the research (Abdel Karim & Abboud, 2010, p. 221). Some researchers compare the title to the leaflet with an arrow that guides the passengers to their goals (Chelbi, 1992, p. 47). The main title must be:

- Very exact in indicating the topic.
- Very clear and far from vagueness.
- Covering the details of the subject.
- Very influential on the reader thanks to its attraction.
- Strong and motivating for reading.
- Conveying an important problematic (Othman, 2014, p. 33).
- Scientific and far from the poetic and allusive style.
- An averagely long statement, neither very long nor very short, to show the researcher concentration.
- A simple statement with an easy and clear language.

These guidelines must be respected during the research also.

### **4. The problematic:**

It is the main idea from which the researcher starts. It is all what raises our doubts and questions that require study and investigation. Al Jarjani defines it as what is achieved after contemplation.

#### **4.1 Identifying the concept of the research problematic:**

The research topic and problematic can be defined as all what draws the attention of the researcher towards investigation to know what is ignored or assess what is known (Jebli et al., 1998, p. 327). Gates defines the problematic as that problem that faces a person when he wants to reach a goal. Thus, he needs to solve the problem and overcome the obstacle. However, if the way is open, there is no problem (Attoui, 2007, p. 59). The research problematic is the difference felt by the researcher between the starting situation that seems unconvincing and the target situation. When the researcher feels the need to reduce the gap between what is existing and what is desired, we admit the existence of a research problem. Thus, the problem is the gap that must be filled between what is known and what we want to know using the research problem (Fali, 2009, p. 127).

The problem is expressed starting from the feeling of ignorance and will to know more about the situation noticed. To correctly identify the problematic, Kiplinger provides three main criteria, namely (Gharbi, 2009, p. 21):

- The problematic must be exactly, clearly, and correctly formulated and take the form of a question.
- The problematic must exactly show the relation between two or more variables.
- The problematic must be empirically testable.

Therefore, the identification of the problem aims at understanding the topic and the path of the research, and at directing the researcher towards a given fact, i.e., without a problem, it is not possible to draw the limits of a given topic. In an exam for instance, when we do not understand a question, we cannot reach the correct answer. Thus, the researcher can know what he wants to investigate and why (Hamed, 2008, p. 97).

#### **4.2 The importance of the problematic in conducting the research:**

The problematic is the backbone of the research. Usually the beginner researchers do not know this fact. Therefore, it is necessary to know its importance and how to correctly formulate it. The problematic in research is like the concrete base in construction because it represents the extent and bases of the research. Since it is possible to make many researches on one topic, the problematic of each research is what characterizes one research from another, as it describes the view from which we start in dealing with the problem. The view determines the research direction (Fali, p. 127). Thus, it is the central unit of the research.

#### **4.3 The main factors before identifying the problematic:**

- The researcher must have scientific and practical incentives. The scientific is moral more than material, such as getting a degree recognized nationally and abroad and gaining fame and good reputation; these things are acquired, not inherited.
- The researcher must be used to reading to gain knowledge and information related to the topic.
- The researcher must have a good command of language and its rules to formulate a good problematic.

#### **4.4 The problematic formulation:**

We have four main steps:

- Feeling the problem (Al Qadi, 1984, p. 48): After choosing the topic, the researcher tries to delve in it and finds vagueness, which turns into a feeling of anxiety. Therefore, he tries to focus on the dimensions of that feeling.
- The exploration: The vagueness was a mere feeling. But then, the researcher explores it by reading related literature and collecting information that confirms the existence of the vagueness.
- The analysis: After collecting information and facts, the researcher divides the problem into elements and analyses it.
- Formulating the problematic: It is about the verbal expression of the problem. Generally, the problem combines two parties that represent keys to solving the research question. The problematic is formulated in a text that shows the hypotheses, general question, and sub-questions that cover the different sides of

the topic.

#### **4.5 The conditions of formulating the problematic:**

The problematic must be clear, acceptable, and limited to express the content and field of the research. The data collection requires the researcher to choose the terms that exactly express the content of the problem to avoid a multilateral, very detailed, or narrow problem that cannot be clearly understood. To formulate a problematic that meets the international standards, the researcher must follow the following points (Bellaala, 2005, p. 44):

- Avoid questions that need direct answer, and opt for those that trigger debates and thinking.
- Generate questions from questions to delve deep in the phenomenon.
- Ask diverse questions related to the method, the author, the text, etc.
- Ask questions that help formulate graphs and models, i.e., which focus on the relations.
- Ask new and clear questions.
- Avoid redundancy and contradiction.
- Include two or more variables and link them.

#### **5. Setting the research plan:**

It is the structure of the topic and reflects the ability of the researcher to study it. In this regard, each topic has its specific nature, quality, method, and purpose that require a specific plan. Besides, it differs based on the researcher's culture, personality, level, inclinations, university, scientific traditions, conditions, considerations, and other influencers. The plan is the space where the cognitive keys and methodological marks of the research meet. It shows the landmarks and important questions. However, it is an ongoing process, not a plan that is set before the research starts as in architecture (Bellaala, 2005, p. 64). Thus, the plan is dynamic and has three forms (Bellaala, 2005, pp. 64-65):

##### **5.1 The primary plan (The primary perception):**

It embodies the big and main elements of the research and gives a primary image of its nature. It is the main landmark for the use of references and sources and helps understand the research problematic. Despite it is not fully clear, it prepares the researcher to move to another space where it becomes more exact. In this regard, it continuously changes and needs adjustments to the point that the researcher feels surprised with the difference between the primary and final plan.

##### **5.2 The detailed scientific plan:**

Here, the primary perception changes into a set of detailed elements after reading much literature to develop it. Thus, the plan turns practical to interpret the research topic in the light of the information obtained from reading.

##### **5.3 The edition plan:**

The practical plan changes into an edition plan after the researcher collects the similar and different texts to integrate them within the plan and get new ideas to be used as sub-headings. The researcher tries to coordinate them for the unity of the research. In this regard, the plan focuses on different processes like analysis, deductions, and comparison to reach the edition plan.

## **6. Collection, documentation, and tabulation of the scientific content:**

This phase comes after the primary plan. The researcher identifies the sources and references and prepares them for reading. To collect the needed information, the author must access:

- General knowledge cycles and books related to his topic.
- The encyclopedia, as they provide different references related to the topic.
- Modern books that discuss points of his topic to find more information and references.
- The general libraries and the scientific institutes' indexes.
- Internet, which is the most easy and fast source at the present to get information.

After collecting scientific content, the researcher starts the analytical reading.

### **6.1 The phase of reading:**

Undoubtedly, books provide much information on content, styles, and methodology to some people and no information to others (Chelbi, 1992, p. 68). Some believe that reading is easy as long as the sources are found and the plan is made. However, reading is difficult because, as Cole states, the ability to read and digest the written information is achieved by few people, and reading without concentration and criticism is a waste of time and enthusiasm.

### **6.2 The conditions and rules of reading:**

To have a good and successful reading, it is necessary to respect some conditions:

- Avoiding reading when physically or mentally exhausted.
- Attention and concentration during reading.
- Avoiding reading during psychological, social, and health crises.
- Showing organization and saving time.
- Devoting time for contemplation between different readings.
- Reading in the morning because studies showed that the human can understand better in this time.
- Avoiding the irrelevant points and using indexes to know the relevant works. In this regard, the readers of ancient books do not find indexes because the art of writing was not developed. The ancient writers discussed details very much that we can find important information in inappropriate places. Therefore, it is better to skim these books and scan the important information when found (Chelbi, 1992, pp. 71-72).
- Using prior knowledge and skimming the sources and references to assess them (Al Radini & Abboud, 2010, p. 252).

### **6.3 The types of reading:**

Reading the sources and references goes through different phases, as follows:

#### **6.3.1 Skimming:**

It is a fast reading to know the related topics by taking a look on the index, titles, introduction, conclusion, and references to identify the value and topics of the work.

### **5.3.2 The normal reading:**

It is used when detecting important topics during skimming to get ideas and results to be written in stickers and files (Kandliji, 1999, pp. 70-71).

### **6.3.3 Scanning:**

It is used with some documents that cover very important related topics that need concentration and rereading.

## **7. The style of writing scientific researches:**

After preparing the references and writing down and organizing the scientific content, we need to harmonize them in a good scientific formulation with commitment to the scientific method in the presentation and discussion of facts to ensure quality. In this context, Al Hassan Bin Bishr al Amadi states that the good writing and vocabulary strengthen the meaning and add aestheticism making the reader feel something new (Abu Suleiman, 1987, p. 179).

### **7.1 Synthesis:**

It is combining and organizing the different parts, and is the researcher's creativity in combining expressions with expressions and meanings with meanings.

#### **7.1.1 Sourcing:**

It is a common term that refers to the phase of collecting materials (Thoraya Melhas, 1983, p. 83). If the clothes are made from cloth, the researches are made from references and sources.

#### **7.1.2 Commenting:**

It shows the ability of the researcher to understand, analyze, interpret, deal with data, and show his views. This shows his scientific background regarding a given topic. Commenting takes different aspects, mainly (Awad & Al Khadiri, 1992, pp. 109-110):

- Supporting the view of the original author based on scientific criteria far from redundancy and extremism in support.
- Opposing the view of the original author without excess or mockery.
- Commenting must not be a restatement or a verbal or superficial reflection of what the original author said because this adds no new.
- The comment must be based on elements and objective facts far from bias.

### **6.1.3 Criticism:**

It shows the personality of the researcher, as he does not stop at collecting and transferring information; rather, he shows his attitude with arguments to refute the wrong based on study and examination because some researchers reach wrong conclusions that are used in other researches (Al Khatib, 1983, p. 116).

#### **7.1.4 Analysis:**

It is clarifying the idea by simplifying and analyzing it. The main tools for the researcher include:

- The logical accumulative analysis of the parts to reach the whole; it is also known as the structural analysis of the partial elements to reach the whole.
- The disciplinary analysis of the topic in its general frame with its generalities towards its branches and details; it is also known as the gradual analysis from general to specific.

### 7.1.5 Deduction:

It is achieved by turning the topic into a number of logical topics with given correlations, which are measured to show new implicit relations and prove them through the achieved scientific facts (Awad & al Khadiri, 1992, p. 111).

The researcher must combine the scientific and literary styles in his writing to ensure the logical integrity, good style, and sequence of ideas. Therefore, he must be aware of the language rules and expression arts; that is why we focus on the method of writing a scientific research regarding language and scientific style, which are the main criteria in writing the scientific researches to ensure a good, understood, sequenced, and strong language that bridges the gap between the researcher and the reader and establish an intimate, logical, and convincing dialogue that creates interaction and intellectual exchange.

The term “style” designates two things. The first is about the meaning. It states that the style is a research plan and the skill in organizing the paragraphs and ideas and presenting the content, results, and all what strongly affects the value of the message. In this context, the style must:

- Be clear and far from vagueness.
- Avoid strange words and garments.
- Avoid the dialectical style that does not imply scientific truths and is far from the required scientific spirit. If it is necessary to discuss the views of others, it should be polite and fair without compliments or fear.
- Avoid mockery and irony because they lead to disagreements. In this regard, the innocence of the researcher manifests, as he does not delete important points or cause problems he can avoid (Chelbi, 1992, pp. 95-96).

The second is the set of terms and expressions that contain the scientific subject, which are sequenced and not complicated.

### 8. Conclusion:

In the end, the methodology of scientific researches is very important, as it guides the human efforts and thought towards the exact and objective exploration and validation of knowledge. It is a continuously developing science with the development of facts and information. Therefore, the researchers must learn its bases, principles, and techniques. Based on what was said, our findings show that:

- It is necessary to choose novel and innovative topics.
- The title must be well formulated, comprehensive, clear, attractive, and far from redundancy.
- The researcher must formulate a good research problematic.
- It is necessary to identify the primary sources and make sure of their availability to ensure the success of the work.
- The researcher must make superficial and deep readings of the studies that serve his work to develop his analytical skills.
- It is necessary to acquire an exact scientific style.

Thus, we recommend generalizing the research techniques on all the fields for their importance, and organizing study days and conferences for the graduating students.

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