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Tenth lecture

Introduction:

The importance of methodology in scientific research lies in several aspects that can be summarized in the following aspects, in that it is (a tool of thought, reasoning, and organization), after which it is an important tool in increasing knowledge, continuing progress, and helping the student to develop his abilities in understanding information and data and knowing the concepts, foundations, and methods on which any work is based. scientific reseach.

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Some common mistakes in scientific research

Research Title

The title is the formulation of the concepts to be studied in a specific and clear way.

Possible errors:

- The title is general and does not focus on a specific subject.
- The title is long and worded.
- Lack of clarity about some variables.
- Inaccurate title and repetition of words.
- The idea and content of the research differ from the title.
- The researcher's specialty is not clearly stated in the title of the research.
- Using the word (effect) with "in" and using the word "effectiveness" with "on" is the opposite.
- Use the word "tendencies" for the upper grades, and the word "direction" for the lower grades.
- Using the word "acquisition" for the upper grades, and the word "development" for the lower grades.
- Using the word (some) strategies, for example, and the researcher uses only two.

content list

It is placed at the beginning of the research, and includes distributing the material contained in the research in a sequential manner, where each main or subtitle is placed and corresponding to it is the number of the pages on which it was contained.

Possible errors:

- The titles in the index do not match what is in the search.
- Pages are numbered differently than in the text of the paper. Index
- pages are numbered with numbers, not letters.

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Introduction

An introduction that paves the way for the topic being treated, and usually includes an introduction to the topic being researched, its importance, its purpose and the reasons for choosing it, as well as the general goal of the research.

Possible errors:

- Failure to take into account scientific integrity in terms of quotations and writing paragraphs.
- Failure to connect parts of the introduction.
- Prolonging the introduction and filling it with anything that is not related to the topic.
- Using literary and structural introductions.
- Lack of focus on the main topic of the research.
- Many quotations without linking or commenting on them.
- Failure to take into account the logical progression in writing from general to specific.
- The researcher's identity does not appear.
- The introduction focuses on some variables and not others.
- Failure to observe chronology.

Research problem

Defining the research problem in particular is one of the most important stages of preparing the research plan. Therefore, it must be written in a scientific manner, provided that it includes evidence and proof that confirms the existence of the problem, in clear, specific, and documented terms that accurately express the title of the research and end with an informative or interrogative phrase that defines the problem.

Possible errors:

- The problem is general and not specific.
- Not specifying the reasons for choosing the problem.
- Defining the problem in the form of a question without providing a preface about the need to research it.
- Not distinguishing between feeling the problem and identifying it.

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- The problem lacks objective justifications and does not provide evidence or proof of the existence of the problem.
- Failure to present the problem in a logical way that can clarify the motives and justifications for the research.
- Using some wrong methods when the researcher presents his sense of the problem (using...As a general speech teacher without scientific evidence, not conducting an exploratory study on the research problem or failure to fulfill its conditions).

Research questions

In research questions, the researcher expresses what he wants to research through his study, and in precise scientific language that shows the relationship of the research questions to the problem at hand. Therefore, he must define or formulate one or more main questions from which sub-questions branch, through which the researcher aims to reach their answers.

Possible errors:

- Write broad questions.
- Formulate non-measurable questions.
- The research questions are not related to its objectives.
- Formulate research questions in a complex manner.
- The questions should reflect the hypotheses.
- There are linguistic errors in the formulation of questions.
- Research questions are not related to the problem, and begin with the interrogative word "is."

Research hypotheses

A hypothesis is defined as a scientific statement, an intelligent and possible answer to the research questions, which the researcher attempts to verify through a series of scientific procedures, and the research hypotheses are derived from the results he reached through the theoretical framework and previous studies.

Possible errors:

- The hypotheses are inconsistent with the research objectives, problem, and theoretical framework.
- Failure to specify levels of statistical significance in the null or alternative hypothesis.
- Formulating vague or untestable hypotheses.
- Formulating hypotheses that are not supported by scientific foundations.
- Placing hypotheses in the wrong place (before studies).

research aims

The researcher precisely defines the goals that the research seeks to achieve, so that they are realistic, achievable, measurable, and closely linked to the research problem and why he is researching it? This requires that the researcher provide a main goal from which sub-goals emerge, and the research goals are linked to his questions so that they are a reformulation of them in informative terms, in a clear, understandable and free of ambiguity.

Possible errors:

- Talk about the result before the goals.
- Not distinguishing between the objectives of the research and its importance.
- Objectives are not related to the research problem.

research importance

-The importance of research and the reasons for choosing it are sometimes defined by the justifications for conducting the research, or its benefit, and it explains what the research problem requires, as follows:

- The theoretical or scientific importance of the research:

It explains the new information and generalizations that the research will add that have not been reached before.

- The applied or practical importance of the research, which shows the extent to which the research contributes to providing scientific solutions to the problem at hand.

Possible errors:

- The importance is not related to the research problem.
- Not specifying the group that will benefit from the research.
- Failure to clarify the scientific and practical addition to the research.

search limits

Possible errors:

- Being satisfied with temporal, spatial and human boundaries and ignoring objective boundaries.
- Not clarifying the reasons that made it limited to the limits of the research.
- Not adhering to the limits of research.

Search terms

Possible errors:

- Being satisfied with temporal, spatial and human boundaries and ignoring objective boundaries.
- Not clarifying the reasons that made it limited to the limits of the research.
- Not adhering to the limits of research.

Search terms

Possible errors:

- The procedural definition should not be related to the research topic.
- The researcher did not comment on the quoted definitions.
- Expanding the definition of non-key terms.
- The researcher employs multiple definitions that conflict with his orientation and procedural definition.

Previous and similar studies

Possible errors:

- Find research similar to his and steal his previous studies.
- . Taking summaries of previous studies without reviewing the original study.
- Presenting studies that are not related to the research topic.

- Trying to prove that the research is unique in its field.
- Collecting a large number of previous studies and focusing on quantity at the expense of quality.
- Taking previous studies from secondary sources.
- Failure to link previous studies that are related to the research problem.
- Focus only on studies that support the researcher's point of view and ignore those that oppose it.
- Previous studies were not arranged objectively.
- Presentation of previous studies in the body of the research in a biographic way (name of the researcher, scientific title, title
- Search, date of publication, place of publication...).
- The researcher did not address the procedures that were addressed in previous studies in the field of his research in terms of
- The use it will have and how he will develop it to suit his research and procedures.

Theoretical framework

It is the theoretical reference from which the research problem, objectives, importance, limits, hypotheses, methodology, tools, and procedures are derived. When the reference is a set of scientific facts and concepts and not theories, it is called a conceptual framework.

Possible errors:

- The theoretical framework is not related to the research problem.
- The theoretical framework is not related to the research variables.
- Relying on quoting texts without commenting on them.
- Lack of distinction between theoretical and conceptual framework.

Research methodology and procedures

It means the methods, procedures or approaches that are used to collect data and through them reach results, interpretations, explanations or predictions related to the research topic and the steps that the researcher will follow in answering his research questions, which include: the research methodology, tools, population, and sample.

Possible errors:

- Lack of logical arrangement of the research parts.
- Failure to adhere to the scientific methodology in writing research.
- Failure to explain the reasons for choosing the research method.
- Statistical methods do not match the methodology used.
- Not specifying the research community and its sample, the characteristics of each, and the method used to select the sample.
- Uncertainty about the representation of the sample members of the research community.
- The experimentation time did not match
- the time plan of the Ministry of Education.
- The research tool is not consistent with the research problem, its objectives, and its study methodology.
- Relying on translation of foreign tools without taking into account the cultural dimension.
- Weak or sometimes non-existent honesty and consistency procedures.
- The research relies on inaccurate and subjective research tools.
- Poor linguistic formulation of the items of the tools used.
- The researcher does not distinguish between the concepts of method and methodology.
- Confusion between the study methodology and its experimental design.

Analyze and interpret results

Under this element, the researcher determines the statistical methods

- descriptive and inferential - through which the data are processed. This method is necessary in quantitative research, whether the research is field, experimental, or quantitative documentary. However, if the research is historical documentary, the method of data analysis is contained within the researcher's clarification of how to employ the research methodology.

Possible errors:

- Unorganized and not related to the research objectives and questions.
- Neglecting to write the text of the hypothesis at the beginning of the analysis, and presenting its tables, and just mentioning it

- Just her number.
- The statistical treatments used are not compatible with the presentation of the
- results. It does not include the necessary organizations (tables, figures, etc.) that convince the reader.
- The researcher does not link the results of his research to any of his goals that he set at the beginning.
- Exaggerating the description of the research results and the impact of its independent variables on the dependent variables, or
- Even his descriptive study of society is
- what. The results do not indicate the importance of any practical aspects that can be benefited from or applied in the future
- Other educational environment.
- The interpretation of the results is not based on evidence derived from the results and is so superficial that it does not lead to acceptance or
- Rejecting research hypotheses or answering research questions.
- Allow personal preferences to intervene in the procedures and interpretation of research data.
- The researcher does not link his results to previous relevant studies and does not explain the degree of similarity or...
- Disagree with arguments that convince the reader and show the originality and importance of the research.
- The researcher does not show his scientific personality and does not explain his opinions independently and based on scientific foundations.

Summary of the research and presentation of the results

- recommendations and proposals The results are the summary of what the researcher has achieved in his research and are the input from which recommendations and proposals for future research topics result.

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Possible errors:

- The summary does not include the research objectives, sample, procedures, and the most important findings researcher.
- The distorted abbreviation of the research results so that they do not reflect the importance of the research and the questions it contains And assignments.
- Not realizing the difference between the research summary and its abstract.
- The results in the foreign summary differ from the original.
- Place the foreign abstract after the abstract.
- There is no distinction between the wording of the recommendation and the proposal, and the number of proposals exceeds the number of research results.
- Recommendations are not consistent with the results.
- The recommendations are not divided into scientific and practical.
- The proposals are not related to the research problem.
- Proposals do not include new research ideas.
- The proposals do not include recommendations for concerned parties.

Aspects of language and production

It means the external and formal appearance of the font type, the correctness of the spelling, grammar, and linguistic writing, as well as the internal organization of the research pages.

Possible errors:

- Relying on models that differ from the manual in designing the external cover page.
- Extensive and detailed preparation of the dedication or thanks page.
- Error in some Quranic verses and use of some in the wrong place.
- Disproportionality between the number of chapter pages.
- Omitting some figures whom it is important to thank, and not writing the scientific title
- For discussants.
- Linguistic, grammatical and spelling errors.
- Repeated use of some words, such as: the researcher did, the researcher was keen.
- Do not formulate phrases in the passive voice.

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- Neglecting to put punctuation marks in the correct places.
- The absence of numbers for some pages of the research, separators, references, appendices).
- Inserting tables and appendices into the text, and neglecting to number them.
- Failure to adhere to the guide in terms of font type, size, and spacing.
- Do not provide each chapter with a brief introduction or introduction to explain the importance of the chapter and its contents.

References and documentation

- References: These are all the sources that the researcher uses in his research, and relies on in understanding his research, and they include books, periodicals, reports, university theses, publications, and seminar papers.
- Documentation: Preserving, appreciating and preserving the efforts of others. What is meant is the researcher's reference to the sources of information he used in completing his scientific research.

Possible errors:

- Using documentation in a way not approved by the university.
- Multiple forms of documentation.
- The presence of references in the body of the thesis that are not included in the list of references.
- The presence of references copied from other messages.
- The names of authors in the reference list differ from what is written in the text of the research.
- Inaccuracy in alphabetical order.
- Lack of consistency in the way references of the same type are written.
- Lack of unification of abbreviations for the same periodical in foreign references.
- Not documenting all references used.

Conclusion

The researcher's commitment to an organized methodology and work plan is one of the basics of preparing integrated scientific research. Commitment to controlling the problem of the study and covering it from various theoretical as well as practical aspects is not sufficient in the absence of organization, good direction, and correct documentation of the various information relied upon in building the research.

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