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Common Mistakes In Using Field Data Collection Tools – The Questionnaire As An Example

Samiha.Younes * Laboratory for the Study and Analysis of Social Problems in Algeria., Faculty of Social Sciences and Humanities, University Mohamed El Bachir El Ibrahimi, Bordj Bou Arreridj, Algeria

Corresponding author*: samiha.younes@univ-bba.dz

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Abstract

Most researchers and practitioners in the field of scientific research aspire to present their research work in the best possible manner, utilizing the knowledge and methodological skills acquired throughout their academic journey. They adhere to the methodological principles of scientific research, which serve as the fundamental reference and scientific framework for various stages of scientific research. Despite adhering to the commonly accepted methodologies among researchers and academics, many of them quickly fall into various methodological errors, whether intentional or unintentional. Building upon the aforementioned, our study aims to address various common errors that students and researchers encounter when using field data collection tools, particularly questionnaires, as one of the most widely used tools in the field of social sciences.

Keywords: Common errors, Data collection tools, Questionnaire.

1-Introduction

Methods and tools of scientific research vary from one study to another, ranging from measurement devices to observation, interviews, testing procedures, and questionnaires, among others.

The selection of appropriate methods or tools depends on the research objectives and the nature of its hypotheses. A researcher may need to use a single method or tool, or multiple tools, to accurately address all the questions posed by their study. Therefore, it is necessary for every researcher to:

- Be aware of research methods and tools and their types in order to choose what suits their research.
- Familiarize themselves with the characteristics of these methods and tools to be aware of the level of reliability they provide.

- Acquire the skill of effectively using these methods and designing them when they are not readily available.
- Learn to interpret the results collected through these methods.

Researchers should adopt their research tool and develop it themselves, or use methods or tools developed by other researchers related to their research topic, after modifying them to fit the purpose of the research or the circumstances associated with it. One of the most commonly used research methods, especially in the field of humanities and social sciences, is the questionnaire (Saif al-Islam Saad Omar, 2009, pp. 86-87).

2- Concept of Questionnaire: The questionnaire is a technique for collecting data or information to verify research hypotheses. It is a testing technique through which the researcher presents a set of questions to the sample individuals to obtain information from them, which is later processed quantitatively and compared with what was proposed in the hypotheses. It is worth noting the existence of another similar term to the questionnaire, which is the survey. Some methodological works use the term survey (Saeed Saboon, 2012, p. 155).

In his book "Methodology of Scientific Research in the Humanities," Maurice Anderg argues that the questionnaire, or as he calls it, the survey, is a direct technique for scientific inquiry used with individuals, allowing for guided questioning and quantitative sampling to find mathematical relationships and make numerical comparisons (Maurice Anderg, 2004, p. 204).

The questionnaire (survey) is a document that includes a set of questions directed to respondents, who are the individuals of the sample selected by the researcher to verify the research hypotheses. These respondents are expected to provide answers to specific issues or points related to the study objectives. It is worth noting that the researcher's resort to using the questionnaire is not intentional or arbitrary, but rather the logical outcome of the research process, especially considering the study objectives, which guide them towards the appropriate data collection technique or tool (Saeed Saboon, 2012, p. 156).

3-Types of Questionnaires: Questionnaires can be classified according to the type of response required from the respondents into four types:

3.1Closed or Restricted Choice Questionnaire: In this type, the answer is constrained, as it contains questions followed by specific answers or options, and the respondent only needs to select one of them by marking it with a cross (×) or a circle around it, or any other indication requested by the researcher.

3.2Open Questionnaire: In this type, the answer is free and open, allowing the respondent the freedom to answer a number of questions in their own way, style, and language. The aim of this type is to give the respondent a greater opportunity to

express their opinion, thoughts, and provide full and explicit justifications for their answers.

3.3Semi-Closed/Open Questionnaire: Also known as the semi-structured questionnaire, it contains a number of questions with predefined and specific answers provided by the researcher, along with a number of open-ended questions or questions with predefined answers followed by a request to explain the reason for the choice. This type is considered better than the previous two types as it eliminates the drawbacks of each.

3.4Pictorial Questionnaire: In this type, questions are presented in the form of drawings or images instead of written statements. This type is usually presented to children or those who are unable to read and write, and its instructions are usually verbal (Saif al-Islam Saad Omar, 2009, pp. 87-88).

4.Design Rules for Questionnaires: Designing a questionnaire is not an easy task, as it requires great intelligence. The researcher must consider several rules and standards while formulating it, related to its content, form, and objectives (Amer Masbah, 2010, p. 147).

4.1General Formulation Rules: General formulation rules include the content (size) of the questionnaire, where it is assumed not to be extensive to avoid exerting effort from respondents. The researcher should avoid including unjustifiable questions or those that require detailed or complex thinking. If information can be obtained from other sources such as records and documents, there is no need to request it through the questionnaire. To encourage respondents to answer accurately and seriously, elements should be included that attract their attention or allow them to express their opinions. Therefore, it is necessary to ensure that each question in the questionnaire is related to the research problem and contributes to achieving a partial goal that contributes to the overall research objectives (Khaled Hamed, 2012, p. 145).

4.2Rules related to Question Formulation: Consideration should be given to clarity and simplicity, with questionnaire phrases and vocabulary formulated in clear and easily understandable words with limited meanings, making them easy to comprehend without ambiguity. It is preferable to use common words with agreed-upon meanings. The sentences used in formulating questions should be short and linked to the meaning. Each question should contain only one idea, no more, to avoid making respondents feel embarrassed. All possible answer options should be provided, focusing on the main options, while leaving an open option for the possibility of another choice (Raja Wahid Dawidri, 2008, p. 331).

4.3Accuracy of Answering Questions: Special questions should be included to clarify the accuracy of the respondent, and questions should be formulated whose answers are related to the answers of other questions in the questionnaire, as any discrepancy in the answers reveals the respondent's lack of accuracy in answering.

4.4Ordering of Questions: Care should be taken to start with easy questions that address basic, clear facts related to age, social status, monthly income, and so on. Questions should be logically sequenced, with researcher-specific questions on a particular topic grouped sequentially in the questionnaire, followed by questions related to another topic. The researcher should start with easy and general questions and address each question as a single problem (Saif al-Islam Saad Omar, 2009, p. 90).

5.Steps in Designing the Questionnaire: The researcher follows four main steps in designing the questionnaire, which can be summarized as follows:

- Stating the purpose of the questionnaire in light of defining the general subject of the study (problem formulation) and stating the study objectives.
- Preparing the sub-questions related to the main question (the problem), ensuring that the questionnaire's purpose is reflected in light of the research problem. This involves formulating one or more questions around each sub-topic and linking each question to an aspect of the problem, while reducing the number of questions and focusing on the essential ones. This step helps outline the initial structure of the questionnaire.
- Conducting a pilot test of the questionnaire by presenting it to a number of study participants before final approval. Participants are asked to comment on it, indicating whether the questions are clear or ambiguous, how well the questionnaire covers the research topic, and suggesting additional questions regarding the research problem that were not addressed in the questionnaire.
- Modifying the questionnaire based on the suggestions, if any, thus finalizing the questionnaire (Amer Masbah, 2010, p. 147).

6.Contents of the Questionnaire: In its final form, the questionnaire consists of two essential parts: 6.1. Introduction of the Questionnaire: This section includes an introduction to the researcher and the study, where the researcher explains the scientific purpose of the questionnaire, the type of information needed from the respondents, and encourages them to provide objective and explicit answers to its sections. It reassures them about the confidentiality of the information, which positively affects respondents. Additionally, the introduction clarifies how respondents should answer the questionnaire sections, as some questions may require a specific answering method.

6.1 Questionnaire Items: This includes all questionnaire questions along with the answer choices provided for each item, allowing the researcher to choose the most appropriate answer.

6.2 The questionnaire consists of two paragraphs, encompassing all questionnaire questions with the corresponding answers placed in front of each paragraph. This allows the researcher to choose the answer they deem appropriate.

7. Advantages and Disadvantages of the Questionnaire:

7.1. Advantages of the Questionnaire: Undoubtedly, the questionnaire, as a primary and important tool in field data collection, offers numerous advantages, which can be summarized as follows:

- Saves a lot of effort and time in data collection, especially if sent via email or regular mail, enabling coverage of geographically distant locations in the shortest time possible.
- Provides respondents the freedom to choose the appropriate time to fill out the questionnaire and the freedom to think and refer to some sources they need.
- Gives respondents sufficient opportunity for reflection without imposing psychological pressure on them, as is the case with interviews or tests.
- Considered the most representative tool for the studied problem, as its sections can be distributed across its aspects, similar to public opinion polls.
- Suitable standardization conditions are available for the questionnaire, as words can be chosen, questions can be arranged, and answers can be recorded.
- Assists in obtaining sensitive or embarrassing data that the researcher cannot obtain through interviews or other survey methods (Saif al-Islam Saad Omar, 2009, p. 89).

7.2. Disadvantages of the Questionnaire: Just as the questionnaire has advantages, it also has drawbacks, which we outline below:

- Low response rate, which means the possibility that the opinions of respondents may differ from the rest of the original population of the study, thereby limiting the generalizability.
- Existence of unanswered questions by respondents due to reasons related to the type of questions or personal reasons related to the respondents.
- Misunderstanding of some questions by respondents, leading to different or contradictory answers compared to the researcher's intent.
- Inability of the researcher to know some emotional or affective matters of the respondent while answering the questionnaire.
- Reliance primarily on verbal ability to answer the questionnaire makes it unsuitable for illiterate individuals unless the questionnaire is pictorial, which is rarely used.

- Lack of seriousness of some participants in responding, resorting to random answers.
- Misunderstanding of some questions by respondents leads to incorrect interpretation, resulting in inaccurate answers (Saif al-Islam Saad Omar, 2009, p. 89).

8.Common Mistakes in Using Questionnaires: Many students, when conducting research or writing their theses, often make numerous mistakes, mostly due to their lack of familiarity with the basics of scientific research or their limited experience in this scientific field. Through our experiences in discussing students' theses at the undergraduate and master's levels, and even at the doctoral level, we have found many mistakes that students commit when using data collection tools, especially the questionnaire. Here, we highlight some of the most common mistakes in using this research tool:

- One common mistake made by many students is believing that the questionnaire is the easiest tool for collecting field data. Most, if not the majority, of students' theses at the undergraduate and master's levels, and even in doctoral studies, use this tool exclusively, despite the diversity of research tools for data collection, which vary according to scientific research methodologies.
- Many social science researchers deviate from objectivity and fall into bias and sometimes prejudice. They resort to a selective process when collecting data, trying to choose and record data that support a particular viewpoint while ignoring other data that contradict this view.
- Many researchers use the questionnaire to obtain information that they could acquire by consulting various documents or through alternative methods.
- Failure of the researcher to follow scientific procedures and necessary steps for designing the questionnaire and ensuring its validity and reliability.
- The researcher's lack of emphasis on explaining the purpose of the questionnaire to the respondents and failure to thank the respondents for their participation.
- Overloading the questionnaire with too many questions, requiring the respondents to spend a long time answering them, which may lead some to refuse to fill out the questionnaire.
- Including questions in the questionnaire that are beyond the respondents' scope of knowledge or asking embarrassing questions or those related to the respondents' personal lives, such as questions related to philosophical beliefs, religious practices, or topics considered taboo. For example, asking respondents: "Do you pray?"

- Using questions that rely on negation or suggest specific answers, directing respondents to certain answers over others.
- Students' use of unscientific language in a clumsy style, or using unscientific terms that do not match the cultural level of the respondents, in addition to linguistic errors in writing, whether spelling or grammatical errors, leading to misunderstanding and thus affecting the reliability of the responses.
- Among the mistakes that many students make when formulating questionnaire questions is the length of the questions and combining multiple variables in one question, such as asking the respondent, for example: "Do you prefer to use Arabic or English in your research?"
- Many students overlook presenting the questionnaire questions for arbitration by experienced professors specializing in the field of the questionnaire's subject matter, to verify the accuracy of the questions and their suitability for the research objectives and hypotheses.
- After designing the questionnaire, many students forget to apply it to a trial sample to ensure the accuracy and clarity of the questions to the respondents.
- One common mistake made by researchers and students is relying on a single type of questions in preparing the questionnaire—whether closed or open-ended—such as researchers relying on questions like: "Is your monthly salary sufficient for your basic needs?" "Are you satisfied with your job?" ... etc.

Conclusion:

Engaging in scientific research is neither easy nor straightforward. It requires significant effort and diligence from those involved in this field, as well as precision and adherence to the principles and basics of scientific research to avoid many errors that often result from students' and researchers' lack of awareness, knowledge, and practice. In order to avoid such errors, we offer a set of useful tips and guidelines in scientific research methodology:

- Students should strive to have a high level of familiarity and understanding of scientific research methodology. The more they acquaint themselves with research books and scholarly references, the fewer mistakes they are likely to make.
- Students should carefully select their research topics, focusing on identifying their problematics, research objectives, followed by selecting appropriate methodology and tools.
- Students should seek the expertise of professors and specialists in the field of scientific research, consulting knowledgeable and experienced individuals.

- Scientific research is more of a practical field than theoretical. Therefore, students should prioritize engaging in field research and testing its methods and approaches firsthand.

References:

1. Khalid Hamed (2012) - Methodology of Research in Social and Human Sciences - 2nd ed., Dar Jassur, Mohammedia, Algeria.
2. Rajaa Wahid Dweidari (2008) - Scientific Research: Theoretical Foundations and Actual Practices - Dar Al-Fikr Al-Mu'asir, Beirut, Lebanon.
3. Said Saboun (2012) - Methodological Guide for Preparing Theses and University Dissertations in Sociology - 2nd ed., Dar Al-Qasbah, Algeria.
4. Saif Al-Islam Saad Omar (2009) - Summary of Scientific Research Methodology in Education and Humanities - Dar Al-Fikr, Damascus, Syria.
5. Amer Musbah (2010) - Research Methodology in Political Science and Media - 2nd ed., Diwan Al-Matba'at Al-Jami'iah, Algeria.
6. Kauther Hussein Kojok (2007) - Common Errors in Educational Research - 1st ed., Alam Al-Kitab, Cairo 2007.
7. Maurice Angers (2004) - Methodology of Scientific Research in Humanities - Translation: Mustafa Madi and Said Saboun, Dar Al-Qasbah, Algeria.