

Lecture 6: Developing Research Questions, Aims, and Objectives.

By the end of this lesson, you will be able to

Distinguish between a research objectives, aims, and questions or what is called the Golden Thread

Be able to write research questions, research objectives, and research aims

Introduction:

Upon completion of the literature review, the subsequent crucial step involves defining the research questions, aims, and objectives. Although closely interconnected, the research problem, research aims, research objectives, and research questions maintain distinct roles. Serving as a litmus test for relevance, the research aims, objectives, and questions collectively guide the research endeavor, ensuring that every element contributes meaningfully to the study's overarching goals. In moments of uncertainty regarding the inclusion of specific information, one can refer to them, posing the question, "does this contribute toward my research aims, objectives, or questions?" If not, it is likely extraneous and can be omitted.

I-Research Questions

1. What is a Research Question?

A research question serves as the focal point of inquiry within a study, encapsulating the primary query that the research endeavors to address. During this phase, the researcher transitions from the broad subject of their investigation to the formulation of precise and researchable questions.

Various definitions have been proposed to elucidate the nature of research questions, as highlighted in the following quotations:

According to Creswell (2015 p. 110),

“Research questions are questions in quantitative or qualitative research that narrow the purpose statement to specific questions that researchers seek to answer. Researchers typically develop them before identifying the methods of the study (i.e., the types of data to be collected, analyzed, and interpreted in a study). Unlike the single statement found in a purpose statement, researchers typically state multiple research questions so that they can fully explore a topic. Research questions are found in both quantitative and qualitative research, but their elements differ depending on the type of

research you are conducting”.

According to Macintyre (2000, P. 30)

“The research question is the central focus of your investigation. It must be clear, unambiguous, and genuine i.e. not something obvious that can be answered ‘yes’ or ‘No’; and if possible concise!”

According to Leavy, (2022)

“Research Questions are the central questions that guide a research project. They are the questions you seek to answer or explore. Once you have developed your research purpose statement, which details your objectives, you can develop questions that will help you achieve those objectives. The questions must be researchable. In other words, these are questions that can be directly answered through research”.

There is no set rule for determining the number of research questions in a study. Typically, a study may have anywhere from one to three primary research questions. Additional, more focused secondary questions may be attached to the primary question, aiming to narrow down the study's focus (Leavy, 2022). These research questions can take two forms:

- (a) A central question: The central question is a broad question that asks for an exploration of the central phenomenon or concept in a study.
- (b) Associated subquestions: The subquestions narrow the focus of the study but leave open the questioning. The subquestions can also become specific questions during the interview, observation or document examination at a later stage of the study.

For instance:

Primary Research Question: How do students describe the impact of the zero-bullying policy in their school?

Secondary Research Question 1: Do students feel safer because of the policy?

Secondary Research Question 2: Are students more likely to report bullying they experience or witness?

This example illustrates that the primary objective of the study is to explore how students describe the impact of zero-bullying policies. The secondary questions serve to support this primary goal by providing a more detailed understanding of specific aspects related to the central question.

1/1. Qualitative versus Quantitative Research Questions

Once you identify a research problem, it's crucial to assess whether it aligns more effectively with a quantitative or qualitative approach. The distinctive characteristics of these two approaches necessitate a careful consideration of their compatibility with your research problem. According to

Johnson & Christensen (2014), “**Although research questions are found in both quantitative and qualitative studies, they differ somewhat in their structure. Quantitative research questions state exactly the relationship being investigated between the target variables. Qualitative research questions are not as specific. Instead, qualitative research questions are more likely to ask a general question about a process or express intent to explore or understand the participants’ meanings of a particular phenomenon**”. Thus, several factors play a pivotal role in determining this alignment. For instance, what aspects of the phenomenon under investigation can be quantified, and what aspects are better explored qualitatively? The nature of your research problem, the type of data you seek, and the depth of understanding required are all key considerations in making this decision. The appropriateness of quantitative research is often seen in studies aiming for numerical precision, generalizability, and statistical patterns, while qualitative research is well-suited for exploring complex phenomena, capturing participants' perspectives, and generating in-depth insights

A. Qualitative research Questions

In general, qualitative research is well-suited for research questions centered around the meaning of experiences and inquiries related to broader meaning-making. It typically addresses "how...?" rather than "why...?" questions. As articulated by Johnson and Christensen (2014, P. 163), "A qualitative research question is an interrogative sentence that asks a question about some process, issue, or phenomenon that is to be explored." Leavy (2017, P.128) adds that qualitative research questions are inductive (open-ended) and often initiate with the words "what" or "how." These questions may incorporate nondirectional language, using terms such as explore, describe, illuminate, unearth, unpack, generate, build meaning, and seek to understand”.

Examples of Qualitative Research Question

1 / How do homeless people in London experience their daily lives Radley, Hodgetts, & Cullen 2005.

Quality focus: Experience or understanding

Broad Approach: experiential

2/ What social and environmental barriers do parents and children see to healthy eating, physical activity and child obesity prevention programmes Hesketh, Waters, Green, Salmon, & Williams; 2005

Qualitative focus: Perceptions, Views, and opinions

Broad Approach: Experiential

3/Bodycott, Walker, and Kin, (2001) investigated the belief that pre-service teachers held about their principals. Their statement of purpose was as follows:

The purpose of this study was to explore how the social context of schools and schooling influenced pre-service teachers' personal constructs of the principals

The research question that followed from this purpose statement is this:

How does the social context of a school influence pre-service teachers' beliefs about the principals?

4/ Main Question: How do employees perceive digital transformation in retail HR?

Secondary Question: What are the barriers and facilitators of digital transformation in retail HR?

B. Quantitative Research Questions

In quantitative research, research questions inquire about the relationships among variables being investigated and are usually used in social science research and especially in survey studies (Creswell 2014) "Quantitative research questions are deductive. Questions center on how the variables under investigation relate to each other, affect different groups, or how they might be defined. They may employ directional language, including words such as *cause, effect, determine, influence, relate, associate, and correlate*" (Leavy, 2017, P. 92). **According to Johnson and Christensen (2014, P. 163) A quantitative research question is question about the relationship that exists between two or more variables. Common forms are descriptive, predictive, and causal research questions,**

Examples

Example 1 What effect does playing football have on students' overall grade point average during the football season? (This question specifies exactly the variables that are to be investigated: the extracurricular activity of playing football and academic performance as measured by overall grade point average.

Example 2 Does student self-care predict the well-being scores of engineering graduate students?

Does student support predict the well-being scores of engineering students?

Do student self-care and student support interact when predicting well-being in engineering graduate students?

II- Research Aims

1. What is a Research Aim?

The research aim represents **the overarching purpose** of the research stated in general terms (The

focus required for good research means that there is **usually only one aim per study**). Possible aims include

1. **Adding to the knowledge base**
2. **Achieving a personal, social, institutional and or organizational impact**
3. **Measuring changes**
4. **Understanding a complex phenomenon**
5. **Testing new ideas**
6. **Generating new ideas**
7. **Examining the past**

True to the name, research aims usually start with the wording “this research aims to...”, “this research seeks to...”, and so on.

For example:

“This research aims to explore employee experiences of digital transformation in retail HR.

“This study sets out to assess the interaction between student support and self-care on well-being in engineering graduate students”

As you can see, these research aims provide a **high-level description** of what the study is about and what it seeks to achieve. They’re not hyper-specific or action-oriented, but they’re clear about **what the study’s focus is** and what is being investigated.

III/ Research Objectives

1. What is Research Objectives?

The research objectives take the research aims and make them more practical and actionable. In other words, the research objectives showcase the steps that the researcher will take to achieve the research aims. The research objectives need to be far more specific (higher resolution) and actionable than the research aims. In fact, it’s always a good idea to craft your research objectives using the “SMART” criteria. In other words, they should be specific, measurable, achievable, relevant and time-bound”.

Examples

Let’s look at two examples of research objectives. We’ll stick with the topic and research aims we mentioned previously.

For the digital transformation topic:

1. To observe the retail HR employees throughout the digital transformation.
2. To assess employee perceptions of digital transformation in retail HR.
3. To identify the barriers and facilitators of digital transformation in retail HR.

And for the student wellness topic:

1. To determine whether student self-care predicts the well-being score of engineering graduate students.
2. To determine whether student support predicts the well-being score of engineering students.
3. To assess the interaction between student self-care and student support when predicting well-being in engineering graduate students.

As you can see, these research objectives **clearly align** with the previously mentioned research aims and effectively **translate** the low-resolution aims into (comparatively) higher-resolution objectives and **action points**. They give the research project a clear focus and present something that resembles a research-based “to-do” list.

References

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