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Using concepts related to research design while writing thesis and dissertation at universities: questioning the status quo

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Funding: No specific funding was received for this work.

Potential competing interests: No potential competing interests to declare.

Abstract

Different Master's and Ph.D. advisors or supervisors request their students to use different concepts in a research design chapter. The concepts are research methodology, research design, and research method. The supervisors inform their students to use these concepts in combination as research design and research methodology or research design and method or research methodology or research method as a chapter main heading as per their university or department guidelines or their own experience. However, I argue that the concepts must be used consistently worldwide by understanding their differences and similarities. Therefore, this short paper tries to conceptualize the concepts in line with different research methodology books and articles and suggest concepts to be used as a heading of the research design chapter in a thesis and dissertation.

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Keywords: research methodology; research design; research method.

Introduction

Master and doctoral students' supervisors at different universities and departments force their students to use headings for a research design chapter without clearly conceptualizing different concepts and their relationships. Consequently, the supervisors and their students use different concepts as heading even within a department when different research methodology books and articles have explained the concepts differently. Presenting the different definitions of the concepts by different scholars, this paper argues and proposes a concept that is appropriate for a research design chapter

of a Master's or Ph.D. thesis or dissertation. Therefore, the main purpose of this conceptual paper is to review the literature, clarify the different concepts and propose a solution to avoid confusion in using concepts related to research design. To achieve the purpose, the following basic questions were framed.

1. How do different scholars define the concepts of research methodology, research design, and research methods?
2. What is the difference between the concepts?
3. Which concept should be used as a heading of the master's and doctoral thesis and dissertation research chapter? Why?

Method of the literature review

As the main purpose of this review was to examine the definitions of the concept research methodology, research design, and research method, identify gaps observed in conceptualizing the concepts, and propose a solution for future practice, among the different types of literature reviews 'narrative review, integrative review, and systematic review' (Toronto & Remington, 2020), a narrative literature review was used in this review. Based on the experience, opinions or a priori assumptions of the reviewer, present theories and models, a narrative review summarizes different sources and reaches conclusions from holistic interpretation narrative analysis (Campbell Collaboration, 2001; Toronto & Remington, 2020). According to Toronto and Remington (2020, p.2), "narrative review does not follow a systematic method for locating and analyzing selected studies". Hence, keywords were identified in line with the research questions; online sources mainly Google, Google Scholar, ERIC, EBSCO, and Z-Library were browsed, relevant literature was identified; the literature was quoted, described, and synthesized, and critiqued (questioned the status quo), and an explanation has emerged from the concepts for future practice.

The concepts of research methodology, research design, and research method

Different scholars explain research methodology in different ways. For example, Adams, Khan, Raeside, and White (2007), research methodology is the scientific procedures and paradigmatic assumptions that researchers use in all types of research whereas a method is an approach that researchers use to study a specific research problem. On the other hand, according to Cohen *et al.* (2007:47), the research method is an instrument for data collection, and research methodology is the kind and approach of research including its paradigm and process.

Research methodology is a general approach to scientific inquiry that includes the way research questions are asked and answered, the choices of research designs, sampling logics, data analysis strategies, the ways generalizations are made, and the quality of research assessed. Whereas, the research method is a strategy of research that has its specific research design, sampling techniques, and methods of data collection and analysis. (Teddle & Tashakkori cited in Creswell & Tashakkori, 2007).

According to Somekh and Lewin (2005), research methodology is the rules, principles, theories, and values that guide researchers to conduct their research in line with a specific research approach, whereas Walter (2006) contends that

research methodology is the context of a study that is determined by a paradigm of a study. Lukenchuk and Kolich (2013:73) also define research methodology as a plan for studying a research problem or issue. According to Morgan (2007:68), research methodology is beyond methods. For Wiggins (2009), a method is an approach, technique, and procedure for data collection, analysis, and reporting; research methodology is the study of methods in line with their paradigms.

On the other hand, scholars define research design in different ways. For Punch (2005), a research design is the main plan of research that contains the strategy, conceptual framework, the participants or issues of the study, and methods of data collection and analysis. Creswell and Plano Clark (2007) define research design as a procedure for collecting, analyzing, interpreting, and reporting data of research. Comparing these two definitions, the latter is very specific and includes one of the four main elements from the explanation of research design by Punch. According to the definition of Punch, if research design has to incorporate the conceptual framework of a study, it might also include a theoretical framework or model of a study instead of the conceptual framework. Punch includes strategy as one of the components of research design from the perspective of specific quantitative design, qualitative design, or a mix of the two designs (Punch 2005). Whether the paradigm of research is part of research design is not included in the definition of Punch. However, it can be argued that if research design is the basic plan of research, it must include the paradigm base of specific quantitative, qualitative, or mixed methods design. Whereas, the definition of Creswell and Plano Clark (2007) equates research design with methods of data collection and analysis that do not include some more elements of research design in line with the aim or purpose of a study. As a whole, the research design of research should match its purpose (Cohen et al., 2007).

Questioning the status quo

From the above definitions, we can understand that different scholars in different contexts define research methodology and research method. They do not have an agreed explanation of the two important concepts for researchers, research methodology academics, and postgraduate students. Some scholars define methodology as the sciences and philosophies of all research, which is very general and very broad that is related to research courses. Some others define it as a general research approach like quantitative, qualitative, or mixed that has its paradigm base in line with a research context. Still, some others define it as a plan of research that they equate with research design. This implies that the research design is the same as the research methodology. If the two concepts are the same, no need of using research design and research methodology together in a research design chapter. Rather, I argue that we can substitute method for methodology. On the other hand, scholars also define research method as an approach or strategy that is used to research a specific research problem. In this case, they equate the research method with the research methodology. Other scholars define the research method as the method of data collection and analysis. Hence, I argue that as research design is the overall plan of a research study that includes the specific strategy from the research approach, participants of a study, sampling techniques, and methods of data collection and analysis, we are not expected to use the general concept, research methodology which is beyond a specific research design, and research methods as they are included in

a research design of a study.

Implications for practice

Generally, the three research approaches (quantitative, qualitative, and mixed) have different designs in line with the specific research problem. Therefore, I can argue that if research design is a plan that included a paradigm, a specific strategy, and methods, no need of using the concept research methodology, as it is included under a design as a specific strategy. Research methodology should not be included in a specific study if its meaning is related to the science and philosophy of all research approaches. The research method is part of the research design. Hence, we can use only 'Research Design', rather than 'Research Design and Methodology' or 'Research Design and Methods' or 'Research Methodology' or Research Method'. This argument will also imply writing articles for publications in different journals and editing articles.

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