



MIXED METHOD RESEARCH: A BRIEF OVERVIEW

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RESEARCH ARTICLE



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DOI:

<https://doi.org/10.70096/tssr.250305017>

Abstract

Mixed Method research is a strong way of research because it uses two quantitative and qualitative approaches in a study. This method helps researchers see patterns in data while also understanding people's personal views and experiences. In this way, it gives a fuller picture of social, educational, and behavioural issues. Based on the aim of pragmatism, Mixed Method methods research focuses on answering equivalent research questions. This paper looks at the main philosophies behind Mixed Method methods, explains the different types of methods designs, and also shows the benefit and drawback of this approach. By applying the advantage of both quantitative and qualitative methods, mixed methods help build theories and solve real-life problems. However, it also has some challenges, such as being complex, time-consuming, and requiring more resources. Overall, mixed methods research is an important and flexible strategy balance between different ways of studying problems in today's academics' work.

Keywords: *Mixed Method Research, Quantitative Research, Qualitative Research, Research Methodology*

Introduction

Research is a systematic as well as organized process to increase knowledge, problem solving, and contribute to understanding within a field. Creswell (2014) defines research as "a process of steps used to collect and analyse information to increase our understanding of a topic or issue" (p. 3). It involves identifying a problem, reviewing existing literature, selecting appropriate methods, collecting and analysing data, and drawing conclusions based on evidence (Kothari, 2004). The systematic nature of research ensures that findings are reliable, valid, and applicable beyond the immediate study context. By following established methodological and ethical standards, research provides both theoretical advancement and realistic application.

Over the past few decades, scholars have increasingly recognized that complex social, educational, and behavioural issues cannot always be fully addressed using only quantitative or qualitative methods alone (Johnson & Onwuegbuzie, 2004). Quantitative research, grounded in the post-positivist paradigm, emphasizes measurement, generalization, and statistical analysis, whereas qualitative research, grounded in interpretivist traditions, emphasizes meaning-making, context, and participants lived experiences (Denzin & Lincoln, 2011). Both approaches have unique strengths and limitations, which has motivated researchers to consider combining them in a complementary way.

Mixed Method research is a powerful methodological approach that integrates two elements quantitative and qualitative research to address multifaceted research problems. According to Creswell and Plano Clark (2018), Mixed Method methods research "integrates the collection and analysis of both qualitative and quantitative data in a single study or in a sustained program of inquiry" (p. 5). This integration allows researchers to capitalize on the advantages of both approaches: quantitative methods provide generalizability, precision, and statistical rigor, while qualitative methods provide depth, flexibility, and contextual richness (Tashakkori & Teddlie, 2010). By blending numerical trends with narrative insights, Mixed Method research produces new comprehensive and nuanced interpretations of phenomena than either approach could achieve alone.

Moreover, the logical foundation of mixed methods research is pragmatism, which emphasizes practical solutions and methodological flexibility. Pragmatism allows researchers to focus on "what works" in addressing specific research questions without being constrained by rigid adherence to a single paradigm (Morgan, 2007). This paradigm shift has encouraged researchers across disciplines – particularly in education, psychology, health sciences, and social policy – to adopt mixed methods as a versatile tool for both theory development and applied problem-solving (Plano Clark & Ivankova, 2016).

Mixed Method research not only bridges such gaps between quantitative and qualitative traditions but also provides a platform for innovation, integration, and inclusivity in knowledge production. As a result, MMR is increasingly valued in contemporary scholarship as a balanced approach to addressing complex and multidimensional research questions.

Philosophical Background

Johnson and Christensen (2012) explained paradigms as, “a perspective about research held by a community of researchers that is based on a set of shared assumptions, concepts, values, and practices” (p. 31). Paradigms are also known as organizing frameworks or disciplinary matrices (McKerchar, 2008), and hold identifying characteristics, methods and practices that create expectations about the nature and conduct of research.

The final paradigm discussed in this article is the paradigm of pragmatism which is not committed to any sort of philosophical stance (Creswell, 2007) but argues that the forced choices between positivism and interpretivism should be abandoned as it views reality as both singular and multiple. Realism “is pluralistic and oriented towards ‘what works and practice’” (Realism well & Plano Clark, 2011, p. 41). Researchers adopting a pragmatist position have the liberty to choose those research methods or strategies that can best answer their research questions (Creswell, 2007).

Mixed Method Methods as a Research Methodology

A mixed-methods research design provides a comprehensive framework for investigating complex research problems by integrating the philosophical underpinnings of both post-positivism and interpretivism (Fetters, 2016). Through this integration, descriptive and statistical strands are interwoven in this way multifaceted dimensions of analysis are explained in a more meaningful and holistic way. Unlike single-method approaches, Mixed Method research synthesizes the strengths of both paradigms, allowing researchers not only to measure and analyse variables statistically but also comprehend the intricacies of participants' knowledge, perspectives, as well as meanings. This dual engagement offers a logical foundation for inquiry, methodological flexibility, and a nuanced understanding of smaller or context-specific cases (Maxwell, 2016).

Scholars have identified six major explanations for mixing observational and numerical data within a single investigation. The first logic is the expansion synonymous study, which emphasizes that a Mixed Method approach enables researchers to broaden the scope of their investigation by ensuring both depth and breadth. Researchers believe that when information from observation and numerical data are used together in a study, the research becomes strong and reliable. This is because two types of methods are used at the same time. As a result, the research can be analysed in a detailed way. In such cases, the integration of closed-ended quantitative data, which provides measurable trends and patterns, with open-ended qualitative data, which reveals contextual insights, enhances the validity and richness of the findings (Creswell, 2003). In addition to expansion, Mixed Method research is also frequently justified by its capacity to corroborate findings across data sources, to explain unexpected results, and to contribute a related accomplished and reliable account of complex human and sociable phenomena.

Why Mixed Method Research?

Researchers choose Mixed Method research because it collaborates observation and numerical method. It allows for expansion of the study by providing in depth understanding. For example, quantitative data can help generalize findings to a population, while observational data offers rich, contextual insights into individual experiences. Together, these approaches provide a more comprehensive understanding of complex research problems (Creswell, 2003). Mixed methods research is defined as an approach that integrates both quantitative and qualitative forms of data collection and analysis within a single study to provide a more complete understanding of research problems (Johnson, Onwuegbuzie, & Turner, 2007). Mixed methods research is defined as research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry (Tashakkori & Teddlie, 2010). Mixed Method research is “a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases of the research process” (Creswell & Plano Clark, 2011, p. 5).

Types of Mixed Method Research

Mixed Method research designs are broadly classified into several types. According to Creswell and Plano Clark (2018), the major types are as follows:

1. **Triangulation:** In this design, quantitative and qualitative data are collected at the same time and analysed separately. By collecting qualitative and quantitative data together, the topic can be compared as a whole and explained in a complete way.
2. **Explanatory Sequential Design:** In this design, quantitative data is collected first, followed by qualitative data. The quantitative data is first collected and analysed, and then qualitative data is collected to help further analyse and explain the results.
3. **Exploratory Sequential Design:** In this design, qualitative data is collected first, followed by quantitative data. Initially, qualitative data is collected and analysed to explore the phenomenon, and then quantitative data is collected to examine and analyse the phenomenon in generalisations.
4. **Embedded Design:** Embedded design is a type of design in which one form of data (qualitative or quantitative) is included within the main research. It addresses multiple research questions within the same study. By connecting another type of data with the main data, the research becomes stronger. This allows researchers to address different research questions simultaneously and provide supportive information to strengthen the main study (Creswell & Plano Clark, 2018).

5. **Multiphase Design.** This design involves multiple stages or studies over time, where two (qualitative and quantitative) approaches combine to manipulate evolving facts of a long-term study program. This design allows researchers to integrate qualitative and quantitative methods across multiple stages to address complex research questions and enhance the depth and breadth of understanding (Creswell & Plano Clark, 2018).

Strengths of Mixed Method Research

In Mixed Method methods research, both types of data are collected and analysed, making the study more credible, practical, and reliable compared to another research.

1. Holistic perspective. Mixed Method methods research provides both numerical evidence and contextual insights, enabling researchers to obtain a more holistic understanding of complex phenomena (Creswell & Plano Clark, 2018).

2. Triangulation and Validity. By combining different forms of data, mixed methods allow for cross-validation, which enhances the reliability and validity of findings (Fetters, Curry, & Creswell, 2013).

3. Exploration and Confirmation. Researchers can use qualitative data to explore new perspectives and quantitative data to confirm findings, thereby strengthening the credibility of results (Johnson, Onwuegbuzie, & Turner, 2007).

4. Flexibility. Mixed methods provide methodological flexibility, allowing researchers to address diverse research questions that cannot be answered adequately by a single approach (Tashakkori & Teddlie, 2010).

5. Practical Application. The integration of both approaches generates results that are not only academically rigorous but also practical for policymakers, educators, and practitioners (Creswell & Plano Clark, 2018).

Weakness of Mixed Method Research

Although the Mixed Method research method is considered more credible compared to other research methods, it has some limitations that researchers should carefully consider.

1. **Complication:** Mixed Method methods research is often more complicated to method, implement, and interpret compared to specific approaches of studies. Researchers must be skilled in both qualitative and quantitative methodologies (Creswell & Plano Clark, 2018).
2. **Capacity:** Conducting Mixed Method methods research usually requires more time, effort, and financial resources, as it involves collecting and analysing two different forms of data (Johnson & Onwuegbuzie, 2004).
3. **Integration Challenges.** One of the main difficulties lies in effectively integrating qualitative and quantitative data. Poor integration may result in superficial or conflicting interpretations (Fetters, Curry, & Creswell, 2013).
4. **Philosophical Differences.** Mixed methods combine post-positivist and constructivist paradigms, which can create tensions due to differing assumptions about knowledge and reality (Tashakkori & Teddlie, 2010).
5. **Publication Constraints.** Journals and academic outlets may have limited space, making it difficult to present both quantitative and qualitative findings in sufficient depth (Bryman, 2007).

Conclusion

Mixed Method research provides a balanced technique by integrating two methods to gain a deeper and more understanding, reliability of research problems. It combines the strengths of both approaches statistical rigor and contextual depth making it especially useful for studying complex and multidimensional issues. Although it requires more time, effort, and resources, the insights gained from Mixed Method methods are more significant than using one approach. Mixed Method research stands out as a valuable and practical approach in contemporary educational and social research.

Acknowledgment: No

Author's Contribution: *Rimpa Mondal:* Data Collection, Literature Review, Methodology, Analysis, Drafting, Referencing;
Dr. Mahfuz Alam: Data Collection, Literature Review, Methodology, Analysis, Drafting, Referencing

Funding: No

Declaration: All the authors have given consent for the publication.

Competing Interest: No

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