

A New Trend in Research: Mixed Methods Research

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Abstract

Mixed methods research is an emergent research approach that involves intentionally collecting, analyzing, and integrating qualitative and quantitative data in a study to provide a better understanding of a phenomenon. As a cutting-edge methodology, mixed methods research is being used increasingly across countries and disciplines. The purpose of this paper is to provide context for researchers who are interested in adopting and using mixed methods research in their research and evaluation studies. To do so, the researcher provides an insight about mixed methods guidelines and best practices to further elaborate on the conceptualization of mixed methods research. This presentation includes a methodological discussion about mixed methods research.

Keywords: mixed methods research, social sciences, adoption and use of mixed methods research, evaluation

Introduction

Mixed methods research is defined as a new approach to research (Plano Clark, 2010), “third research paradigm” (Johnson & Onwuegbuzie, 2004, p. 14) and “third methodological movement” (Teddle & Tashakkori, 2003, p. 5). Given that there are more than 40 definitions of mixed methods research in the literature, mixed methodologists encourage scholars to provide a reference for their definition of mixed methods research so that they can convey the way mixed methods research is conceptualized in their research or evaluation studies (Johnson, Onwuegbuzie, & Turner, 2007). Mixed methods research is conceptualized as a philosophy (Greene, 2007), methodology (Creswell & Plano Clark, 2018; Teddle & Tashakkori, 2009), and a method (Johnson et al., 2007). Researchers also define mixed methods research as a community of practice given that researchers’ adoption and use of mixed methods research is influenced by their social contexts (Denscombe, 2008). As an emergent research approach and innovative way of thinking about research, mixed methods research gives investigators an opportunity to collect, analyze, and integrate qualitative and quantitative data in a study to better understand a phenomenon rather than using qualitative or quantitative methods alone (Creswell & Plano Clark, 2018). Therefore, mixed methods research represents a third and increasingly popular methodological option that embraces methodological pluralism to address complex problems (Maxwell, 2012; Teddle & Tashakkori, 2009) and the purpose of this paper is to provide context for researchers who are interested in adopting and using mixed methods research in their research and evaluation studies.

The Status of Mixed Methods Research

Since using and integrating two distinct approaches (qualitative and quantitative) in a study require having some additional funding for resources, time for data collection, and expertise in both approaches, it is important to highlight that mixed methods research requires researchers to assess whether they have necessary resources and more importantly their research problem calls for mixed methods research. As highlighted in the literature, researchers choose mixed methods research for three main reasons (Stockman, 2015). First, due to unique perspective gained through mixed methods research, researchers may think that mixed methods research will guarantee their study’s contribution to the field of knowledge. Second, researchers might choose mixed methods research due to its popularity rather than focusing on the intentionality of using mixed methods research. Put simply, the research problem may not call for mixed methods research in a study, but researchers might insist using mixed methods

research due to its growing popularity. Third, researchers might misunderstand the conceptualization of mixed methods research due to limited knowledge or skills in employing the logic of mixed methods research conceptually.

The adoption and use of mixed methods research have been influenced by the predispositions and preferences of researchers as well as their social contexts that include funding allocations and the choice of methodology in their disciplines (Bryman, 2007; Denscombe, 2008; Plano Clark & Ivankova, 2016). The studies show that there is a growing interest in mixed methods research across contexts (Alise & Teddlie, 2010; Coyle et al., 2018; Ivankova & Kawamura, 2010; Lopez-Fernandez & Molina-Azorin, 2011; Plano Clark, 2010). Along with researchers' adoption and use of mixed methods research, scholars have advances pedagogical approaches and teaching practices for mixed methods research (e.g., Christ, 2009; Frels, Newman, & Newman, 2015; Ivankova & Plano Clark, 2018; Poth, 2014). Funding agencies have also played key roles in the growing interest in mixed methods research given that they called for the use of mixed methods research in proposed projects and developed best practices (Creswell, Klassen, Plano Clark, & Smith, 2011; Institute of Education Sciences [IES], 2015; National Science Foundation [NSF], 2002).

As the interest in mixed methods research has grown (Plano Clark, 2010), researchers have examined the practices of mixed methods research to investigate the extent to which researchers practice mixed methods research rigorously (e.g., Molina-Azorin & Feters, 2016; Ross & Onwuegbuzie, 2012; Toraman, Cox, Plano Clark, & Dariotis, 2019). To do so, researchers examined the inclusion of key mixed methods elements as an indicator of well-developed and implemented use of mixed methods research (Creswell & Plano Clark, 2011; Fàbregues & Molina-Azorin, 2017). Therefore, it is important to understand the key elements of mixed methods research and use them in a research or evaluation study accordingly.

Key Mixed Methods Research Elements

Creswell and Plano Clark (2011; 2018) provided guidelines for scholars interested in adopting and using mixed methods research. The guidelines suggest inclusion of key mixed methods research elements to convey the logic of mixed methods research study. First key element is *mixed methods term in the title*. Creswell and Plano Clark (2018) discuss that including the key term mixed methods in the title of a study helps the target audience to learn about mixed methods research. In addition, it gives some clues about the study context. The second key term is *rationale*. Mixed methods research rationale is to provide a clear statement about why mixed methods research is used in the study. Providing a rationale for a research or evaluation study can help researchers avoid the criticism of using mixed methods research due to its popularity given that why mixed methods research used is justified in the study context. The third key term is *paradigmatic assumption for mixed methods research*. This element is rarely found in the abstracts of mixed methods dissertations and thesis (Toraman et al., 2019); however, Creswell and Plano Clark (2018) highly recommend scholars to convey the paradigmatic assumptions used in their studies. Given that the variety of paradigmatic assumptions for mixed methods research is not within the scope of this work, researchers are recommended to read more about paradigms (e.g., Freshwater & Cahill, 2013; Johnson, 2017; Maxwell, 2011; Mertens, 2012; Morgan, 2007; Shannon-Baker, 2016).

The fourth element is *mixed methods design*. Designs are important elements to be explicitly described and detailed in any research or evaluation projects since they are defined as a road map (Plano Clark, Wang, & Toraman, forthcoming 2020). There are various mixed methods research design typologies in the literature from which scholars can benefit (e.g., Creswell & Plano Clark, 2018; Leech & Onwuegbuzie, 2009). Researchers, however, encourage scholars to be creative about the study design and adopt any of the typologies or modify them for their study context (Creswell & Plano Clark, 2018; Plano Clark & Ivankova, 2016). The fifth element is *qualitative methods* that include information about sampling, data collection, and analysis in the context of a mixed methods research study. Creswell and Plano Clark (2018) recommend researchers to provide explicit information about qualitative methods as well as *quantitative methods*, which is the sixth element to include in a mixed methods research study. The seventh element is *sequence (timing)* of qualitative and quantitative components in a mixed methods

research study. This element is important to emphasize the relative timing of qualitative and quantitative components in a study and therefore it helps researchers determine the study design (whether it is a sequential, meaning one data sampling, collection, or analysis is informed by the other one, or concurrent, meaning two types of data collection occurs simultaneously).

The eight element is *priority (weighting or importance)* of qualitative and quantitative components. This element is important but still contentious in the mixed methods literature. While some scholars do not put emphasis on this element, others recommend specifying the priority to convey either of qualitative or quantitative approaches have dominance in a study (Creswell & Plano Clark, 2018). The ninth element is *integration techniques*. Creswell and Plano Clark encourage scholars to specify the integration techniques used in their research or evaluation studies so that they convey the meaningful mixing with intentionality of using mixed methods research. Researchers have advanced these integration techniques for mixed methods research over the years. Challenges and potential problems of integration has been discussed in the literature (Bazeley, 2016; Fetters & Freshwater, 2015) that can help scholars decide how to overcome those integration challenges in their research or evaluation studies.

The tenth and eleventh elements are *the results of qualitative analysis* and *the results of quantitative analysis* respectively (Creswell & Plano Clark, 2018). These are important elements to include in a research or evaluation study given that the main focus of mixed methods research is to combine or mix two different types of data and their results. The results of qualitative and quantitative analysis can be presented in a study in various ways that depend upon the research question(s) of the study. The twelfth element is *the mixed methods integrated results* (Creswell & Plano Clark, 2018). Researchers have advanced the ways in which qualitative and quantitative results can be integrated with new approaches (e.g., joint displays) (e.g., Guetterman, Fetters, & Creswell, 2015; Plano Clark & Sanders, 2015). The thirteenth element is *added value of using mixed methods research*. This element has been discussed in the literature to shed light on what it means and how the contribution of mixed methods research to understanding a study context can be described in a study (Creswell & Plano Clark, 2018; Greene, 2007; Molina-Azorin & Fetters, 2016). When using mixed methods research, it is important for scholars to highlight the unique contribution of using mixed methods research in their study (Creswell & Plano Clark, 2018). This emphasis will also support the justification of using mixed methods research, which is called *rationale*. The fourteenth and last mixed methods element is *advancing the field of mixed methods research*. This element is important to include if/when researchers use mixed methods research in a unique way that advances the use of mixed methods research in methodological, theoretical, or philosophical point of view. This element is found to be very limited (less than %1) in dissertations and theses (Toraman et al., 2019) and therefore is important for researchers to think creatively about the various ways to use mixed methods research.

Conclusion and Discussion

Researchers can further promote the adoption and use of mixed methods by advocating for mixed methods and positioning their scholarly work in their fields. Training and mentoring in mixed methods research can further help researchers secure funding for their mixed methods research projects. As the national and international agencies encourage scholars to propose mixed methods projects, training in mixed methods research can further contribute to researchers to get more funded through mixed methods projects across disciplines and countries. For this reason, approaches and delivery of methods of teaching mixed methods research can vary depending on the contexts and the needs of learners. Yet, there is a need to develop a pedagogical culture in teaching mixed methods research with co-curricular research activities to support learning and practices of mixed methods research. Developing curricula for mixed methods research would further help high quality in training in mixed methods research. Thus, researchers and students across the contexts would have a common understanding of what to teach and how to teach mixed methods research. Accordingly, quality issues in mixed methods research could be addressed with the effective use of mixed methods research elements in the adoption and use of mixed methods research (Fàbregues & Molina-Azorin, 2017).

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