

Closing Commentary: The Contributions of Innovations in Integration in Complex Mixed Methods Evaluation Designs in This Issue and Beyond

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Arguably, much of the methodology of mixed methods research developed through the field of evaluation (e.g., [Cook & Reichardt, 1979](#); [Greene et al., 1989](#)). Perhaps evaluation has fostered mixed methods because of the need to answer practical, very applied questions. Therefore, it may not be a surprise that the field of evaluation keeps pace with mixed methods developments. This special issue represents a set of innovations related to mixed methods integration. The integration of qualitative and quantitative research is perhaps the defining characteristic of mixed methods ([Creswell & Plano Clark, 2018](#)) and can occur at multiple levels—design, methods, data, results, and even investigators—as described in this special issue. This commentary summarizes those distinctive innovations in mixed methods integration and argues that evaluators are in a unique position to contribute to the ongoing dialogue (e.g., [Fetters & Freshwater, 2015](#); [Guetterman et al., 2020](#)) and advance new integration practices and strategies.

The evaluation articles and practice notes included in this special issue describe numerous advances in mixed methods integration. First, MacGregor and Cooper advance the term “*integration literacy*, which we take to mean an ability to determine why integration is appropriate, what objects of the evaluation should be integrated, and when and how integration will occur” (p. 000). In addition, Gokiert and colleagues discuss an innovative design that intersects mixed methods with community-based participatory research (CBPR). They use a visual to succinctly depict when and where integration in their CBPR occurred. Next, Muskoe et al. (2021) conducted a multiphase mixed methods evaluation of an innovative and prominent educational initiative of the Mixed Methods International Research Association. The evaluand involved a massive open online course (MOOC) focused on building mixed methods research capacity. They used a complex mixed methods design for beta testing and evaluating the educational initiative to inform the subsequent season. This study exemplifies utilization of evaluation results and the importance of integration for program improvement. In the final evaluation article, Biru et al. evaluate a large global neonatal and maternal health initiative. In their study, they leveraged different dimensions of integration including methodology,

data, investigators, and theory. For example, they integrated multiple methods to produce defined deliverables, such as a partnership brief that discussed facilitators for forming partnerships, gaps, and recommendations to form better partnerships and ultimately the final report. Notably, they also include a figure that shows how multiple methods were integrated to inform deliverables.

The practice notes emphasize lessons learned from integration innovations. For example, Ramanujan et al. examine a community and school intervention to support foundational learning among children. From a randomized controlled trial (RCT), they selected four villages for an “embedded case study” using multi-stage purposive sampling informed by both key informants and baseline survey data from the RCT. Their example illustrates a solution to a major conundrum: how to identify a purposive qualitative sample from a large quantitative sample. In their report of an evaluation capacity building initiative, Mahato et al. advance an innovation in thinking about integration for different purposes in the evaluation cycle. Their discussion of integration for planning and implementation, replication, and translation is novel. Using collaborative approaches to evaluate a mental health and well-being program for youth, Searle et al. describe how a convergent mixed methods design engaged stakeholders in working sessions of sense-making and reflecting to generate insights. Finally, Hou describes the development and implementation of a competency-based mixed methods assessment of student learning. Specifically, the tool integrated a quantitative competency scale with reflective questions to assess five essential domains of evaluation competency. While the use of mixed methods for research and evaluation is common, the use of mixed methods for assessment represents an innovation. Similar tools could be developed to assess student learning outcomes in multiple disciplines and fields.

Evaluators aspiring to learn more about mixed methods will find the excellent book reviews by Bachan and Poth, Melendez et al., and Worthington et al. useful for highlighting key resources. A fulsome review is offered for each of these recently published books, with a focus on integration. These books offer evaluators with varying levels of MMR expertise an entry to deepening their thinking about its application to evaluation practice.

EVALUATORS ARE IN A UNIQUE POSITION TO FURTHER DEVELOP INTEGRATION PRACTICES

The collection of articles, practice notes, and book reviews in this special issue exemplifies how and why evaluation continues to represent a fertile ground for advancing integration in mixed method designs. In brief, evaluation is unique because of the potential for a large number of data sources, the applied nature of evaluation to address practical questions, the complexity of situational contexts where evaluation takes place, and the sampling considerations which are moderated by propriety, feasibility, and utility in evaluation practice (Yarborough et al., 2011). The following sections dive into each these aspects of evaluation to make explicit connections to mixed methods integration.

Evaluation often draws upon large amounts of data and multiple types

Given the breadth and scope of data, the opportunities for integration are endless. A common purpose of mixed methods evaluation designs is to gain a more complete understanding of a complex problem or program. Evaluators are well positioned to act nimbly when evaluating a program to identify multiple data sources, and more importantly to integrate those sources. In this issue, the complex contexts surrounding the evaluations of Mahato et al. and Hou illustrate the need for multiple types of data.

Evaluation often addresses applied questions to understand and improve programs

In general, evaluations are concerned with what works, for whom, and under what conditions. I encourage evaluators to consider what they hope to address by each type of integration or integrative analysis as illustrated in this special issue by Muskoe and colleagues and Searle and colleagues. Connecting evaluation questions to integration, understanding “what works,” might involve determine whether a program is effective quantitatively. Yet, through integration of qualitative methods, we might address what specific features were most effective or helpful in light of participant experiences. “For whom” types of questions suggest a mixed methods integrative analysis to explain variation. For example, evaluators might identify individuals who benefited and those who did not, and then conduct qualitative research to understand that variation. An integrative analysis could compare qualitative themes for those with different outcomes. Finally, to determine “under what conditions” a program works, evaluators might conduct process evaluation to understand implementation characteristics and context. Qualitative research is often well suited to understand process and implementation. An integrative analysis might then systematically compare outcomes based on implementation characteristics or staff process to explain variation.

Complex evaluation designs benefit from visuals

As seen in this special issue in the visuals to make integration explicit of Biru et al. and MacGregor and Cooper, effective visuals can include an evaluation design diagram of mixed methods research procedures and a joint displays that facilitate and represent integration (Guetterman, Fetters, & Creswell, 2015). There is need for further innovation of evaluation design diagrams, such as creating an overall high-level diagram of the full design complemented by more detailed call-out diagrams to depict specific phases. Regarding joint displays, evaluators have numerous opportunities to develop new joint displays, such as representing integration in a needs assessment, showing the integration of qualitative or quantitative research in developing or modifying a program, or presenting the integration of outcome and process data in a clear way. Current typologies of joint displays do

not reflect those purposes, and evaluators are uniquely positioned to innovate joint displays to meet these needs and others.

Addressing sampling challenges are really important for meaningful integration

Among the key challenges for mixed methods evaluators is thinking about the unique sampling strategy for the qualitative and quantitative strands, the respective sample size, and the relationship between the quantitative and qualitative samples (i.e., the same people or cases or different ones, one sample as a subset of another, etc). Evaluation studies, including those described in this special issue by Ramanujan and colleagues and Gokiert and colleagues, demonstrate that relying on a subsample rather than an entire census of all program participants can be advantageous. This unique characteristic of evaluations provides a prime setting for methodological innovation regarding mixed methods sampling strategies.

CHALLENGING EVALUATORS TO LEVERAGE INTEGRATION AND DEVELOP TECHNIQUES

Evaluators have an opportunity to build on these innovations and continue to advance integration in complex mixed methods designs. To address current challenges in integration, I advance four recommendations for mixed methods evaluators.

1. Think about integration broadly, not just integrating data or results, and take advantage of the full array of tools for integration. Much of this special issue illustrates this broader notion of integration, including how one form of research might inform another or how data collection itself can mix qualitative and quantitative research. There is an entire array of tools, techniques, and strategies for integration to address the multitude of data that complex evaluations generate.
2. Make use of contemporary terms to describe integration processes and procedures. I would add to the integration literacy definition offered by MacGregor and Cooper the use of appropriate terms to describe integration in detail. That should include evaluation methods descriptions that include sections on integration and the use of design diagrams that clearly indicate points of integration.
3. Utilize joint displays as a way to facilitate and represent integration. Mixed methods researchers have detailed different types of joint displays (Guetterman, Creswell, & Kuckartz, 2015; Guetterman, Fetters, & Creswell, 2015; Plano Clark & Sanders, 2015; Younas et al., 2020), how joint displays can be used to address specific research questions (Guetterman & Moss Breen, 2021), and steps in the process of using joint displays for analysis (Fetters & Guetterman, 2021). Moreover, joint displays can simplify complex results for stakeholders and, it is hoped, promote evaluation utilization.

4. Integrate technology through the use of software for integration and mixed method analysis. While several articles in this issue mentioned the use of software for analyzing qualitative data or quantitative data, there is ample opportunity for the use of software that can manage, store, and analyze both qualitative and quantitative data. The *Routledge Reviewer's Guide to Mixed Methods Analysis* (Onwuegbuzie & Johnson, 2021) includes a section on the use of software (QDA Miner, MAXQDA, ATLAS.ti, NVivo, and SPSS) for mixed methods analysis. This work should be extended to address evaluation questions.

This issue provides a wonderful launch to a conversation that I look forward to seeing continue within the field related to innovative practices and strategies for integration in complex mixed methods evaluations.

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