

This article was downloaded by: [Sharlene Hesse-Biber]  
On: 01 August 2015, At: 07:13  
Publisher: Routledge  
Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered  
office: 5 Howick Place, London, SW1P 1WG



## International Journal of Social Research Methodology

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/tsrm20>

### The problems and prospects in the teaching of mixed methods research

Sharlene Hesse-Biber<sup>a</sup>

<sup>a</sup> Department of Sociology, Boston College, Chestnut Hill, MA, USA  
Published online: 31 Jul 2015.



[Click for updates](#)

**To cite this article:** Sharlene Hesse-Biber (2015): The problems and prospects in the teaching of mixed methods research, International Journal of Social Research Methodology, DOI: [10.1080/13645579.2015.1062622](https://doi.org/10.1080/13645579.2015.1062622)

**To link to this article:** <http://dx.doi.org/10.1080/13645579.2015.1062622>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms &

Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

## The problems and prospects in the teaching of mixed methods research

Sharlene Hesse-Biber\*

*Department of Sociology, Boston College, Chestnut Hill, MA, USA*

*(Received 6 November 2014; accepted 9 April 2015)*

There are pedagogical challenges USA students and instructors face within mixed methods classrooms. Instructors of mixed methods are often self-taught, lacking adequate training in both qualitative and quantitative approaches to research. Students are not often trained in both research approaches. These dual training gaps can result in deep pedagogical issues compromising students' ability to fully understand mixed methods research praxis and leaving teachers feeling ill equipped to address students' learning concerns. To tackle the myriad of challenges confronted in the mixed methods classroom requires structural changes to the current way graduate training programs in social research methods are organized and taught. Developing a team-based teaching approach to mixed methods research that provides students with instructors who have the requisite qualitative and quantitative knowledge can serve as a pedagogical model that can begin at least to address the current methods and methodological skills gap in the teaching of mixed methods research.

**Keywords:** mixed methods research; qualitative research; quantitative research; teaching

### Introduction

Mixed methods research courses in the United States are primarily offered at the graduate and upper-division undergraduate level, and have only emerged over the course of the last five years (Frels, Onwuegbuzie, Leech, & Collins, 2012). A recent study of one hundred schools of education throughout the USA notes that twenty-two percent of graduate programs require their graduate students to enroll in a mixed methods course. In addition, twenty percent of educational programs encourage students to take one mixed methods course as an elective offering (Leech & Goodwin, 2008). At the same time, there is a lack of pedagogical literature on the challenges of teaching students mixed methods (Onwuegbuzie, Frels, Leech, & Collins, 2011).

There is an overall deficit of a pedagogical culture with regard to teaching research methods in general. Wagner, Garner, and Kawulich (2011) conducted a systematic literature review of articles published between 1997 and 2007 concluding that there was little guidance provided to teachers of research methods. Earley's (2014) extensive review of the literature on this topic notes the paucity of pedagogical research on the problems and prospects regarding student learning of research

---

\*Email: [hessbiber@bc.edu](mailto:hessbiber@bc.edu)

methods. These studies also point out the lack of interdisciplinary context in the teaching of research methods as a whole.

Most faculty currently teaching mixed methods courses have not themselves taken such a course in their academic career. Creswell, Tashakkori, Jensen, and Shapley (2003, p. 620) refer to these individuals as the 'first generation of faculty' who more or less are teaching themselves the 'how-to's' of doing mixed methods research and at the same time trying out the 'how-to's' of teaching these methods to their students. Earley (2007, p. 146) notes that those who are the teaching pioneers of mixed methods courses, '... find ourselves in the same situation: we were not officially trained in the mixed-methods research process and have to create these courses without the benefit of prior coursework to guide us.' In addition, Frels et al. (2012) state that few studies examine the issues students and instructors face in the contemporary mixed methods classroom thus leaving a pedagogical gap in our understanding of 'what works' well in the teaching and student learning in the mixed methods classroom.

Yet there are signals that the pedagogical ground is shifting toward an increased focus on teaching and learning of research methods as a whole. Kilburn, Nind, and Wiles (2014) path-breaking work on the pedagogical state of social science research methods in UK higher education included an in-depth exploration of twenty-four published papers that specifically addressed research methods 'pedagogical culture.' In analyzing these papers, the authors note the wealth and range of activities and formal classroom learning that is related to the building of students' skills in research methods. Their review of the resource rich content in these papers concludes on a more optimistic note and they discerned in their review, three important goals of an effective pedagogical process. The first goal is to make the learning of research visible through engaging students in a series of learning exercises across the research process. The second goal is to have students conduct their own research. The final goal is to have students critically reflect on their own research praxis.

Levine et al.'s (n.d.) work is one of the few studies to address some of the specific challenges students and instructors encounter in the mixed methods classroom. The authors, too, engaged in 'reflective learning' in their mixed methods course, which took the form of using students' weekly mixed methods classroom reflections as the basis of subsequent class discussion and debate. This served to specifically identify and address student-learning issues as they unfolded over the course of the semester. These 'reflective' learning discussions served at times to clear up some crucial issues students were encountering. The authors note that they dealt with 'grey area' studies where the qualitative component was usually not developed fully. One finding that came out of the analysis of their data was the presence of 'persistent issues,' such as how to address student issues with regard to analyzing mixed methods data. This type of reflective pedagogy they present has many of the elements of the effective pedagogical process uncovered by Kilburn et al. (2014).

As mixed methods continues to become a growing field in social research, it is critical for faculty who are teaching, or who are contemplating teaching, mixed methods to understand the methodological and methods challenges students learning about mixed methods confront as they begin to tackle the complexity of mixing and analyzing research findings from two different methods and often from multiple theoretical perspectives.

### **Toward a mixed methods pedagogy**

I recently taught two graduate seminars on mixed methods research inquiry. I decided to teach this course in an iterative manner, somewhat like the ‘reflexive discussions’ that Levine et al. (n.d.) engaged in when they taught their mixed methods course. Right from the beginning I encouraged students to keep a log of their experiences in learning about mixing methods and the concerns and issues they were having in understanding the nuts and bolts of mixing methods. I specifically asked students to clarify for me at the beginning of each class what they perceived as some critical points of confusion about just what mixed methods entails and what they found most difficult.

Most of the graduate students in my mixed methods courses were at a midpoint in their graduate career and many were at the pre-dissertation or dissertation proposal writing stage, with most of their course work completed. They hailed from different professional schools and most were getting an applied professional advanced degree in the healthcare field. The prerequisite for enrollment in my mixed methods course required students to have taken at least one graduate research methods course. As the semester progressed, it became clear to me that students taking my course, for the most part, had education and training in only one type of method – either qualitative or quantitative – that was housed within their discipline.

### ***Student challenges in the learning of mixed methods***

Many students came to a mixed methods course not sure of just what it would mean for them to learn a new methods approach and then proceed to engage with both qualitative and quantitative approaches in one research project. It was clear to them that adding a new method would often require them to switch their disciplinary mental model and research practices, and this was not something many of them anticipated, understood, or were prepared for.

It was not surprising that when I asked students in my mixed methods course what they found the most difficult thing about learning mixed methods, they all seem to agree on the following point: mixing paradigms brought confusion. Their own methods training gave them little understanding of how qualitative and quantitative methods were connected to a set of philosophical assumptions about the nature of the social world. The course readings they encountered during the first two weeks of the mixed methods course maintained a tight link between theory and method, with a discussion of the range of different paradigmatic stances toward knowledge building that spanned the qualitative and quantitative divide. Learning about paradigmatic viewpoints raised issues that touched on whether or not paradigms could be mixed within *one* mixed methods study.

The following are some examples of what students relayed to me when I asked them more specifically about their understanding of what it meant to have a paradigmatic point of view. It is important to note the differences in their responses depending upon whether they came from a predominantly qualitative or quantitative background.

One graduate student with a quantitative background in the field of education said: ‘I didn’t know I had a paradigm!’ Another student in the health sciences noted:

Positivism in my field is so ‘secure’ that is not something I have considered before in terms of what this means for me individually and how this stance has influenced my

research endeavors, particularly the development of my dissertation (which is in a quantitative data collection stage currently).

Another student with a strong social justice qualitative background noted the following:

I'd like to focus in this note on one strong bias that I have at the research design phase. I'm biased towards research that injects the voices, opinions, and ideas of marginalized populations into the halls of power. Another bias is to privilege those populations' viewpoints over those of so-called experts. Often times those marginalized populations are the ones that have suffered the most from a discriminatory governmental policy, a brutal war, etc. They are often also the ones who have the most to gain from a remedy. Moreover, they are often the ones who have the least say over policy decisions moving forward. I suppose I view this bias as a sort of affirmative action. As such, it is an innate bias and one that I try to continue imposing on my research.

Once students began to uncover their own biases, and started to be open to the idea of a range of paradigmatic stances a researcher might take when considering a mixed methods approach, their concerns shifted to issues of paradigm incompatibility. One student expressed the following concern with regard to this issue: 'Which paradigm are we situated in, how is it possible to exist in both paradigms if they are opposing, can we mix these paradigms and conduct a mixed methods research study, and which set of rules will our study be held to?'

Another source of confusion for students centered on what a mixed methods question was. One student quoted in the Levine et al. study noted:

I'm still struggling to nail down my research question – I know the different quantitative and qualitative components, but I'm trying to find a good way to merge them under a broader objective. Regardless, it was great to work through the different components with my peers.

When asking mixed methods questions, students were curious about just how paradigms fit into the asking of a mixed methods question. Their queries about this took the following form: Can an interpretive paradigm include quantitative methods? Can quantitative paradigms include qualitative methods? One student mentioned that she could not imagine creating a research question that would include both a qualitative and quantitative paradigm.

Another source of confusion for students centered on how they should go about analyzing mixed methods data. They wanted to know how two very different data forms could connect to one another. Students' knowledge of different analytical methods was sparse. Quantitatively trained students usually had only one statistical analysis and a few had taken one advanced statistical course. Most qualitatively trained students had taken an introductory graduate qualitative course that focused on either field work/ethnography or interviewing. The most common type of analysis they used was grounded theory, but they were hard-pressed to tell me more about the type of grounded theory they employed. They also mentioned that they did not have much hands-on experience using this analytical tool. Students asked me some of the following types of questions: Can quantitative research findings ever be connected to or related to qualitative findings? How? It seems in some studies that qualitative research is always being conducted as secondary to the quantitative – Why? Is not qualitative research sometimes needed in order to even determine quantitative research component and its question? As I listened to the types of methods training students received, it became clear that it was hard for them to tackle deploying one

data collection method and analytical tool to their research project. In addition, students mentioned that they had little training in foundational issues and how they entered the research process.

During the course of learning about different paradigmatic approaches in my course, students also began to question their own paradigmatic stance toward mixed methods projects. Students often asked me how their own paradigmatic stance might begin to cloud their own thinking about how to proceed with a mixed methods project, asking questions such as: Is my going into mixed methods research with a firm ideology and failing to move from that ideology, particularly if it is from a positivist paradigm, the best way to conduct mixed methods research project?

Given these sources of confusion, one important first challenge in the teaching of mixed methods involves moving students from either a deductive mode of research inquiry to an *inductive* one, or vice versa. This type of transition in knowledge building requires a discussion of paradigmatic viewpoints linked to research questions that are then linked to methods selected. I ask my students questions such as the following: What does it mean to ask a deductive question? What does it mean to take an inductive approach? What is an inductive question? How are these two modes of knowledge building linked? I provide students with specific examples and empirical research studies that ask questions using both types of research inquiry. I have found that the use of concrete short case studies to be invaluable in the learning process.

As students proceed to transition to other ways of knowing, students often find themselves asking a series of philosophical questions that often start to upend their former ways of thinking about research inquiry. Instructors of mixed methods must have the knowledge and training in both modes of knowledge building in order to transition students to thinking along a theory-question-methods continuum. If not, students may not fully understand or even begin to appreciate the profound links between theory and research design as a whole.

### **Teaching mixed methods: what works, what confusion still remains and acknowledgment of reflexivity**

I often start out my mixed methods course by getting a sense of a student's prior methods and theory training. As I mentioned, the pre-requisite for entering this course is having at least one general graduate methods course, and so I begin by asking students to tell me about their own researcher positionality. I ask them to write down the general types of questions they tended to ask in their own past research projects and what specific methods and theories lie in their theory/methods comfort zone.

I then discuss the importance of knowing what specific values/attitudes/perspectives they apply in their own research projects. The importance of being conscious of their researcher standpoint is one way to offset researcher bias within their research projects. I then discuss the importance of being reflexive throughout the research process, drawing on my training in feminist approaches to research inquiry (Hesse-Biber, 2014). I note that being reflexive means to interrogate one's values and attitudes by recognizing that 'all knowledge is affected by the social conditions under which it is produced and that it is grounded in both the social location and the social biography of the observer and the observed' (Mann & Kelley, 1997, p. 392).

A useful pedagogical tool to practice reflexivity in the mixed methods class is the following reflexive exercise that I use in all my methods courses. I ask each student at the beginning of the course to take 20 min to write down what they perceive to be the values and attitudes they hold that impact the ways in which they go about approaching a research project, specifically asking them to answer the following questions:

What particular biases, if any, do I bring to and/or impose onto my research?

How do my specific values and attitudes and theoretical perspectives influence the research style you take on? How do my values and attitudes and beliefs enter into the research process? Do I only ask questions from my perspective?

How does my own agenda shape what ask and what I find?

How does my positionality impact how I gather, analyze, and interpret my data: From whose perspective?

After completing this exercise students share what they feel comfortable sharing in small class discussions. I also ask students to keep a research journal in which they reflect on their own research conundrums and ephanies throughout the mixed methods course. This can be quite helpful to students as they evaluate their own experiences in learning mixed methods. One female graduate student in social work responded to the exercise by noting:

While I would like to consider myself unbiased, I believe the reality is that we are all biased to some extent based on past experiences, education, personal beliefs, cultural exposure, worldviews, etc. The primary bias that I am trying to undo is the one inculcated in myself through my education regarding the preeminence of positivist and objectivist quantitative research and theory development over qualitative methods and more subjective methodologies.

There are a range of important sources of confusion students confront as they proceed in learning about mixed methods. Many of the students in the class have only had training in one type of method and methodology. With the exception of one student, most of the students in the class had training in quantitative methods with a post-positivist theoretical lens. The first part of the course introduces students to a range of paradigmatic points of view onto the social world and discusses the questions that often flow from a given paradigmatic stance. For some students this is the first time that they were consciously aware that they were seeped in a given paradigm – that of post-positivism. Once conscious of their own paradigmatic world-view, they began to ask how mixing methods of different types would be linked to a given paradigm and could they use post-positivism for both methods and so forth. One student asked:

What if one undertakes a mixed method study from say a post-positivistic stance? Does the qualitative component then become post-positivistic as well and therefore separated from its own methodological, ontological, and epistemological assumptions in its service to the quantitative essence?

In discussing paradigmatic assumptions, I tie this discussion to the specific types of research questions students' address in their own research. I often start out asking students about what questions lend them to a qualitative approach? A quantitative approach? We discuss the differences between the two types of question asking modes (confirmatory questions versus exploratory questions). I then link these



different types of questions to a discussion of the assumptions each question makes about the nature of the social world – what can be known? Who can know? And so on.

### ***Envisioning the mixed methods research process***

I then proceed to ask the students what they think a mixed methods question might look like. This form of inquiry usually leads to more confusion in that students are not clear about what a mixed methods question would look like. Here, I rely heavily on case studies that deploy a variety of different qualitatively driven and quantitatively driven mixed methods questions. We also explore the situation where the types of questions asked take a different approach, but their goals are to tackle the same research problem with the goal of coming up with a similar set of findings in the serve of providing a more valid set of findings.

In general, students understand that a mixed methods question encompasses different types of research questions in one study. These questions are not mixed, but they can serve many different objectives depending on the overall goals of the research study. I found that students came to appreciate that the overall research objectives will dictate how each question is positioned in the research project. Through interrogating specific empirical case studies, students were able to examine exemplary mixed methods projects from a quantitatively-driven/qualitatively-driven and triangulation perspective.

In discussing the different types of mixed methods questions, I also stress how each question asked is linked to a specific method or set of methods. I ask my students about what types of mixed methods design would serve to answer the range of research questions. I ask them to reflect on how mixed methods questions relate to one another: To what extent if any if one question more dominant in the project, and if so, what role does the other question place? How are the methods linked to those questions and in turn how do the findings gathered from the asking of question relate?

It is at this juncture that my mixed methods class segues from issue of data collection to the topic of analysis and interpretation of mixed methods data – more specifically, to addressing how the data collected from two different mixed methods components can be analyzed. It is important to note here that this very issue also plagues the mixed methods research community as a whole.

The field of mixed methods itself finds this particular question difficult to answer and the ways forward are not often clear. I think it is important to share with students the issues that still remain in a growing field of praxis like mixed methods inquiry. Namely, what does one do with data gathered across qualitative and quantitative approaches? How does a quantitatively-driven researcher, for example, assess the importance and meaning of the qualitative data collected when they may not have training in assessing how to do this and vice versa? What should be the overall goal in the analysis of different data types? Should they be integrated? How? Should they be separate analyses?

As I begin this phase of the course, a new set of questions comes to the surface as students grapple with the case studies and their analytical and interpretive practices. One student in my class, who was trained as a quantitatively driven researcher, asked me whether the qualitative component she used in her mixed methods study would then become post-positivistic as well. If this was so, she went on to ask me

how quantitative research could ever build off qualitative finding. Another student was concerned about what he saw as the delegation of qualitative methods to a secondary position in the research articles he had read. He asked me, ‘Must qualitative research always be done as an auxiliary to quantitative? Is not qualitative research sometimes needed in order to determine quantitative research aims?’

To begin to answer these questions, I have students read a variety of short empirical case study articles that use different types of sequential mixed methods research designs, starting with qualitatively and quantitatively driven mixed methods designs. I then have them look at the range of different analytical and interpretative choices that are dictated by how the researcher positions each component and its specific role in the research process. I also use case studies that deploy concurrent (triangulated designs and nested) mixed methods designs. I point out to my students that in undertaking a mixed methods project, it is important to possess a range of analytical and interpretative lenses and tools, as well as a profound appreciation for the potential contributions a given methodological perspective can bring to a mixed methods project. A respect for methodological, methods, analytical, and interpretative differences is a critical ingredient to successful mixed methods praxis.

I also tell my students that many projects that authors claim to be mixed methods still remain unmixed, with little interaction between the two methods (Bryman, 2006b, 2007; Yin, 2006). In effect, we are still witnessing the publication of parallel quantitative and qualitative components (for a discussion of these issues, see Bazeley, 2003; Bryman, 2006a, 2007; Hesse-Biber, 2010; O’Cathain, Murphy, & Nicholl, 2007; O’Cathain, Nicholl, & Murphy, 2009).

Engaging with this type of mixed methods analysis and interpretation phase then also requires researchers to come out of their methods and theoretical comfort zones. This is often a process in which the research becomes both an insider and an outsider, taking on multiple standpoints and negotiating different researcher identities simultaneously. These are indeed critical mixed methods praxis issues that are not easy to address in the mixed methods classroom, as it requires my students to also obtain the theoretical skills and analytical methods they may not yet have. This cannot be easily obtained in just one class period.

### ***Highlighting the importance of a research question and how it is linked to method, analysis and interpretation***

I begin to chip away at this analytical/interpretative conundrum by reminding my students that it is important at the analysis and interpretation stage in a mixed methods research design to be aware of the question that each data collection component is answering. What does each design component play in the analysis and interpretation? It is also important to understand that each question is also rooted in particular research methodology – that has its particular set of assumptions about the social world. Brannen and O’Connell (2015) work on doing mixed methods analysis provides some important strategies for thinking about the data analysis, interpretation and writing up stage of a mixed methods project. In interpreting and writing up your mixed methods findings they stress the importance of taking a ‘narrative approach,’ whereby the researcher addresses the various ways each of the data set’s findings inform each other both alone and using them together. Another critical insight these authors suggest addressing first and foremost is that each of the findings using a different method do not necessarily have to agree with one another, as in a mixed

methods traditional triangulated design. Instead, each study's findings can complement or provide a more complex understanding of the problem being addressed.

What is clear from the research into barriers of integrating mixed methods research findings is that there is a skills gap among those conducting mixed methods research that may require the addition of new analytical options for assessing how different data forms can connect to one another. These analytical options are still emerging among those members who are traversing this landscape.

### ***The movement toward a mixed methods pedagogy culture***

The experience of teaching mixed methods in the graduate classroom and some of the issues/barriers and glimmers of hope I have experienced, lead me back to the recent findings garnered from Kilburn et al.'s (2014) pedagogical dimensions that facilitate student learning of research methods in general. I concur with their pedagogical goal of student-centered learning. My pedagogical experience in the mixed methods classroom has been that the students need to be engaged with the learning of research methods. It is critical to present provide them with a range of hands-on activities that allow them to take learning risks; to apply the more abstract ideas they have learn in a more formal way. Along with this goal is to provide classroom space for a more back and forth reflexive learning dimension. It is critical for students to share what they have found hard or difficult in the application of more formal methods concepts in carrying out mixed methods research activities. What is also critical especially within the context of teaching mixed methods is what Kilburn et al. (2014) note as the engaging of students in interdisciplinary moments of interaction within the methods classroom and the encouragement of dialogue across what to many of them have heretofore been research/disciplinary research paradigmatic divides. Likewise, there must be a pedagogical space for teachers of mixed methods to engage in dialogue about their own pedagogical concerns and issues and the ability to share resources and new ideas that continue to foster a mixed methods pedagogical culture.

The good news is that there is an emergence of new paths along the mixed methods analytical terrain, as demonstrated by the development of a range of emergent analytical mixed methods frameworks for integrating both qualitative and quantitative data (see Brannen & O'Connell, 2015). These analytical developments open up new analytical ground for moving mixed methods analysis and interpretation beyond a parallel analytical approach. One such example is that of data transformation (i.e. the process of qualitizing and quantitizing; see, e.g. Sandelowski, Voils, & Knafl, 2009). In addition, computer-assisted data analysis programs now include a mixed methods component to facilitate complex analyses of mixed methods data (Bazeley, 2003).

In my teaching of mixed methods at the graduate level, I found that one of the best strategies for demonstrating analysis and interpretation of mixed methods data is to again provide students with exemplary mixed methods case studies of how this has been done successfully, and talking through the specific step-by-step analytical approach each researcher took along the way to accomplish this type of analysis and interpretation of their multiple data sets. We discuss the issue of just how the two data sets can 'talk' to one another and what role each plays – the questions each data-set answers and how each contributes to the overall research project objectives. A case study by Moffatt, White, Mackintosh, and Howel (2006) is an excellent

example of how this can be done. The study is based on a pilot randomized controlled trial (RCT) of individuals above age sixty and was designed to determine the impact of providing welfare rights advice within primary care setting in the UK. The authors' goal was to show how such interventions could tackle age-based health inequities. The study used a concurrent mixed methods longitudinal design consisting of a quantitative and qualitative component. Quantitative data was gathered from a random sample of 126 participants (119 at final follow-up) who were invited from the databases of four general practices in the 'most deprived wards' of Newcastle upon Tyne. Quantitative data was gathered from structured surveys (four over two years) that used a variety of standard psychological scales that measured participants' mental health – their levels of anxiety and depression – as well as covering the areas of demographics and physical health. A sub-sample of survey participants was then recruited for the qualitative interview component. Each participant in the qualitative sub-sample component was interviewed twice; 25 participants at baseline and 22 participants 12–18 months later. The interviews covered a range of topics that centered on participants' lived experiences regarding the impact of resources (material and financial) on their physical and mental health, as well as their assessment of the impacts of the overall study intervention. All participants were then randomized into 'control' and 'intervention' groups.

The quantitative data showed no statistically significant impact of interventions on health and social outcomes. However, the qualitative interviews revealed that despite this, every interviewee saw their intervention as positive. Every participant also felt that negative health outcomes were a result of age, family history, fate, or other factors that could not be affected by extra money or resources. Extra money would only serve to improve other facets of their lives. While the quantitative and qualitative data appeared to be in conflict, the researchers sought to resolve these divergences in their concurrent data sets. They did so by placing both data sets in conversation with one another by recognizing the fundamental differences between quantitative and qualitative components' questions and findings. Each component was tapping into a set of different questions. The authors came to appreciate the complementarity of their data even if the questions were not exactly the same. Moffatt et al. also looked at the methodological rigor of each component, comparing the samples, and collected further data for verification, and addressing unexpected factors that would affect the data, and comparing the outcomes to find use of both complementary and contradictory findings. Although a positivist theoretical lens is the dominant paradigm in RCT, the authors argue that the infusion of a qualitative subjective component into RCTs can serve to strengthen and enhance the overall interpretation of RCT findings.

After going through the entire research design outcomes of the Moffatt et al. study, I ask students to complete the following exercise. I have them work in pairs as a way to allow each student to articulate and reflect with one another regarding their respective analytical rationales with regard to the following specific analysis questions:

- (1) What is Moffatt et al.'s overall research question or set of questions they want to answer?
- (2) Draw a diagram of Moffatt et al.'s mixed methods research design. Construct a research design that accounts for the characteristics of mixed methods research as related in this article.

- (3) Does each component of the research design answer the same or a different research question? Be specific.
- (4) Why do the authors elect to add a subjective qualitative component to the RCT? In what sense, if any, does the introduction of a qualitative component add value to this study?
- (5) What are the strengths and weaknesses (if any) of adding a qualitative component?
- (6) Data analysis and interpretation: Describe the data analysis and interpretation stage of this mixed methods project. In your answer, please determine and explain how these authors decided on 'how and at what stage does mixing occur' if at all in this study. Describe the analysis of the qualitative and quantitative data. Were they mixed? Why or why not? How was each data-set validated?
- (7) At this juncture, the researchers could have followed up their findings using another method of data collection. Would you recommend that they do so? Why or why not? What would be the goal of adding another methods component? What question would that new methods component answer or clarify?

Another critical conundrum students confront is how they can navigate constructing a mixed methods research proposal. Very often, students find that they lack specific guidelines in writing up their mixed methods proposal while their own disciplines have specific guidelines about how to format a dissertation proposal, mentioning nothing about mixed methods proposals. In addition, some of my students who have gone on to write a mixed methods dissertation proposal tell me that they cannot find committee members who are familiar with just what mixed methods is. They frequently find the need to bring in a faculty member from a different discipline who has knowledge and who has, in fact, conducted mixed methods research projects.

Students who wanted to explore doing a mixed methods project also wanted to know more about the specific issues they might confront, like how much time it would take them to complete a mixed methods dissertation. A student noted that she was fearful of being overwhelmed and puts it this way:

I might become overwhelmed at the prospect of carrying out what could amount to multiple research projects with advising faculty who may not have the prerequisite knowledge on mixed methods research that could help see the dissertation to a timely completion. The situation may be that an advisor has experience with other forms of mixed methods research than the one chosen by the student, or has a different paradigmatic emphasis than that of the student.

As I discussed these issues with my class, we brainstormed about the possibility of choosing a range of advisors across departments who might have the different skill sets and theoretical lenses that would allow them to obtain the guidance they needed. We also talked about the difficulties in working with an interdisciplinary committee and all that issues that might entail in terms of faculty from difference disciplines trying to communicate across their own research divides. Students offered suggestions for novice and seasoned instructors of graduate research methods courses as a whole, especially with regard to the teaching of mixed methods. There are a few excellent resources I provide my students with regard to the

specifics involved in preparing a mixed methods dissertation proposal. I have found Talab's (2009) online resource ([http://coe.k-state.edu/annex/ecdol/Mixed\\_Methods.htm](http://coe.k-state.edu/annex/ecdol/Mixed_Methods.htm)) to be a great tool for novice mixed methods researchers. One important pedagogical area that is ripe for integrating into the learning of mixed methods is the incorporation of some on-line mixed methods webinars and You-Tube clips that already exist that cover a range mixed methods topics. However, the quality and validity of these resources needs to be systematically reviewed. A mixed methods guide to such on-line resources might be a great contribution to facilitating a mixed methods pedagogy culture as well.

### **Future directions**

In my teaching of mixed methods, I found that students desired even more guidelines and examples of the various ways mixed methods researchers use a range of mixed methods designs when tackling a given research problem. They wanted even more emphasis placed on learning about different paradigms and their linkages to research questions and methods not just in my course, but within their doctoral training as a whole. They also sought additional in-class exercises that specifically engaged them with different ways qualitative and quantitative findings 'interact' or inform one another through examining and walking-through the steps researchers took to complete their mixed methods journal articles. Students also sought more support and guidance from their disciplinary department. Students wanted more of their disciplinary faculty to receive specific training in conducting and teaching mixed methods research so that they could rely on faculty expertise within their home discipline as they began to write up their mixed methods proposals.

Given my own teaching of mixed methods over several years, I want to stress again the importance of taking a hands-on approach – providing students with in-class exercises around the thorny issues about learning mixed methods that I have discussed. I have found that using the power of peer group learning was effective in small groups in class discussions where students could share their own strategies, and share and reflect together on their own learning of mixed methods issues and successes. It is also important for instructors to develop an iterative reflexive model of getting feedback from students early and often as the mixed methods course proceeds. Levine et al. (n.d.) stress this as well, in order to deal with what they term the 'gray areas' of learning about mixed methods research.

### **The lack of training of faculty teaching mixed methods courses**

Teaching a mixed methods course is a daunting task from the standpoint of the instructor. What is most crucial to make this type of teaching successful is for all instructors of mixed methods to possess extensive training in both theory and methods. In addition, it is important for instructors to have the experience of conducting their own mixed methods research projects that provide them with conducting mixed methods research, utilizing the range of designs and having the experience of grappling with the very issues my students bring to their mixed methods course.

What I fear most is having instructors teaching mixed methods that only have one type of training and theoretical skill set. Tashakkori and Teddlie (2003) early on pointed out that the continued polarization in the USA between qualitative and quantitative approaches has created a strong fissure in the teaching of research

methods here such that students learn either from a qualitative or a quantitative approach and are often effectively forced to choose one type of approach. However, given the pressures to learn both methods approaches and the increasing popularity of a mixed methods approach, students need to learn how to navigate between these two approaches. An instructor, for example, who is trained primarily as a quantitative researcher with a post-positivist lens, needs to acquire a new theory/skills set before entering the mixed methods classroom. If not, how well will the qualitative component of the mixed methods design be brought into view in a mixed methods course? Will the qualitative component be just an add-on? Looking over the range of quantitatively driven mixed methods articles, one often discerns a type of superficial adding-on of the qualitative component whereby the qualitative findings amount to cherry picking quotes, for example, from interviews that support researchers' quantitative results. Such a rendering of what a qualitative approach is (method alone) without its methodological and analytical underpinnings does not make for a robust mixed methods research project. At worst it misinforms students about just what a qualitative approach is all about.

A multitude of pedagogical challenges lie ahead in the teaching of mixed methods. At this point there are few instructors within the social research methods community who possess the theory/methods skills to teach such a course effectively. The inclusion of multidisciplinary team-based teaching is necessary to move the teaching of mixed methods research forward and effectively produce the next generation of mixed methods teachers. One important element of a team-based pedagogical approach might be to model for students how research teams actually negotiate their standpoints with each other – demonstrating for students the often hidden types of 'give and take' praxis among interdisciplinary team members. Such an enactment can provide students with strategies for how to cross-disciplinary divides, methodological divides as well as methods divides productively. To begin to accomplish this, instructors themselves need to be open to new ways of knowing and, perhaps, have already acquired some experience in working within a team-based research environment, such that they themselves are open to new ways of knowing and have already crossed some different divides in terms of their own research standpoint. Instructors might begin to relate their own narratives on their own set of strategies they have found useful in this regard.

### **Structural barriers to mixed methods research that remain within and outside the academy**

Much work remains to be done in order to pave the way for our students to effectively engage with mixed methods training and conduct mixed methods research projects within their disciplines. As already noted at the disciplinary/department level, students confront structural constraints with regard to writing up a mixed methods proposal and finding faculty within their own discipline that can teach and/or advise them. Even when they complete their research, they will confront a culture of journal publishing that is also divided along a qualitative/quantitative trajectory and that may be unwilling to be open to a mixed methods perspective, except for a select few journals that are specifically targeted as mixed methods journals. Even if a journal is open to a mixed methods research study, the effective writing-up a mixed methods project and doing this effectively may require an article word count that is over what the journal guidelines require. In fact, many journals have cut back their

word counts for research articles. This trend, if it continues, will stifle the publishing of mixed methods research work and/or demand that researchers cut back on their methods and findings section in their publications.

Uncovering some of the challenging pedagogical issues and those promising strategies for addressing them is a good beginning. However, addressing the long-term structural issues – the methods and theory gaps in that exists among faculty and students – requires deep-rooted changes at the departmental and disciplinary level. This would involve looking at graduate training programs as a whole and a commitment of resources to re-tool graduate programs and the faculty training in interdisciplinary team-based research methods courses. This will also require a deep commitment of resources and a willingness of faculty to come out of their theory/methods comfort zones. It is important for instructors to engage with the differences they encounter by traversing the qualitative/quantitative divides they confront at multiple levels – the university and disciplinary – if we are to train the next generation of mixed methods researchers who can address a range of complex social problems. To do this well requires a commitment to also honor the collective contributions of a range of methodologies and methods.

These pedagogical dialogues within and across the disciplines needs to include team-based solutions that can serve to fill the methods and skills gap that currently exists in the teaching of social research methods, especially the teaching of mixed methods. Engaging in a deep dialogic process that is ongoing and open toward the inclusion of a diverse and multiple perspectives onto the effective teaching and learning of mixed methods can hold the promise of unleashing the synergistic potential of mixed methods research endeavors as a whole.

### Disclosure statement

No potential conflict of interest was reported by the author.

### Notes on contributor

Sharlene Hesse-Biber is Professor of Sociology and Director of Women & Gender Studies Program at Boston College in Chestnut Hill, Massachusetts, USA. She is currently leading a study exploring the lived experiences of both men and women with breast cancer.

### References

- Bazeley, P. (2003). Computerized data analysis for mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social & behavioral research* (pp. 385–422). Thousand Oaks, CA: Sage.
- Brannen, J., & O’Connell, R. (2015). Data analysis: Overview of data analysis strategies. In S. Hesse-Biber & B. Johnson (Eds.), *Oxford handbook of multimethod and mixed methods research inquiry* (pp. 257–274). New York, NY: Oxford University Press.
- Bryman, A. (2006a). Integrating quantitative and qualitative research: How is it done? *Qualitative Research*, 6, 97–113.
- Bryman, A. (2006b). Paradigm peace and the implications for quality. *International Journal of Social Research Methodology*, 9, 111–126.
- Bryman, A. (2007). Barriers to integrating quantitative and qualitative research. *Journal of Mixed Methods Research*, 1, 8–22.



- Creswell, J. W., Tashakkori, A., Jensen, K. D., & Shapley, K. L. (2003). Teaching mixed methods research: Practices, dilemmas, and challenges. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 619–637). Thousand Oaks, CA: Sage.
- Earley, M. A. (2007). Developing a syllabus for a mixed-methods research course. *International Journal of Social Research Methodology*, *10*, 145–162.
- Earley, M. (2014). A synthesis of the literature on research methods education. *Teaching in Higher Education*, *19*, 242–253.
- Frels, R. K., Onwuegbuzie, A. J., Leech, N. L., & Collins, K. T. (2012). Challenges to teaching mixed research courses. *Journal of Effective Teaching*, *12*, 23–44.
- Hesse-Biber, S. (2010). *Mixed methods research: Merging theory with practice*. New York, NY: Guilford Publications.
- Hesse-Biber, S. (Ed.). (2014). *Feminist research practice: A primer*. Thousand Oaks, CA: Sage.
- Kilburn, D., Nind, M., & Wiles, R. (2014). Learning as researchers and teachers: The development of a pedagogical culture for social science research methods? *British Journal of Educational Studies*, *62*, 191–207. doi:10.1080/00071005.2014.918576
- Leech, N. L., & Goodwin, L. D. (2008). Building a methodological foundation: Doctoral-level methods courses in colleges of education. *Research in the Schools*, *15*(1), 1–8.
- Levine, A., Nicolau, B., & Pluye, P. (n.d.). *Challenges in teaching mixed methods*. Poster presentation. McGill University, Montreal, Canada.
- Mann, S. A., & Kelley, L. R. (1997). Standing at the crossroads of modernist thought: Collins, Smith, and the new feminist epistemologies. *Gender and Society*, *11*, 391–408.
- Moffatt, S., White, M., Mackintosh, J., & Howel, D. (2006). Using quantitative and qualitative data in health services research – What happens when mixed methods findings conflict? *BMC Health Services Research*, *6*. Retrieved from <http://www.biomedcentral.com/1472-6963/6/28>
- O’Cathain, A., Murphy, E., & Nicholl, J. (2007). Integration and publications as indicators of “yield” from mixed methods studies. *Journal of Mixed Methods Research*, *1*, 147–163.
- O’Cathain, A., Nicholl, J., & Murphy, E. (2009). Structural issues affecting mixed methods studies in health research: A qualitative study. *BMC Medical Research Methodology*, *9*, 82.
- Onwuegbuzie, A. J., Frels, R. K., Leech, N. L., & Collins, K. M. T. (2011, February). *A mixed research study of approaches used by mixed research instructors*. Paper presented at the annual meeting of the Southwest Educational Research Association, San Antonio, TX.
- Sandelowski, M., Voils, C. I., & Knaf, G. (2009). On quantizing. *Journal of Mixed Methods Research*, *3*, 208–222.
- Talab, R. (2009, February). *Preparing a dissertation proposal: The mixed methods version*. Kansas State University. Retrieved from [http://coe.kstate.edu/annex/ecdol/Mixed\\_Methods.htm](http://coe.kstate.edu/annex/ecdol/Mixed_Methods.htm)
- Tashakkori, A., & Teddlie, C. (2003). Issues and dilemmas in teaching research methods courses in social and behavioural sciences: US perspective. *International Journal of Social Research Methodology*, *6*, 61–77.
- Wagner, C., Garner, M., & Kawulich, B. (2011). The state of the art of teaching research methods in the social sciences: Towards a pedagogical culture. *Studies in Higher Education*, *36*, 75–88.
- Yin, R. K. (2006). Mixed methods research: Are the methods genuinely integrated or merely parallel? *Research in the Schools*, *13*, 41–47.