Mixed methods research in TESOL: Procedures combined or epistemology confused?

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Abstract
Mixed methods research tends to be received as a resolution to the traditional quantitative–qualitative debate in research methodology. However, although the extended repertoire of research techniques provided by combining the two approaches may appear practically attractive, the perspective of technical inclusiveness may raise questions at a deeper conceptual level. Revisiting aspects of mixed methods in TESOL research, this article focuses on the distinction of philosophical, methodological, and procedural concerns in academic inquiry. On this basis, I argue that in conceptualizing mixed methods, researchers may need to look beyond the simple combination of procedures and to consider more fundamental epistemological issues. While relying on a mix of numerical and verbal data might be helpful in gaining better understandings of complex language education problems, the crucial concern in this regard is epistemological rather than technical. It is about the level of mixing and the nature of knowledge that is sought, which cannot be both experimentally objective and subjectively constructed. Therefore, the TESOL research community may need to beware of an atmosphere of methodological discussions overshadowed by technicalities and to avoid the marginalization of epistemological understandings by emphasizing the quick-fixes of mixed methods.

Introduction

In a lunch-table chat on social science research, a senior colleague from the faculty of psychology asserted that mixed methods should be the optimum choice nowadays. Commenting on the quantitative–qualitative dichotomy, he categorized researchers who
adhere to the former or the latter as belonging to the day *before yesterday* or staying in *yesterday*, respectively. Research *today*, he believed, is shaped by mixed methods. While he appeared to receive enough nodding to be satisfied with his argument, I found it a reminder of the need for the problematization of social science research perceptions and practices in terms of what has really been improved and what has possibly moved towards further convolution and confusion. While the traditional *paradigm wars* between the qualitative and quantitative camps (Hammersley, 1992) may appear to have found a point of resolution in a middle-ground of mixing the two approaches (e.g., Feilzer, 2010; Teddlie & Tashakkori, 2009), this very view of technical inclusiveness may create conceptual challenges of its own (e.g., Giddings, 2006; Morgan, 2007).

In this article I argue that in encountering mixed methods, TESOL researchers should consider the potential philosophical concerns that may rise beyond the simple combination of research techniques. After a sketch of the idea of mixed methods in social sciences and an overview of the landscape of mixed methods approaches in TESOL, I specifically revisit their recent highlighted presence in the field. Then, based on a differentiation of epistemological positions, methodological perspectives, and practical procedures in research, I propose that perceptions and practices of TESOL inquiry should be informed by a consideration of all of these concerns. Moreover, it is argued that the already-available meager discussion on epistemological aspects of mixed methods research in the field has hardly provided strong-enough theoretical foundations for these approaches. Consequences of ignoring philosophical standpoints as well as pitfalls of providing loose epistemological justifications are also discussed and it is argued that while diverse procedures of dealing with data can be put together, epistemological understandings in TESOL research should not be overshadowed by the obsession with technicalities.

Given the fairly extensive discussion of mixed methods issues in general discussions of social science research methodology, the need for TESOL-specific debates in this regard might not be strongly felt by some parts of the TESOL research community. However, such specific considerations do appear reasonable based on two arguments: On the one hand, addressing discipline-specific research methodology concerns has been a widespread phenomenon in the case of quantitative and qualitative as well as mixed methods approaches in several specific fields of social sciences such as sociology, psychology, and education. This is well illustrated by the numerous specific books and journals on research in theses disciplines. On the other hand, within the area of TESOL, the notion of (quantitative or qualitative) *TESOL research* is an established one (e.g., Cumming, 1994; Kasper & Prior,
2015; Lazaraton & Dufon, 1993). Moreover, the very idea of TESOL-specific mixed methods research discussions has already emerged as a scholarly subarea in the field, as seen later in this article. Therefore, it appears well-justified to focus on TESOL as the context of specific disciplinary debates of mixed methods approaches.

**Mixed Methods Research**

The mixed methods trend revolves around the idea of bridging qualitative and quantitative research approaches to benefit the strengths of both (Teddlie & Tashakkori, 2009). Defying a priori theoretical boundaries for right and wrong research conceptions, mixed methods research applies inquiry procedures that practically work (Denzin, 2010; Feilzer, 2010; Morgan, 2007). Johnson, Onwuegbuzie, and Turner (2007) provide an umbrella definition of mixed methods as a type of research that “combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration” (p. 123). Apart from the arguments about its emergence and history (Maxwell, 2016), a wave of mixed methods research in social sciences started in the 1980s, the growth of which in the following two decades led to a turning point where the Journal of Mixed Methods Research was launched in 2007 and has continued to date (Fetters & Molina-Azorin, 2017).

In TESOL research, combining qualitative and quantitative approaches dates back to at least three decades ago when Chaudron (1986) discussed their *interaction* and Johnson (1987) used both types of data to investigate the language learning of young migrants. Mixing the two approaches in TESOL was also reported in the 1990s, though not under the title of mixed methods (e.g., Ferris & Tagg, 1996; Klassen & Burnaby, 1993). Later, reports of mixed methods language education studies continued to increase, importantly in journals such as TESOL Quarterly (e.g., Coady, Harper, & de Jong, 2016; Lamb, 2007), Applied Linguistics (e.g., Caldas, 2008), Language Learning (e.g., Hu & Lei, 2012), and The Modern Language Journal (e.g., Ziegler, 2014).

Signifying the further embracement of mixed methods approaches, a number of theoretical discussions and textbooks have also specifically focused on these approaches in language education. In addition to the first-time inclusion of mixed methods in an applied linguistics research textbook by Dornyei (2007), Brown (2014) and Riazi (2017) wrote two full-length books in this regard. Moreover, some related meta-analytic and theoretical
discussions in the field have appeared in the past few years: Hashemi (2012) and Hashemi and Babaii (2013) explored designs of mixed methods studies in some of the major journals of the field; Wisniewska (2014) investigated the conceptualizations of mixed methods in a number of studies on English language teaching; Riazi and Candlin (2014) extensively discussed different aspects of mixed methods research in language teaching and learning; and Riazi (2016) discussed the notion of innovative mixed methods research in the case of grounded theory and phenomenological inquiry. I will return to these articles, specifically to Riazi and Candlin’s (2014) work, in the next section.

**An Epistemological Problematization**

Mixed methods approaches may appear technically facilitative “as a response to the long-lasting, circular, and remarkably unproductive debates discussing the advantages and disadvantages of quantitative versus qualitative research” (Feilzer, 2010, p. 6). The doubled repertoire of procedures can be expected to create better research than one approach alone. Therefore, mixing different methods is asserted to serve multiple purposes such as complementarity and development in social science research (Riazi & Candlin, 2014). Nonetheless, although these arguments appear to be reasonable on the surface (Giddings, 2006), the prerequisite assumptions for mixing methods can raise controversies. What I aim to particularly highlight in this regard is about the different conceptual levels of issues in academic inquiry. One may distinguish practicalities of handling data, more sophisticated methodological issues of design, and abstract philosophical foundations of research (Loftus & Rothwell, 2010). On this basis, Lincoln and Guba (1985) proposed a conceptual framework in terms of the three notions of ontology (the perception of the nature of reality), epistemology (the understanding of knowledge), and methodology (the design and practice of research). Ontological and epistemological positions shape the foundation of methodological and procedural levels of inquiry (Johnson et al., 2007).

The pivotal point in conceptualizing mixed methods is about the level at which the mixing occurs. “In discussions of mixed methods research, epistemological and ontological issues have been marginalized to a significant extent as pragmatism has emerged as a major orientation to combining quantitative and qualitative research” (Bryman, 2007, p. 17). Nonetheless, from an epistemological standpoint, any act of inquiry is philosophically-rooted and assumes an epistemological stance (Hammersley, 2006; Morgan, 2007). Therefore, although combining different research procedures and blending data types in mixed methods
research are its most important appeal (Johnson & Onwuegbuzie, 2004), a more profound question that should be raised in this regard is an epistemological one about the nature of knowledge that is sought through the process of inquiry. It is difficult, in response to this question, to argue that, for example, the type of knowledge that we seek is both experimentally objective and subjectively constructed (Mirhosseini, 2017a).

Based on a positivist epistemological position, research should reduce phenomena to variables that can be objectively measured and quantitative research procedures are surface-level tools to enact such perceptions in the research process (Sale, Lohfeld, & Brazil, 2002). However, from an interpretivist-constructivist perspective, knowledge of any phenomenon should be contextually gained through processes of meaning making (Denzin & Lincoln, 2007; Hesse-Biber, 2010). Therefore, recognizing that the “key issues in the quantitative–qualitative debate are ontological and epistemological” (Sale et al., 2002, p. 50), if the mix at the epistemological level is not justified, the incompatibility of the two perspectives would appear to be a philosophical inevitability. With this in mind, one may argue that raising a theoretical standpoint called pragmatism hardly resolves the issue. Pragmatism, which has been deployed as a possible epistemological base for mixed methods, is asserted to rely on what practically works and, therefore, it claims to value both qualitative and quantitative procedures (Maxwell, 2010; Morgan, 2007). However, the problem is the possibility of adopting a conception of knowledge to be shaped by both objective measurement and contextual meaning making.

It can be argued that researchers are not usually inclined to spend time on assessing the philosophical underpinning of their practical involvements (Guba & Lincoln, 1994; Morgan, 2007), but the awareness and endorsement of the researcher cannot be considered as a condition or prerequisite for the functioning of epistemological assumptions of the research method, as they are enacted and lived rather than named. Regardless of researchers’ awareness of and focus on these foundational assumptions, they “inevitably influence researchers’ purposes and actions to some degree, and are often implicit and not easily abandoned or changed” (Maxwell & Mittapalli, 2010, p. 147). Therefore, the position known as pragmatism is not expected to annihilate the influence of underlying epistemological stances. It may only imply ignoring, bypassing, or underestimating the inevitable functioning of such stances and assumptions. It is on this basis that by some accounts, the thinking of mixed methods research has been criticized for acting as “a cover for the continuing hegemony of positivism” (p. 195) and reproducing the dominant positivistic views in practice (Creswell, 2011).
In applied linguistics and language education, mixed methods research has been increasingly embraced rather enthusiastically for its purported potential as a tool for facilitating more comprehensive scrutiny of issues under investigation (Hashemi, 2012; Hashemi & Babaii, 2013; Riazi & Candlin, 2014). In this context, some awareness does seem to exist about the role of epistemological positions in research. It is also admitted that in assuming the progressiveness of mixed methods, “the reasoning or logic behind such an assumption is not always as readily expressed as is the sentiment itself” (Dornyei, 2007, p. 46). Nonetheless, in discussing such problems, apart from the occasional touching of some philosophical notions, there is a tendency to hastily retreat to the claim of benefiting the merits of both approaches. For instance, Hashemi and Babaii (2013) are aware of the incongruent epistemological and ontological standpoints that shape the two approaches, but after raising the issue of epistemological incompatibility, they resolve it in a hardly-convincing manner: “the problem of incommensurable philosophical assumptions behind the two approaches need not be a major hindrance; in any case, the practical value of mixing is quite evident.” (p. 829)

Riazi and Candlin (2014) do present the rare case of a discussion of related epistemological considerations. Mentioning critical views towards placing pragmatism at the foundation of mixed methods, they highlight critical realism as an alternative. However, two issues can be raised about Riazi and Candlin’s arguments: First, it seems to be problematic that they view “the choice” (p. 143) of an underlying worldview for mixed methods as a key challenge in this regard. If there is an actual distinct epistemological foundation for mixed methods, it needs to be simply introduced in terms of the type of knowledge it defines. It does not sound convincing to knock on different doors to choose one. Second, Riazi and Candlin (2014) argue that critical realism perceives reality as multifaceted and shifts attention from the surface of events under scrutiny to the deep-residing mechanisms of social phenomena. Mixed methods research based on critical realism, they assert, “is more concerned with the conceptualisation of reality at different levels and with multiple dimensions and how knowledge of the object of study can be produced” (p. 141). But is this different from the constructivist and interpretive positions of qualitative traditions? Does this perspective bring positivism and constructivism together? The response may be evident, as Riazi himself appears to abandon the notion of critical realism later (Riazi, 2016).

Viewing reality as constructed and exploring underlying mechanisms are familiar notions in qualitative approaches like ethnomethodology (e.g., ten Have, 2004). Similarly, triangulation, which is frequently highlighted as a major purpose of mixing methods, is
obviously rooted in qualitative traditions. Likewise, it is questionable that Morgan (2007) proposes a notion like *transferability* as a feature of mixed methods research based on a pragmatist perspective, while it has already been defined as a component of naturalistic inquiry (Lincoln & Guba, 1985), also discussed in the context of qualitative applied linguistics research (Edge & Richards, 1998). Encountering such arguments, one may consider more seriously the concern about the privilege of positivism underlying mixed methods and “taking qualitative methods out of their natural home” of critical and interpretive views (Cresswell, 2011, p. 227). Overemphasis on the quick-fixes provided by mixed methods trends might imply an already taken-for-granted acceptance of the methodological and procedural perspectives of mixed methods for which only a *label* needs to be secured as an epistemological basis.

As a final note before the conclusion, it may be illuminating to refer to an example of the naïve combination of different qualitative and quantitative procedures in TESOL research that can bear an underlying epistemological confusion. In a perusal of studies published in the field under the rubric of mixed methods, one can notice the relatively frequent mixing of standardized questionnaire results and qualitative interview data (e.g., Chang, 2010; Cole & Vanderplank, 2016; Kubota, 2017; Macaro & Lee, 2013; Ziegler, 2014). While standardized questionnaires are deeply rooted in positivist conceptions and heavily rely on reliability measures and statistical analyses, well-developed in-depth or focus group interviews can provide qualitative data devoid of positivist criteria of rigor and objectivity. Avoiding the epistemological concern highlighted in this article, such studies that juxtapose these two procedures simply deploy the justification of gaining a *comprehensive understanding* of the issue under investigation. However, beyond the surface of different numerical and verbal information that is gathered, the essence of the understanding that is sought through such studies tends to be ignored; are they seeking objective scientific knowledge or contextually situated understanding? The probable response is ‘a *mix* of both’, but what is the nature of mixing these two types of knowledge beyond making an alluring collage?

**Conclusion**

The quest for wider and more profound visions and approaches in TESOL research cannot cease (Mirhosseini, 2017b) as “the field increasingly grapples in methodologically sophisticated ways in the attempt to address a growing number of urgent, real-world problems” (King & Mackey, 2016, p. 209). In dealing with complex language education
phenomena, more sophisticated understandings of knowledge and ways of gaining knowledge should be continuously sought (Hashemi & Babaii, 2013; Riazi & Candlin, 2014). However, such persisting necessities should not turn TESOL researchers into mere technicians of designs and procedures. Excessive focus on design typology and satisfaction with multiple practical ways of dealing with data should not push epistemological understandings to the margin or cause naiveté in epistemological thinking. Otherwise, the worries expressed by Giddings might find a route to creep into TESOL research:

The ‘thinking’ of positivism continues in the ‘thinking’ of mixed methods… The positivist scientific tradition continues to be privileged as a way to know… If accepted naively as a new inclusive research movement, the methodologies from the interpretative… paradigms, so recently ‘accepted’ within social science and health research disciplines, may become relegated to the margins… (Giddings, 2006, p. 202)

I agree with Riazi and Candlin that many issues in mixed methods research remain “in need of substantive clarifications” (2014, p. 168). However, the direction and nature of such discussions may need to be different. Perhaps apart from the epistemological confusion, the claimed merits of mixed methods may be sought in constructivist and interpretive perspectives. Different ways of data collection and interpretation may be combined without the obligation to shift and confuse epistemological standpoints. The use of numerical and verbal data together for gaining profound understandings does not necessitate abandoning a constructive epistemological position and forgiving or adopting a new one. Therefore, by a mere sentiment for bringing the researchers of yesterday and the day before yesterday to the realm of today’s research, fields of social sciences including TESOL need to beware of turning the research of tomorrow into an edifice rich with technicalities but thin in terms of lifelike and meaningful knowledge.

References


Where mixed methods research combines qualitative and quantitative research in a single study, multi-method research involves data collection using two methods from the same paradigm (e.g., interviews and focus groups, surveys and medical record audit) (Andrew and Halcomb, 2009). In combining qualitative and quantitative data collection, mixed methods research capitalises on the strengths of both qualitative and quantitative research, whilst ameliorating their weaknesses to provide an integrated comprehensive understanding of the topic under investigation (Scammon et al., 2013, Wisdom et al., 20 Mixed Methods Research in Education: Some Challenges and Possibilities. It was with great pleasure that I agreed to address the 2012 conference on mixed methods hosted by the UTDANNING2020 programme. Starting with a consideration of a piece of real-life research, the paper argues that we should not separate numbers from every other form or data in the first place. Then, in terms of qualitative and quantitative data at least, we have nothing to mix. They damage social science by treating serious subjects like epistemology as though they were fashion items to be tried on and rejected on a whim. The Q words do not define the scale of a study. What few seem to recognize is that the similarities in the underlying procedures used are remarkable. PDF | Mixed methods research tends to be received as a resolution to the traditional quantitative–qualitative debate in research methodology. However, | Find, read and cite all the research you need on ResearchGate. CITATION: Mirhosseini, S. A. (2018). Mixed methods research in TESOL: Procedures combined or epistemology confused? TESOL Quarterly, 52(2), 468â€“478. DOI: 10.1002/tesq.427. Mixed methods research in TESOL: Procedures combined or epistemology confused? Seyyed-Abdolhamid Mirhosseini. Alzahra University, Tehran, Iran. Mixed methods research has evolved a set of procedures that proposal developers can use in planning a mixed methods study. In 2003, the Handbook of. 203. Numerous published research studies have incorporated mixed methods research in the social and human sciences in diverse fields such as occupational therapy (Lysack & Krefting, 1994), interpersonal communication (Boneva, Kraut, & Frohlich, 2001), AIDS prevention (Qanz et al., 1996), dementia caregiving (Weitzman & Levkoff, 2000), mental health (Rogers, Day, Randall, &13entall, 2003), and in.