

Chapter 44

The Nature of Research Methodologies

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ABSTRACT

In the nature of research methodologies, quantitative research and quantitative research data are static through time, compared to qualitative research and qualitative research data. Across the globe, the internet and mobile technologies are providing unprecedented access to markets and individuals. Such technologies range from high-definition video conferencing and instant communication around the world to the ability to reach participants on their mobile devices and access to demographics that are traditionally hard to reach. The internet is providing technology-based research methods like blogs, webinars, virtual intercepts, and virtual reality. The nature of the problem then plays the major role in determining what approaches are suitable. The purpose of this chapter is to cover the three types (trends) of research methodologies: the traditional (quantitative, qualitative), the universal (mixed-methods), and the trends (blogs, webinars, virtual intercepts, and virtual reality).

INTRODUCTION

In the research community, according to Tran (2015), the process of research, is generally defined as the procedures used in research that involve introducing a problem, narrowing the research problem into purpose statements, research questions, and hypotheses, collecting and analyzing data to address these questions and hypotheses, and using a writing structure that best fits the problem and the methods. Hence, terms such as *investigator* (often associated with quantitative research) and *inquirer* (often associated with qualitative research) are used interchangeably. Thus, a *methodology* refers to the philosophical framework and the fundamental assumptions of research (van Manen, 1990), *research design* refers to the plan of action that links the philosophical assumptions to specific methods (Creswell, 2003; Crotty, 1998), and *methods* are techniques of data collection and analysis (Creswell, 2003; van Manen, 1990). Some mixed methods writers, like Tashakkori and Teddlie (1998), consider this form of research a methodology and focus on the philosophical assumptions. To call a process a *methodology* introduces a complexity to the

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process of research. Other mixed methods writers, like Creswell, Plano-Clark, Guttman, and Hanson (2003), Greene, Caraceli, and Graham (1989), and Onwuegbuzie and Teddlie (2003), emphasize the techniques or methods of collecting and analyzing data. To call mixed methods research a *method* is clean and concise and resonates with many researchers (Elliott, 2005). The purpose of this chapter is to cover the three types (trends) of research methodologies: the traditional (quantitative, qualitative), the universal (mixed-methods), and the trends (blogs, webinars, virtual intercepts, and virtual reality). This chapter will also cover a brief history of research methods and the usage of research methodologies.

BRIEF HISTORY OF RESEARCH METHODOLOGIES

Before the advent of mixed methods, many studies used multiple methods to achieve the benefits of triangulation (Galton & Wilcocks, 1983) without restricting themselves to any paradigmatic membership or methodological category (Tashakkori & Teddlie, 2003). Thus, during the last 50 years, writers have used different names, making it difficult to locate articles that might relate to mixed methods research. Mixed methods has been called *multitrait/multimethod research* (Campbell & Fiske, 1959), *integrated* or *combined* (Johnson & Onwuegbuzie, 2004, p. 17; Steckler, McLeroy, Goodman, Bird, & McCormick, 1992), and *quantitative and qualitative methods* (Fielding & Fielding, 1986). It has been called *hybrids* (Ragin, Nagel, & White, 2004), *methodological triangulation* (Morse, 1991a), *combined research* (Creswell, 1994), and *mixed methodology* (Tashakkori & Teddlie, 1998). It has also been called the *third methodological movement* (Tashakkori & Teddlie, 2002, p. 5), the *third research paradigm* (Johnson & Onwuegbuzie, 2004, p. 15), and *a new star in social science sky* (Mayring, 2007, p. 1). Nevertheless, the beginning of mixed methods is cited by some (Creswell & Plano-Clark, 2007, p. 5; Johnson, Onwuegbuzie, & Turner, 2007) to Campbell and Fiske (1959) as *multitrait* or *multimethod* research, a concept later formalized by Webb, Campbell, Schwartz, and Sechrest (1966) as *triangulation* (Greene, Caraceli, & Graham, 1989), and is often cited as having methodological superiority over single methods (Johnson et al., 2007; Tran, 2014a). For the first 60 years or so of the 20th century, mixed research can be seen in the work of cultural anthropologists and, especially, the fieldwork sociologists (Gans, 1963; Hollingshead, 1949; Jahoda, Lazarsfeld, & Zeisel, 1931/2003; Lynd & Lynd, 1929/1959).

In social science methodological literature, Campbell and Fiske's (1959) article introduced the idea of triangulation, referring to *multiple operationalism* (Bouchard, 1976). Today, the most frequently used name is *mixed methods research*, a name associated with the *Handbook of Mixed Methods in Social and Behavioral Research* (Tashakkori & Teddlie, 2003). Furthermore, early researchers' idea of multiple operationalism follows more closely what today is called *multimethod research*, in contrast to what currently is called *mixed methods research*. However, Campbell and Fisk (1959) are rightfully credited as being the first to show explicitly how to use multiple research methods for validation purposes, and were extended further by Webb, Campbell, Schwartz, and Sechrest (1966). Thus, Webb et al. are credited with being the first to coin the term *triangulation*. With that said, Cook (1985) is credited for coining the term critical multiplism (also see Houts, Cook, & Shadish, 1986).

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