# Chapter 23

# Integration in Mixed Methods Research Designs by Graduate Students at the University of Science and Technology

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## ABSTRACT

*This chapter reports on a study that investigated how graduate students in the Faculty of Communication and Information Science at NUST were approaching integration in their mixed-methods research dissertations. There has been a concern that lack of expertise of what mixed-methods research is restricts the integrative capacity. Using a research synthesis method, the study investigated three graduate programmes, namely Master's degrees in Library and Information Science, Records and Archives Management, and Journalism and Media Studies from 2016 up to 2018. A total of 95 dissertations were reviewed, and 40 employed mixed-methods research design. It was discovered that integration was commonly done at methods and interpretation levels. Integration of qualitative and quantitative data sets resulted in confirmation (83), expanding understanding (27), and discordance (31). Graduate students dealt with discordant findings by either ignoring the discordance (20), seek corroboration with existing literature (7), or give priority to the quantitative strand (4).*

## INTRODUCTION

There is an established body of knowledge about mixed methods research (MMR); discussing why this approach is used, how it can be used, and the challenges of using it in theory and in practice (O'Cathain, Murphy, & Nicholl, 2007). However, Fetters and Freshwater (2015) contend that a crucial aspect of MMR is the integration issue. Befittingly, the field of mixed methods has been moving towards the challenge of integration. Integration is where investigators intentionally combine or mix the quantitative and qualita-

tive elements rather than keeping them separate in order to bring new understanding of a phenomenon than either method alone can achieve. Fetters, Curry and Creswell (2013) cautioned that although there are many potential gains from data integration, the extent to which MMR studies implement integration remains limited. In health services for example, Tonkin-Crine et al. (2016) observed that mixed methods are commonly used however; data are not often integrated to explore complementarity of findings. Creswell (2009) opined that mixed methods researchers need to establish a purpose for their mixing, a rationale for mixing the quantitative and qualitative data in the first place.

The way graduate students in the Faculty of Faculty of Communication and Information Science (CIS) at NUST have been exploiting MMR has not been adequately studied. It is not known whether graduate students in the Faculty of CIS are harnessing the value integration in their MMR. Thus, it is appropriate and timely to reflect how students are approaching the MMR focusing on the integrating aspect. There is a sense in which the lack of expertise and/or understanding of what mixed methods is, which restricts the integrative capacity of students to appropriately use the method. Creswell and Plano Clark (2011) are of the view that prior to designing a mixed methods study, the researcher should develop a deep understanding of the method to recognise its essential characteristics and adequately justify its use.

Scholars point that researchers and students alike tend to conflate and confuse mixed methods design and triangulation of methods in a study (Ngulube & Ngulube, 2015; Denzin, 2012; Creswell, 2009; Greene, Caracelli, & Graham, 1989). This led to Sale, Lohfeld and Brazil (2002) to conclude that MMR is now being adopted uncritically by a new generation of researchers. Many researchers take qualitative and quantitative strands and call it MMR and rightly, Denzin (2012) cautions researchers not to confuse triangulation with MMR. In its original form Denzin (2012, p. 82) argues "triangulation referred only to the use of multiple forms of qualitative research methods, not the combination of quantitative and qualitative methods." Denzin further notes that triangulation reflects an attempt to secure an in-depth understanding of the phenomenon in question. MMR is "more than simply collecting both quantitative and qualitative data; it indicates that data will be integrated, related, or mixed at some stage of the research process" (Creswell, Fetters, & Ivankova, 2004, p. 1). This integration occurs at various stage(s) of the research process (Glogowska, 2011). To this end, experts intimated an underdevelopment and/or limitation in the way mixed method has been employed or applied by researchers. Creswell et al. (2004) note that the stage of the research process at which the data are combined illustrates the complexity of MMR and the need to be explicit about the model of inquiry being used. As a result, it was felt that graduate students in the Faculty of CIS were probably not maximizing the degree to which they are using this design "given the added resources, time, and expertise required to conduct a mixed methods study" (McKim, 2017, p. 202).

It is, therefore, the thrust of this chapter to review the application of MMR design by graduate students in the Faculty of CIS with a particular focus on integration. This is done as part in profiling the research practices in the Faculty of CIS and provides the Faculty with trends and patterns of research approaches being exploited by its graduate students. Alise and Teddlie (2010) make the point that "examining the prevalence rate of methodological approaches within the social sciences is a new line of research" (p. 103). Further, the study attempts to contribute to the knowledge of MMR as the field is dealing with the challenge of integration. Understanding how students were approaching integration in MMR in the Faculty can help supervisors, researchers and graduate students leverage the strengths of MMR and avoid the pitfalls, misconception and common fallacies associated with the method. The focus on graduate students is justified by the fact that this group of students has mastered research and can produce research with the potential of contributing to knowledge and development.

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