


Chapter 1

Application of Mixed Methods in Information Science Research in Africa: A Methodological Review

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ABSTRACT

The chapter discusses the application of mixed methods research (MMR) in information science (LIS) journals in Africa. MMR is increasingly becoming popular because it provides a comprehensive overview of a complex phenomenon that a single methodology cannot address. It adds insight and perspectives into a study, thereby enriching the findings. The chapter reviewed information science journals indexed in African Journals Online (AJOL), which is a core database in Africa. Twelve journals indexed between 2011 and 2020 were identified for the methodological review to help determine the prevalence of MMR in LIS and establish the reporting quality of MMR in LIS. Findings indicated that MMR studies in the LIS field in Africa was still low, and the few studies that had adopted MMR had poor quality reporting.

INTRODUCTION

Mixed methods research (MMR), also known as the “third methodological movement”, has continued to evolve within behavioural and social sciences (Tashakkori & Teddlie, 2011). MMR is increasingly becoming popular because of its ability to provide a comprehensive overview of a complex phenomenon that a single methodology cannot address and adds insight and perspectives into a study, thereby enriching the findings (Creswell & Creswell, 2018; Johnson et al., 2007; Ngulube, 2020). MMR also allows the

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utilisation of the strengths of both qualitative and quantitative methods, thus overcoming the deficiencies within each method (Bryman, 2016; Fidel, 2008). This explains the direction MMR application is taking in recent years, which shows a need to discuss how MMR should be applied and reported in a study.

MMR in library and information science (LIS) research has been vaguely applied; for example, the integration of the methods is either lacking or limited (Fidel, 2008; Ngulube et al., 2009). For LIS researchers to join the third methodological movement and fully tap into its benefits, they have to apply both qualitative and quantitative methods throughout the entire research process. Quantitative and qualitative strands should be reflected in the research objectives (predict and explore), data collection and analysis, integration of findings, and drawing inferences (Leech & Onwuegbuzie, 2009). Researchers are also required to present the rationale for applying MMR (Bryman, 2016) and recount the challenges encountered during the study (Ngulube et al., 2009).

Two recent methodological reviews on MMR in LIS have been published. Hayman and Smith (2020) reviewed how MMR was applied in the LIS field between 2008-2018. The articles analysed were indexed in Library and Information Science and Technology Abstract (LISTA) and Web of Science. Another study by Granikov et al. (2020) published a methodological review, which assessed the state of MMR in LIS using 84 articles indexed in the LIS journals published in 2017 and 2018. These databases included LISTA and Library and Information Science Abstract (LISA). The review, which was specifically on the integration of qualitative and quantitative components, revealed a need to promote awareness on the adequate use and reporting of MMR within the LIS field. Preliminary review of the literature, however, revealed that there was only one African LIS journal indexed in Web of Science and non in LISA or LISTA.

To contextualise this discussion in the African setting, the authors examined LIS journals indexed in African Journals Online (AJOL). Existing strengths and gaps in the quality of reporting MMR studies in LIS journals in Africa between 2011 to 2020 were identified. Insights into how MMR studies should be explicitly and transparently reported to strengthen research in the LIS field in Africa were presented. The objectives guiding the study were: (1) to determine the prevalence of MMR in LIS; and (2) to establish the quality of reporting of MMR in LIS.

BACKGROUND

Mixing of methods is not new and has been around since (Campbell & Fiske, 1959) recommended utilising multiple quantitative methods. However, it was only in the late 1980s and early 1990s when MMR gained popularity (Maxwell, 2015). Ngulube (2012) reviewed several definitions of MMR and noted that different authors defined MMR differently depending on their academic backgrounds. The key concepts identified about MMR were collection, analysis, integration, and interpretation of qualitative and quantitative data based on a convergent or sequential research approach to maximise the benefits of both methods in a single study.

Mixed methods research designs are a combination of quantitative and qualitative research approaches (Terrell, 2012). Quantitative research is inclined to the positivist paradigm where the researcher conducts empirical studies and does not get emotionally involved with the study participants while qualitative research subscribes to the constructivism (interpretivism) and critical paradigms where the researchers believe that multiple realities can be explored through the interaction of the study participants with the researcher (Johnson & Onwuegbuzie, 2004, p.14). The integration of the qualitative and quantitative approaches has led to the merging of the philosophical assumptions from the two approaches (Ngulube,

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