

# The Application of Mixed Methods Research in Public Administration: Opportunity Missed or Taken?

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**Abstract:** The aim of this paper is to analyse the extent to which public administration scholars make use of mixed methodology in conducting their research. Essentially, mixed methodology entails combining qualitative and quantitative research methods in order to attain research objectives. For the purpose of this paper, an unobtrusive research was undertaken. In other words, no human participants were involved. To be precise, a secondary data analysis was conducted in order to determine the extent to which public administration scholars use mixed methodology in public administration research. In order to attain the objective of this research paper, 239 scholarly peer reviewed journal articles were reviewed in order to establish the methodology applied. This involved an analysis of articles published in 2018 and 2019 volumes of the four academic journals in the field of public administration, namely: Journal of Public Administration and Development Alternatives, Administratio Publica, Journal of Public Administration, and the International Review of Public Administration. The findings indicate that out of 239 articles published in the aforementioned journals, only 20 articles applied mixed methodology in gathering empirical data. The other issue is that in some instances where researchers used mixed methodology in their articles, they did not state any specific variant of mixed methods adopted. Such explanations would assist readers in appreciating the research results and findings. Based on available evidence, this paper concludes that public administration scholars have indeed missed an opportunity to make use of and benefit from using mixed methodology. Therefore, it is important for public administration scholars to consider rigorous application of mixed methodology research in order to obtain in-depth information regarding any subject of investigation.

**Keywords:** Mixed method research, Public Administration, qualitative, quantitative

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## 1. Introduction

Previous research studies (Denscombe, 2008; Ngulube, Mokwatlo & Ndwandwe, 2009; Smith, 2012; Bentahar & Cameron, 2015; Maarouf, 2019) show that the utilisation of mixed methods research in various disciplines such as psychology, health, education, and sociology is gaining traction. For the purpose of this paper, it is important to define mixed method research in order to create a deeper understanding of this research approach. Raimondo and Newcomer (2017:4) define mixed methods research as follows: "The planned and intentional incorporation of multiple mental models – with their diverse constituent methodological stances, epistemological understandings, disciplinary perspectives, and habits of mind and experience – into the same inquiry space for purposes of generatively engaging with difference toward better understanding of the phenomena being studied." Almalki (2016) states that mixed methods research is an empirical research which is concerned with gathering and analysing qualitative and quantitative data in order to answer research

questions from multiple perspectives. The mixed methods research can be defined as a research procedure, which focuses on combining quantitative and qualitative data collection and analysis with a view of finding answers to research questions (Cresswell & Zhang, 2009; Burt, 2015). According to Bentahar and Cameron (2015), a mixed method research is a type of research in which a researcher amalgamates qualitative and quantitative data collection techniques, approaches, methods, and concepts into a single study. Cameron (2011:96) mentions that "mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone." Therefore, in the context of this paper, the mixed methods research is defined as a research approach that integrates the usage of

both qualitative and quantitative data collection techniques in a systematic way in order to find answers to research questions.

The purpose of mixed methods research is to enable researchers to comprehend and clarify intricate phenomena that would be difficult to understand using a single method of inquiry (Jemna, 2016; Shannon-Baker, 2016). This suggests that the mixed methods research provides an opportunity for researchers to understand a phenomenon from multiple perspectives. In support of this assertion, Ingham-Broomfield (2015) argues that mixed methods provides an opportunity for researchers to gather adequate information in order to acquire deep understanding of research phenomenon. Denscombe (2008:273) outlines different purposes for which mixed methods could be used as follows: firstly, to enhance the accuracy of research data. Secondly, to produce full report in relation of a research phenomenon by integrating data collection tools in a complementary fashion. Thirdly, to address potential biasness that may arise when using a single method approach, which implies that combining both qualitative and quantitative methods would "compensate specific strengths and weaknesses associated with particular methods." Further, Denscombe (2008) points out that mixed methods research may be used to develop the analysis of data and build on the preliminary findings of the research thereby juxtaposing data collected through qualitative and quantitative methods. Besides, mixed methods research can be instrumental in assisting with sampling, particularly when either qualitative or quantitative strand is dependent on the other for screening potential participants or respondents. Nevertheless, "conducting well-integrated mixed methods research requires high levels of competence in philosophy of science, research ethics, quantitative research methods, and qualitative inquiry approaches" (Ponterotto, Mathew & Raughley, 2013:42).

In Maarouf's (2019) assessment, the mixed methodology is not adequately applied in social science research. For example, Raimondo and Newcomer (2017) reveal that the usage to mixed methods research in Public Administration research appears to be extremely low. According to Wessels and Thani (2014), scholars in the discipline of Public Administration prefer qualitative research to quantitative research method, which could be attributed to familiarity with a specific research approach. In fact, "Public Administration research

is methodologically underdeveloped, particularly in comparison to other disciplines. Public administration research has fallen notably behind research in related fields in terms of methodological sophistication" (Groeneveld, Tummers, Bronkhorst, Ashikali & van Thiel, 2015:62). Smith (2012) asserts that the paucity of research that uses mixed methods designs could be attributed to poor comprehension of mixed methodology and misunderstanding of paradigm associated with this methodology. Therefore, the purpose of this paper is to analyse the extent to which public administration scholars make use of mixed methodology in conducting their research.

This paper begins by discussing the evolution of mixed methods research in order to trace its historical developments over the years. Subsequent to this, the paper presents the major variants of mixed methods research in order to enhance fundamental understanding thereof. The benefits and challenges associated with mixed methods research are identified and explained in detail. This is followed by a brief outline of the methods and procedures followed in gathering data for the purpose of this paper. The findings and discussions in relation to the usage of mixed methods research in the discipline of Public Administration are presented. This paper concludes by stating that the scholars in the field of Public Administration have not taken the opportunity to reap the benefits of using mixed methods research. However, the findings of this paper could be useful to academics, practicing researchers, methodologist in the discipline of Public Administration because it outlines the different designs of mixed methodology and their benefits in research.

## 2. Evolution of Mixed Methodology Research

Ngulube *et al.* (2009) suggest that the idea of mixing two research methods began in the 1960s. According to Migiro and Maganngi (2011), DT Campbell and DW Fikse pioneered the multimethod research in the field of psychology in 1959 in a study entitled "Convergent and discriminant validation by the multitrait-multimethod matrix." Maarouf (2019) mentions that due to the paradigm war, which began in the 1970s, some researchers, who were proponents of either qualitative or quantitative research methodology, held a view that their research approach was superior in comparison to the others. At the same time, special interest

in integrating qualitative and quantitative methods was launched successfully by TD Jick in 1979 when he used interviews, observations and survey questionnaires to investigate a research problem in a study entitled "Mixing qualitative and quantitative methods: Triangulation in action" (Migiro & Magangi, 2011). Due to 'paradigm war', it was consistently believed that quantitative and qualitative research methods were irreconcilable suggesting that they could not be utilised in a single study (Maarouf, 2019). Ngulube *et al.* (2009:106) state a view that qualitative and quantitative methods were irreconcilable created a notion of 'incompatibility thesis.' However, this fallacy started to disappear in the 1990s when some researcher began to use both qualitative and quantitative methods in a single study. The emergence of new methodological approach to research in a form of mixed methods research meant that the antagonism between positivism and constructivism could not be sustained any longer (Ngulube *et al.*, 2009). This indicates that the invisible chasm created between the qualitative and quantitative research methods was annihilated.

The disappearance of 'paradigm war' heralded a new era in research where the qualitative and quantitative methods enjoyed equal status because of the usage of pragmatism as a new paradigm associated with mixed methods research (Migiro & Magangi, 2011). Nevertheless, Ngulube *et al.* (2009) argue that pragmatism cannot be considered as a paradigm because it focuses on the usage of whichever 'works best' in research. In line with this view, Denscombe (2008) mentions that mixed methods research is not guided by a clear philosophy, instead, it is informed by practical issues and demands, which seem to suggest that the elements of both quantitative and qualitative methods are prone to fragmentation and inconsistencies. Besides, "numerous scholars have cautioned against mixed method designs for fear that one or the other design would be diluted by trying to do too much in a single study" (Ponterotto *et al.*, 2013:46). Following this, however, Ngulube *et al.* (2009) assert that the decision to make use of mixed methods research has to be informed by the purpose and suitability of the research methods to investigate a research problem instead of convenience and expediency. Maarouf (2019) accentuates that pragmatism provides a lucid philosophical justification for using a mixed methods research because it advocates for improvement of action through scientific knowledge in order to make practical difference. Moreover, pragmatism holds

that it is only through action that knowledge can be created, implying that action is a catalyst in the creation of knowledge.

### **3. Typologies of Mixed Methodology Research**

Smith (2012) mentions the reasons for paucity of research using mixed methods research. Firstly, it appears researcher lack a clear understanding of mixed methods research. Secondly, lack of skills to combine quantitative and qualitative methods in a single study. Thirdly, lack of resources required to undertake a mixed methods research. For these reasons, Almalki (2016) indicates that the mixed methods research can be understood clearly if the typologies are explained appropriately. There are four major typologies of mixed methods research, namely: concurrent design, explanatory design, exploratory design, and embedded design. These mixed methods design are discussed briefly below.

#### **3.1 Concurrent Design**

The concurrent design is also known as triangulation design, which seeks to ensure that research data is collected in a complimentary manner in a single study. In concurrent design, "the qualitative and quantitative data is collected around the same time, and the weighting priority is usually equal across approaches" (Ponterotto, 2013:51). The qualitative and quantitative data that is collected simultaneously is further integrated during the interpretation of results (Jemna, 2016). This design is regarded as a single-phase research because quantitative and qualitative data are collected simultaneously (Creswell & Zhang, 2009:613). According to Almalki (2016), the main advantage of this approach is that it allows data collection from different sources through various methods in a complimentary fashion. However, Almalki (2016) notes that the application of this approach in research requires concerted efforts and skills in order to handle contradictory results within data sets. Besides, Terrel (2012) argues that comparing two different data sets could be extremely challenging, particularly when discrepancies are discovered.

#### **3.2 Explanatory Sequential Design**

The explanatory sequential design suggests that the researcher begins by collecting and analysing quantitative data after which a qualitative data collection

and analysis processes are conducted as follow-up to assist in explaining quantitative results (Creswell & Zhang, 2009). Further, Creswell and Zhang (2009) assert that this approach is quantitatively orientated because more premium is placed on quantitative data. In support of this view, Ponterotto *et al.* (2013) argue that quantitative strand precedes the qualitative data collection because priority is given to a quantitative component. The explanatory sequential design is easy to implement and makes it possible to sustain a research focus due to the fact that one data set builds on the other. Nonetheless, the problem associated with this approach is that it is time-consuming and the difficulty in relation to the selection of participants that could assist with relevant information (Almalki, 2016). In this regard, Creswell and Zhang (2009) explain that during the first phase of the research, the researcher uses information emanating from quantitative strand to select participants for the qualitative component and prepare follow-up questions for the second phase. Since the primary purpose of this design is to explain broadly the results of the first phase, the researcher needs to establish a link between data analysis procedures for the quantitative component and the data collection procedures for the qualitative strand. This suggests that a researcher should be in a position to identify gaps in quantitative data sets in order to bridge such a lacuna with qualitative data sets.

### 3.3 Exploratory Sequential Design

According to Smith (2012), the sequential exploratory approach consists of two phases. In the first phase, the researcher collects and analyses qualitative data. In the second phase of the study, the researcher gathers and analyses quantitative data. Basically, this design is the opposite of explanatory sequential design because the qualitative data collection and analysis precedes quantitative data collection and analysis (Almalki, 2016). The exploratory sequential design is suitable for exploring constructs that are addressed insufficiently in literature or poorly or inadequately conceptualized or measured constructs. The second phase of data collection, the researcher needs to examine qualitative findings that may contribute towards building quantitative strand and subsequently establish whether qualitative findings can be generalized to target population (Creswell & Zhang, 2009). According to Terrel (2012), the exploratory sequential approach is easy to follow, because the

phases are distinct and clearly defined than concurrent design. Unfortunately, this strategy could be time consuming particularly data collection and analysis of both qualitative and quantitative strands are given equal weight. Further, Almalki (2016) notes that research participants may become opposed or less interested in taking part in the second phase of data collection in which case the quantitative strand could be affected.

### 3.4 Embedded Design

The embedded design operates in the same way as the concurrent design discussed above, but the difference is that data sets of either quantitative or qualitative method is embedded or nested within the other. This is indicative of the fact that there is one overarching method that guides the research and a secondary method which provides support to the primary method (Smith, 2012). In Almalki's (2016) view, the embedded design allows researcher to use either quantitative or qualitative method of inquiry to support the primary method of inquiry in order to understand a phenomenon comprehensively. The purpose of embedded design is to gain a broad understanding of the research subject matter that could only be achieved through the usage of predominant data collection method. At the same time, the embedded design can be utilised to investigate different research questions or collect data from different target groups or levels within an institution (Terrel, 2012). Further, Terrel (2012) states, the strength of the strategy is that the researcher can be able to collect two different data sets concurrently, implying that both quantitative and qualitative data can be gathered to yield different perspectives in relation to a research issue. Table 1 on the following page presents additional information pertaining to each of the four major mixed methods designs discussed above.

## 4. Benefits and Problems Associated with Using Mixed Methods Research

The well planned mixed methods research can offer researchers in the field of Public Administration an opportunity to benefit from its application. For instance, researchers can use both qualitative and quantitative methods in a complimentary fashion to enhance the quality of research findings. At the same time, researchers can triangulate in order to broaden an understanding of a research phenomenon (Ngulube *et al.*, 2009; Maarouf, 2019). According

**Table 1: Additional Elements of Four Mixed Methods Designs**

Mixed Methods Designs →	Concurrent design	Explanatory sequential design	Exploratory sequential design	Embedded sequential/ concurrent design
Type/Example of mixed methods question	Quantitative and qualitative results compared: Do the quantitative and qualitative results converge, diverge, or present contradictory evidence?	Qualitative data collection helps explain quantitative results: How do the qualitative findings help to explain the quantitative results in more depth?	Initial qualitative exploration leads to improve quantitative data collection and results: Can the qualitative themes be generalized to a sample of a population?	A supportive database enhance a major database: How does qualitative data added to an experiment improve/enhance the experimental findings?
Designs suitable	Qualitative: grounded theory, case study Quantitative: survey, correlational, experiment	Quantitative: survey, correlational, experiment Qualitative: case study, grounded theory	Qualitative: case study, phenomenology Quantitative: survey, correlational	Quantitative: experiment, correlational Qualitative: case study, phenomenology
Validity/ Methodological issues	Unequal sample sizes; Divergent, contradictory information; Lack of parallel quantitative and qualitative measures	Inadequate selection of participants for follow-up; Inadequate use of quan results for follow-up	Inadequate use of quantitative results in qualitative follow-up; Using less-than-adequate rigorous procedures in quantitative follow-up (e.g. poor scale development)	Concurrent design (issues attendant to concurrent design, bias introduced); Sequential design (issues attendant to sequential designs, bias introduced)
Advantages of design	Makes sense intuitively; Efficient for data collection; Provides multiple "angles" on a problem	Easily conceptualized in phases; Manageable for single researcher; Quantitatively driven	Easily conceptualized in phases; Manageable for single researcher; Qualitatively driven	Permits use of qualitative within experimental designs; Improves major design (e.g., experiment, correlational study)
Disadvantages of design	Quantitative and qualitative results may diverge, be contradictory; Extensive data collection	Phases take time; Not qualitatively driven	Phases take time; Not quantitatively driven	Devalues supporting database in supporting role; New, underconceptualised

Source: Cresswell (2009)

to Bentahar and Cameron (2015:6), triangulation "allows the researcher to corroborate and to support the results relative to the same phenomenon with different methods and to ameliorate internal and external validity." In this way, the findings of one method can be used successfully to authenticate the findings of the other research method. Moreover, Migiro and Magangi (2011) assert that researchers using mixed methods research can be able to produce compelling evidence to strengthen their research findings by way of corroboration and convergence. Most importantly, it is possible to add more understanding and insight into the research subject matter when using qualitative and quantitative research methods. Researchers using mixed methods research can be able to identify paradoxes or contradictory findings that may require rephrasing of research questions. Further, the researchers have a splendid opportunity to broaden the scope and focus of the study (Onwuegbuzie, 2011). According to Raimondo and Newcomer (2017:7), mixed methods research "enables the researcher to look at a particular problem or research subject through multiple perspectives, thereby avoiding common researcher biases, the oversimplification

of complicated issues and methodological determinism." Interestingly, Leech and Onwuegbuzie (2010) identify four important benefits for applying mixed methods approach. Firstly, mixed methods research can contribute towards participant enrichment through sample optimisation. Secondly, researchers using mixed methods can be able to enhance the suitability and efficacy of data collection instruments, which may amount to instrument fidelity. Thirdly, researchers can ensure that mixed methods research interventions are implemented as planned in order to achieve treatment integrity particularly in counselling research. Fourthly, mixed methods researchers can enhance the significant findings by using qualitative data to enhance the interpretation of quantitative findings and use quantitative data to support qualitative findings or analyses.

Researchers who decide to use mixed methods research face numerous challenges (Almalki, 2016). In that regard, Smith (2012) and Maroouf (2019) point out that mixed methods research requires extra commitment and resources such as money and time in order to succeed seamlessly even though the researcher may be experienced.

Additionally, researchers must possess the necessary skills, knowledge and experience in terms of applying both qualitative and quantitative research methods. In other words, researchers who choose to undertake the mixed methods research should be conversant with qualitative and quantitative methodology. This involves understanding the designs, paradigms, data collection techniques, sampling, analysis and data quality criteria associated with each method of inquiry. Addae and Quan-Baffour (2015) highlight that the integration to quantitative and qualitative findings in mixed methods research is superficial and incompatible. This argument is based on the ontological and epistemological discrepancies between quantitative and qualitative methods. As a further extension of the above argument, Ponterotto *et al.* (2013) postulate that mixed methods designs tend to eclipse qualitative research thereby advancing quantitative research within a positivist and ethic epistemological stance, though in a discrete manner. In other words, qualitative research can be diluted inadvertently due to overemphasis of quantitative findings. Despite the challenges mentioned herein, Cameron (2011:106) recommends that: "Mixed methods researchers need to be versatile and innovative with a repertoire of research skills that exceeds those needed for single mode research. They need to explicitly state their philosophical foundations and paradigmatic stance before rigorously defending their methodological choices and demonstrate a sound knowledge base of mixed methods research designs and methodological considerations. They need to demonstrate proficiency and competence in both the quantitative and qualitative methods chosen as well as proficiency and competency in applying the rules of integration to methods and data analysis."

## 5. Research Method and Procedures

In order to attain the primary object of this paper, an unobtrusive research method was employed. This indicates that no human participants were involved in data collection processes. Specifically, an analysis of existing literature or documents was undertaken. In this regard, four renowned journals in the discipline of Public Administration were examined, namely: Journal of Public Administration and Development Alternatives, *Administratio Publica*, Journal of Public Administration, and International Review of Public Administration. Journal volumes and issues published in 2018 and 2019 were examined to establish

the extent to which Public Administration scholars have used mixed methods research. The first three journals listed above are published in South Africa and one international journal. The journal was chosen because they publish mainstream public administration articles. A total of 239 articles published between 2018 and 2019 were included, of which 29 (12.13%) were published in the Journal of Public Administration and Development Alternatives, 100 (41.84%) in *Administratio Publica*, 82 (34.30%) in Journal of Public Administration and 28 (11.71%) in International Review of Public Administration, as shown in column 5 of Table 2. Notably, the journals differ in terms of the number of articles they publish. Between 2018 and 2019, the Journal of Public Administration published more articles (n=100) followed by *Administratio Publica* (n=82) Journal of Public Administration and Development Alternatives (n=29), and the International Review of Public Administration (n=28). Journal articles were selected manually and divided in terms of different methodological approach as shown in Table 2 on the next page. Articles in which mixed methods designs were used were examined to understand how the methodology was applied and explained.

## 6. Results and Discussion

This section presents the findings and discussion in relation to the use of mixed methods research by Public Administration scholars in the 2018 and 2019 volumes of the following journals: Journal of Public Administration and Development Alternatives; *Administratio Publica*; Journal of Public Administration; and the International Review of Public Administration.

### 6.1 Trends in Terms of Methodological Preference per Journal

Table 2 shows the journals assessed in terms of methodological choice applied in articles published between 2018 and 2019. Overall, a total number of articles examined was 239 from the four different renowned Public Administration journals as indicated earlier. First, the Journal of Public Administration and Development Alternatives (JPADA) published 29 (12.13%) articles of the 239 articles under consideration. Interestingly, 21 (8.78%) articles published in that journal applied the qualitative methodology while 2 (0.83%) used the quantitative methodology. Notably, 6 (2.52%) of articles published in the above journal applied

**Table 2: Journal Articles Assessed with Regard to Methodological Choice Applied 2018-2019**

Name of Journal	Qualitative Methodology	Quantitative Methodology	Mixed Methodology	Aggregate
Journal of Public Administration and Development Alternatives	21 (8.78%)	02 (0.83%)	06 (2.51%)	29 (12.13%)
Administratio Publica	84 (35.14%)	08 (3.34%)	08 (3.34%)	100 (41.84%)
Journal of Public Administration	66 (27.61%)	10 (4.18%)	06 (2.51%)	82 (34.30%)
International Review of Public Administration	07 (2.92%)	21 (8.78%)	00 (0%)	28 (11.71%)
Total number of articles per research method applied	178 (74.47%)	41 (17.15%)	20 (8.36%)	239 (100%)

Source: Author's own compilation (2020)

mixed methods research. It appears that the mixed methods research is preferred over quantitative research method by researchers who published in JPADA during the period specified. Nevertheless, statistics indicate that the qualitative research methodology was the most preferred in comparison of quantitative and mixed methodology.

Administratio Publica published 100 articles between 2018 and 2019, which constitute only 41.84% of the 239 articles examined. Table 2 indicates that 84 (35.14%) articles used the qualitative methodology whereas quantitative and mixed methodology both had 8 (3.34%) articles respectively. This suggests that the quantitative and mixed methodology received equal preference by researchers who published in the abovementioned journal. There fact the qualitative methodology received more preference when compared to the other two approaches was not surprising.

Statistics in Table 2 confirm that the Journal of Public Administration (JOPA) published 82 articles between 2018 and 2019 which constitute 34.30% of the 239 articles assessed. In this regard, it was noted that 66 (27.61%) articles used the qualitative methodology, followed by the quantitative methodology with 10 (4.18%) article and only 6 (2,51% for the mixed methodology. Again, mixed methods research was the less preferred method of inquiry applied by researchers who published in JOPA. As was seen with previous journals, the qualitative research methodology remains the most preferred approach of inquiry. This important finding is consistent with a concern raised by Wessels and Thani (2014) that Public Administration scholars find it easier to make use of qualitative method of inquiry since they are conversant with this strategy.

The International Journal of Public Administration published almost 28 articles which contribute 11.71% of the 239 articles. Surprisingly, it was found that at least 7 (2.92%) articles used qualitative methodology whereas 21 (17.15%) applied quantitative methodology. These findings show that quantitative methodology was the most preferred approach of inquiry in comparison to the other two methodologies. Contrary to what Wessels and Thani (2014) mentioned that Public Administration scholars prefer qualitative methodology, it appears that scholars who published in the above journal during a period under consideration prefer quantitative methodology. Unfortunately, researchers who published the journal during that period did not use the mixed methods research methodology. In this regard, it remains a concern that mixed methods research appears to be relegated to the lowest rung of the ladder in terms of methodological choices in Public Administration. The fact that there was no single article published which combined qualitative and quantitative methods could be an indication that some researchers are still engaged in 'paradigm war' that sought to create a chasm between quantitative and qualitative methods as argued by Maarouf (2019).

## 6.2 Overall Trend in Terms of Use of Mixed Methods Research in Public Administration Journals

As per Table 2, the findings show that 178 (74.47%) articles analysed applied the qualitative methodology while 41 (17.15%) used quantitative methodology. Further, the findings indicate that at least 20 (8.36%) articles out of the 239 article in total applied mixed methods research. It is not yet clear why mixed methods research is the less preferred method of

inquiry in the discipline of Public Administration. This finding is consistent with Raimondo and Newcomer (2017) assertion that mixed methods research is underutilised in Public Administration. The paucity of studies using mixed methods research raises a concern about the familiarity of Public Administration scholars with this method of inquiry. Perhaps the issue of adequate training may need to be considered to enhance the skills and knowledge about the integration of both quantitative and qualitative methods of inquiry in a single study.

The 20 (8.36%) articles that employed the mixed methods research did not explain the reasons for using the mixed methods research. In other words, there were no reasonable justifications for the methodological choice, which is expected in quality research. By so doing researchers missed an opportunity to make a methodological contribution as it relates to their specific topics. Besides, researchers did not outline any specific variant or typology of mixed methods that was used in their studies, instead, the methods sections only indicated amorphously that mixed methods research was utilised. This indicates that the mixed methods research was not explicated in terms of the order of priority. As a matter of fact, this is contradiction to Almalki's (2016) argument that research can fathom mixed methods research if the typologies are explicated comprehensively. Failure to deal with issues of priority in mixed methods research can complicate issues related to timing the mixed methods research. Another finding is that articles that used the mixed methods research did not explain the levels at which mixing was undertaken. In this sense, replicating a study that does not explain and clarify matters raised above can create complexities when a study has to be replicated. Further, such short coming tends to eclipse valuable findings due to lack of methodological rigour. Perhaps it is for these reasons that Smith (2012) and Maarouf (2019) argue that in order for the researchers to succeed in using mixed methods research, they ought to be experienced, skilled and knowledgeable about the application of both qualitative and quantitative methods of inquiry.

## 7. Conclusion and Recommendations

It is evident from the systematic review or assessment of the four renowned Public Administration journals that mixed methods research in Public Administration has been utilised sporadically.

The findings of this paper indicate that the usage of qualitative methodology by Public Administration scholars is prevalent in comparison to quantitative and mixed methods research. Perhaps the trend could be attributed to the nature of research questions which most of the researchers seek to address. The findings have shown that Public Administration researchers apply the quantitative research methodology scantily. However, it is not yet clear whether the researchers in Public Administration are methodologically prepared to use quantitative research approach in their research. The mixed methods research received less attention from Public Administration scholars. When the method is applied by the researchers, they fail to provide reasonable justification for mixing the methods. Furthermore, some scholars have failed to explain mixed methods research in terms of priority and timing, which shows the level of unfamiliarity with this research approach. Given these and other challenges faced by Public Administration scholars, academic institutions as well as research institutions need to expose the researchers to workshops focusing on mixed methods research, especially the ones that include philosophy of research design, mixed methods design strategies, data collection procedures, data analysis, and information on how to report mixed methods findings. Based on the findings of this paper, it is clear that Public Administration researchers have missed an opportunity to benefit from the use of mixed methods research.

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