



Understanding Research Methods in Development Context: A Synthesis Paper on Research in Development Arenas

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ABSTRACT

One of the challenging undertakings for those who engage in any form of research pertains to the suitable choices of methods and techniques. Even more complicated is undertaking research in the field of development studies which by setting is multidimensional and multifaceted. This is so because the development arenas are indeed both complex and complicated. It is for that reason this study sought to clarify by providing an understanding of research methods in the development context. It is a synthesis aimed at resolving a number of problematic research issues experienced within development arenas. We have argued that the role of applied research in the development arenas should always be deeply understood; and epistemological issues as well as boundary settings in development research must be clarified. At the same time, the choice of methods plus issues concerning rigour and validity in development research are a requirement upon which every researcher should anchor their research conceptualisation and practice. It is our consideration that once these issues were embedded within research processes, development study findings and remedial recommendations will be evidence-based and will cause positive and sustainable effects on human development.

Keywords: research; development arena; epistemology; research methods; rigor; validity; Zambia

INTRODUCTION

The aim of this paper is to discuss and arrive at some syntheses of fundamental issues that concern the role of applied research in the development arenas. To achieve this objective, the paper firstly discusses the role of applied research in the development arena and following this is a discussion on the epistemological issues and boundary setting in development research. Thirdly, the choice of methods is discussed with regard to quantitative and qualitative research approaches. Fourthly, the paper brings to the fore aspects that constitute rigour and validity and these are equally discussed within the context of applied research in the development arenas. Lastly, a reflective conclusion is given.

THE ROLE OF APPLIED RESEARCH IN THE DEVELOPMENT ARENAS

Applied research is an important factor input in the process of development and poverty alleviation and therefore it could have been good to have economies globally investing in research. Thus, it is also crucial to consider applied research as an important addition to the list of many other key factor inputs of economic growth such as labour, land, physical capital, technology and financial resources. Before discussing the role and significance of applied research, it is important to mention that the development arena itself is very dynamic in both its nature and practice. Thus, it is important for those responsible to initiate, implement and review development projects, programs, strategies and most of all policies to clearly understand the complexity of the development arena.

Applied research is defined as a form of systematic inquiry involving the practical application of scientific and/or technical knowledge, improvements or discoveries that can be used to solve practical problems in real world situations. Further, it also makes use of the research communities' accumulated theories, knowledge, methods and techniques for a specific purpose [8,12].

In addition, applied research plays an important role and [13 & 31] asserts that research in the development arena is crucial and is directly used to improve the quality of development interventions or used as back up cases for the modification of development action. It follows therefore that research in the development arena is a fundamental requirement in that it provides relevant information in informing conceptualizing, designing, redesigning, implementing and evaluating of divergent development interventions in any given development situation.

Although the role of research in the development arenas is commonly considered to be inevitable, development actors are supposed to understand contextual differences and subject specific research objectives as they seek for solutions to given situations. Accordingly, [8] warn that "different policies require different research questions to be asked in order to obtain results that will usefully inform those policies. When the policy changes, the core question at the centre of related policy investigations also changes and it is frequently necessary to change the method by which those investigations are carried out". In many instances, the consequence of this is to change the sort of information to be gathered.

The role and significance of applied research in the development arenas could be said to be pivotal without which many development interventions would yield very low social and economic gains. Therefore, researchers and implementers of development policy related

matters need to adhere to quality assurance priorities by ascertaining that research results are products of a rigorous process.

EPISTEMOLOGICAL ISSUES AND BOUNDARY SETTING IN DEVELOPMENT RESEARCH

a. Epistemological Issues in Development Research

Epistemology, according to [12] is defined as the “branch of philosophy that is concerned with the nature, origin, scope of knowledge and ‘how we know what we know’”. This statement is important and challenging because it describes what seems to be the main focus of human life, which is the search for reality in any given subject. The complexity of epistemology therefore lies in the fact that the nature, origin and scope of knowledge fundamentally differs from one field of study to another and the methodologies for investigating it also vary significantly.

Indeed, the subject matter of epistemology is diverse and different perspectives exist explaining what could constitute reality and truth. There are two widely considered epistemological perspectives in the academia that explain the aims and methods of investigating reality and truth. According to [9 & 25], positivist and social constructionist paradigms embrace different perspectives on the aim and practice of understanding human action, different ethical commitments, and different stances on methodological and epistemological issues of representation, validity and objectivity. My discussion in this paper therefore focuses on these two perspectives of positivism and constructivism.

According to the positivist proponents, [12, 21 & 26], point out that reality is considered to be definable, in existence and that it could be observed whereas the constructivists believe reality and truth do not exist. On the one hand, positivism contends that when conducting research in the development arena, the researcher is independent of the researched. On the other hand, constructivists perceive the researcher as not being independent of the researched.

Regarding the positivists, the main goal of research is to acquire reality and truth while the constructivists maintain that the objective of research is to obtain a more informed construction of the world. These two approaches have several other distinctions at various levels of the research process, such as the methods used, types of data collected, and tools of analysis employed. Significantly, the positivist epistemology is aligned with the quantitative research approach while the constructivist epistemology is aligned with the qualitative research perspective.

b. Boundary Setting in Development Research

Provided the wide scope and dynamic nature of the epistemological perspectives, it is clear that conducting research in the development arena requires an organized setting and good planning. Considering a number of complexities within the development arenas, researchers would be required to carefully plan their research processes, for this is important in ensuring that the findings are acceptable. However, it should be considered that this kind of planning in applied research is accompanied with commitment and understanding of the process on the part of the researcher, thus, issues of boundary setting become paramount.

Boundary setting is the process of establishing conceptual lines that demarcate what is inside of a given research scope from what is outside, thereby separating what is directly relevant from what is not of direct relevance [2, 9 & 10]. With sound boundary setting, the seemingly

complex development arena and research process could be simplified to the advantage of the policy researcher conducting a scientific enquiry and hoping to obtain credible findings and conclusions.

Researchers always have to guard against taking the research process for granted. Instead, they need to consistently and constantly verify factors of relevance by setting practically oriented boundaries with a view of obtaining credibility in their findings and possible policy recommendations for consideration in development interventions. [2], add that another factor which affects the way people view the world and set boundaries involves their professions. Many professionals, such as agronomists, ecologists, sociologists, economists, and animal scientists, see the world subjectively in the light of their disciplinary perspectives.

Since the researcher is always presented with many issues to manage throughout the research process, it is imperative that the aspect of boundary setting is made a practical agenda for every individual, organisation or government sector embarking on enquiries, particularly those meant to inform policy and development action. However, to achieve this kind of result and preparedness, researchers are required to be critical in the manner in which they design and conduct every aspect of their research processes. Thus, boundary setting in this regard tends to be a positive prerequisite to good applied development research. Consulting, establishing and planning every perceived opportunity and threat at the design stage increases the chances of getting research findings that are relevant to a given sector of development intervention and poverty reduction, for instance.

CHOICE OF METHODS IN DEVELOPMENT RESEARCH

The two main types of research approaches are quantitative and qualitative. As indicated earlier, quantitative research is associated with the positivist paradigm whereas qualitative research most closely is associated with the constructivist paradigm. Researchers in the development arena have to make a choice between these methods when conducting their different researches.

[5, 14, 27 & 20], reaffirm that quantitative and qualitative research approaches clearly differ in many aspects. For example, quantitative research requires the reduction of phenomena to numerical values in order to carry out statistical analysis, while qualitative research involves the collection of data in non-numerical formats, such as texts, pictures, videos, etc. In other words, [12 & 11], add that quantitative methods are more applicable when answering fundamental questions of 'what' and 'where' whereas qualitative methods tend to be useful when answering the 'why' and 'how' questions.

Following the above, researchers are then challenged to choose their approach of preference, one that is deemed suitable to collect the information needed. Thus, the onus is for the researcher and according to Bryman (2004:464), the challenge is to make decisions on which kinds of research questions will be best answered using a quantitative research method and which ones with a qualitative research method.

In addition, the view discussed above that researchers have the choice of selecting between using the quantitative or qualitative research approaches is further contested by many scholars and applied research practitioners. Instead, some research practitioners advocate the

incorporation and use of mixed methods and challenge researchers to be pragmatic and employ both quantitative and qualitative methods in their research. [1], state that “there is a strong case for the use of integrated research because the strengths and weaknesses of quantitative and qualitative methods often complement each other”. For instance, the research methods under the quantitative approach have a weakness of being inflexible because the instruments that are mostly used cannot be easily modified once the study has started. However, the qualitative approach has strength in that area with methods that are relatively flexible and easily adaptive to the environment of respondents and has provision for non-written and non-verbal responses.

Nevertheless, the choice of mixed methods could be both complicated and costly to implement. In supporting this view, [1, 19-21], suggests that the mixed approach requires a much stronger commitment to integrated approaches and normally puts an emphasis on mobilizing research teams with senior professionals from different disciplines. [6 & 22], also argue that the benefits of using mixed methods are many and could be easily observed. However, it should be noted that there are important differences between the quantitative and qualitative approaches and these variations exist at different epistemological and normative levels. Nonetheless, when implemented properly, the mixed methods would potentially provide much deeper and broader meaning and understanding of the nature and impact of development programs and projects, despite having proved to be more difficult to implement.

RIGOUR AND VALIDITY ISSUES IN DEVELOPMENT RESEARCH

c. Rigour Issues in Development Research

Many research works in the development arenas are conducted within strict and defined conditions with specified and usually short time frames and limited resources. These environments will most likely cause limitations in the way the research processes are conducted and consequently lead to compromised quality in the research results and this ends up into weakened policy and development strategy recommendations. Thus, to increase the confidence levels in the research findings, the issue of rigour in research processes becomes a fundamental requirement.

[13], defines rigour as “the use of available time to challenge the most basic assumptions or to look for evidence in the areas of greatest uncertainty”. To this extent, he further asserts that, rigour would practically mean coming up with research results that are credible and valid because a process that produced them followed the procedures of scientific research. [12-16], underscore this view and point out that the main goal of rigour is to create an account of method and data which can stand independently so that another trained researcher could analyse the same data in the same way and come to essentially the same conclusions and to produce a plausible and coherent explanation of the phenomenon under investigation.

The argument above therefore, suggests and affirms that the issue of rigour brings in aspects of validity, acceptability and preciseness in research processes and this demands for researchers to always adhere to research ethics as they carry out various researches in the development arenas. The main research steps which require rigour issues to be thoroughly addressed include the problem identification, research question formulation, choice of conceptual framework, research design, data collection, data analysis, interpretation and communication [12-17, 30].

At the level of problem identification and formulation, the research questions need to be closely linked to the problem and this is vital to do because a rigorously formulated question is what determines the final quality of response. It means researchers should be careful at this stage and ascertain the relevance of every research question to all other research instruments like the hypothesis and data collection tools. Coherence of the research questions to the research problem at this level will provide a good precedence for a successful research thereby leading to acceptable findings and development recommendations.

Rigour need to be also ensured at the level of conceptual framework and here, it would mean ascertaining that the framework developed is closely aligned with the research problem and the research questions as it should be in the case of the problem identification stage. At this stage, all the theoretical frameworks that were used will have to fit in the general conceptual framework defined.

The other critical stage where rigour checks are needed is the research design. The crucial aspect of rigour at this stage is to ensure that the entire stage is informed by research questions which will guide the choice of data collection instruments and sources. This will also help in the selection of data analysis methods and tools.

Under the data collection stage, rigour entails the alignment of the information to be collected with the research question. The relationship between the research question and the information to be collected also has a direct linkage with the type of data collection tools used in a given research. Therefore, rigour at this level has to be conducted in such a way that it fundamentally relates well with the research question and data collection tools.

With regard to the data analysis level, rigour could be interpreted differently depending on whether the data and the research are quantitative or qualitative. For instance, in quantitative data analysis, rigour may imply critically checking the results from significance tests and assessing the direction of causality, paying particular attention to instrumental variables used for understanding causality as well as controlling for research field specific effects and omitted variables to ensure the results were as full proof as possible.

Lastly, communicating the research results is another key stage where rigour has to be done. It is important at this level to ensure that all the findings are reported in completeness, with objectivity, free from researcher biases and reactivity. Accordingly, [4], points out that "it is unusual for researchers to report exact question wording, even for variables that form the primary focus of the analysis. Although modes of data collection may be reported, few researchers amplify this statement to indicate how responses to the questions of interest may have been influenced by the questionnaire context or the mode of questioning". Therefore, to avoid being in such situations, researchers need to communicate all the important information about their research results and improve their input into the process of development policy.

Consequently, providing details above when communicating research results better informs the would-be policy makers and implementers, thus, enabling them to assess the quality of data source both with respect to a particular question and also when comparing results across studies. Coupled with this, it is imperative that rigour issues are also seriously considered at

the stage of future research priorities. Here, the emphasis should be limited to the relevance of the information to be considered for future research.

d. Validity Issues in Development Research

[5,29 & 31], defines validity as the “level of accountability and legitimacy that is strived through data collection, analysis and interpretation”. In general, validity can be distinguished between internal and external. On the one hand, [11, 23-25], state that internal validity concerns “the extent to which causal propositions are supported in a study of a particular setting. The researcher’s task is to consider and try to overcome a variety of threats to these propositions. For example, in trying to show that X had caused Y to vary, could the researcher be sure that some other factor had not intervened?” On the other hand, external validity refers to the representativeness and generalizability of a given study’s findings. This means that the research findings would not only be used to resolve problems of the researched community but whether they could also be generalised to the whole population.

The main perception held by researchers when undertaking research processes is that the findings shall be acceptable, reliable, widely applicable and implementable in various development interventions. This aspiration for dependable research results raises validity questions in research processes. Thus, for validity issues to be articulated and managed well, it is essential that good measures are put in place at research design stage to guard against possible validity threats.

Researcher biases and reactivity are the two important validity threats that need to be managed well during research processes [7,26,28]. He further argues that researcher bias arises from the researcher’s selection of data that fits one’s existing theory or preconceptions and bias resulting from the researcher’s selection data that is believed to be of good quality. Reactivity refers to the biases attributed to the researcher’s influence on the research setting or individuals being studied.

[10,27], asserts that validity is the approximate truth of an inference and that threats to validity are specific reasons why we can be partly or completely wrong when we make an inference about covariance, about causation, about constructs, or about whether that causal relationship holds over variations in persons, settings, treatments and outcomes. Because of the notable distinctions between quantitative and qualitative research approaches, the designs also take different forms and care need to be taken when dealing with thorough management of validity issues accordingly.

In quantitative research, it is practical to plan and manage validity threats in advance and this is done by developing the research design carefully with properly checked and validated process. This may not be feasible and conclusive in the qualitative approach. When using qualitative approach, it is rather difficult to conclusively identify and manage all perceived threats at design stage. In that case, the approach becomes flexible and uses evidence collected during the research to deal with the supposed threats.

Ultimately, issues that are to do with validity in research are crucial and it is inevitable that researchers, particularly those in the development arena consider this aspect as priority. Such validity checks are critical to the researchers who seek to generate findings of high precision

and acceptability before making policy recommendations. Positive policy impact from such research results is needed to guarantee successful development interventions in form of projects, programs and the implementation of poverty reduction strategies.

CONCLUSION

Throughout this paper, we have attempted to discuss some pertinent aspects regarding what may constitute a successful research in the development arenas. Indeed, applied research brings to the development arena rich information that works as policy input in the improvement and good management of available resources for a given country, organisation, program or development intervention. We therefore, hold a strong view that it is imperative for development researchers to understand the different epistemological perspectives to research because doing so will ensure that their research findings and possible policy related recommendations are anchored on scientifically acceptable procedures and practices.

Further, the paper has articulated the significance of boundary settings and how they were crucial in safeguarding a credible research process and findings. Working in the complex development arena, the choice of approach for undertaking various research processes has been argued upon and found to be a very important requirement. Researchers have a choice of either qualitative or quantitative approaches for their research undertakings.

In addition, we have further argued that a possibility of choosing mixed methods in research is another potential alternative for researchers. However, the researchers are supposed to be careful here when using mixed methods so that they manage the differences of the two approaches well. The two methodological approaches were also discussed with regard to their complementary role and this was viewed as a vital strength when looking for comprehensive and rich research information.

Finally, the paper has emphasised that throughout the process of research, rigour and validity issues need to take precedence by making sure that all stages of research were done accordingly to produce findings of high precision and value addition to the area of need. Rigour and validity issues have to be rationally and critically considered at problem identification, theoretical framework, research design, data collection, analysis of findings and results communication stages of all research processes. Once the above aspects are attained, there will be some high level of certainty that most of the applied research findings will lead to positive development impacts in many areas that affect human life. In this way, the value and role of applied research in the development arenas shall be more appreciated and demanded by players to inform development interventions.

References

- [1]. Bamberger, M. (ed.) (2000) Integrating quantitative and qualitative research in development projects: Directions in Development Series. Washington, DC, The World Bank.
- [2]. Kanyamuna, V., Mulonda, M. & Mulele, C.S. Monitoring and Evaluation Legislation in Zambia–Gap Analysis. *International Journal of Humanities, Art and Social Studies*, 2019. 4(1): 15-25.
- [3]. Blackmore, C. and Ison, R. (1998) “Boundaries for Thinking and Action”, in: Thomas, A., Chataway, J. and Wuyts, M. (eds.) *Finding out Fast: Investigate Skills for Policy and Development*, London, Sage Publication, 42-66.
- [4]. Kanyamuna, V. Sector Monitoring and Evaluation Systems in the context of Poverty Reduction Strategies: A comparative case study of Zambia’s Health and Agriculture sectors. MSc–dissertation, University of Antwerp, Antwerp, Belgium, 2013.
- [5]. Bryman, A. (ed.) (2004) *Social Research Methods*, Oxford, Oxford University Press.
- [6]. Kanyamuna, V., Mubita, A., & Kotzé, D. A. Is the policy environment for Zambia supportive of a thriving whole-of-government monitoring and evaluation system? *Advances in Social Sciences Research Journal*, 2020. 7(1) 542-554.
- [7]. Kanyamuna, V., Mulonda, M. & Mulele, C.S. 2019. Monitoring and Evaluation Legislation in Zambia–Gap Analysis. *International Journal of Humanities, Art and Social Studies*, 4(1): 15-25.
- [8]. Dale, A. (2006) “Quality Issues in Survey Research”, *Int. J. Social Research Methodology*, 9 (2):143-158.
- [9]. Gelo, O., Braakmann, D. and Benetka, G. (2008.) “Quantitative and Qualitative Research: Beyond the Debate”, *Integrative Psychological and Behavioral Science*, 42 (3): 266-290.
- [10]. Kanbur, R. and Shaffer, P. (2007) “Epistemology, Normative Theory and Poverty Analysis: Implications for Q-Squared in Practice”, *World Development*, 35 (2): 183-196.
- [11]. Kanyamuna, V. Analysis of Zambia’s Whole-of-Government Monitoring and Evaluation System in the context of National Development Plans. Doctorate Thesis. University of South Africa, 2019.
- [12]. Maxwell, J.A. (ed.) (2005) *Qualitative Research Design, An Interactive Approach*, London, Sage Publication.
- [13]. Kanyamuna, V. 2013. Sector Monitoring and Evaluation Systems in the context of Poverty Reduction Strategies: A comparative case study of Zambia’s Health and Agriculture sectors. MSc–dissertation, University of Antwerp, Antwerp, Belgium.
- [14]. Potter, S. and Subrahmanian, R. (1998) “Conceptualizing Policy-related Investigation – Information Needs and Policy Change”, in: Thomas, A., Chataway, J. and Wuyts, M. (eds.) *Finding out Fast: Investigative Skills for Policy and Development*, London, Sage Publication, 19-25.
- [15]. Schwandt, T.A. (1994) “Three Epistemological Stances for Qualitative Inquiry: Interpretivism, Hermeneutics, and Social Constructivism”, in: Denzin, N.K. and Lincoln, Y.S. (eds.), 2nd edition, London, Sage Publications, 189-210.
- [16]. Shadish, W., Cook, T.D. and Campbell, D. (2002) *Experimental and quasi-experimental designs for generalized causal inference*, Boston, Houghton Mifflin.
- [17]. Kanyamuna, V., Kotzé, D. A. & Phiri, M. “Monitoring and Evaluation Systems: The Missing Strand in the African Transformational Development Agenda.” *World Journal of Social Sciences and Humanities*, 2019. 5(3): 160-175.
- [18]. Kanyamuna, V., Phiri, M., Kanenga, H. & Mulonda, M. (2020). “Role of Actors Outside Government in Strengthening the Country Monitoring and Evaluation System in Zambia.” *World Journal of Social Sciences and Humanities*, vol. 6, no. 1: 22-29.
- [19]. Seale, C.F. (1999) *The quality of qualitative research*, London, Sage publications.
- [20]. Sumner, A. and Tribe, M. (2004) “The nature of epistemology and methodology in development studies: what do we mean by ‘rigour’?”, Paper prepared for the DSA Annual Conference, Bridging research and policy, Church House, London.
- [21]. Thomas, A. (1998) “Introduction”, in: Thomas, A., Chataway, J. and Wuyts, M. (eds.) *Finding out Fast: Investigative Skills for Policy and Development*, London, Sage Publications, 1-17.

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- [22]. Kanyamuna, V. (2021) "Towards Building a Functional Whole-of-Government Monitoring and Evaluation System for Zambia: The Demand Side." *World Journal of Social Sciences and Humanities*, vol. 7, no. 3: 83-105. doi: 10.12691/wjssh-7-3-2.
- [23]. Kanyamuna, V., Mubita, A., Ng'andu, E., Mizinga, C. & Mwale, A. 2018. An Assessment of the Demand-Side of the Monitoring and Evaluation System of the Health Sector in Zambia. *World Journal of Social Sciences and Humanities*, 4(2): 75–86.
- [24]. Kanyamuna, V., Mumba, M.H., Mkandawire, A., Munalula, M. & Kalonje, V. (2021). "Opportunities and Challenges in Using Information from Zambia's Government Monitoring and Evaluation System". *World Journal of Social Sciences and Humanities*, vol. 7, no. 1: 23-33.
- [25]. Mulonda, M., Kanyamuna, V. & Kanenga, H. 2018. State–Civil Society relationship in Zambia, *International Journal of Humanities, Art and Social Studies*, 3(4): 17-26.
- [26]. Kanyamuna, V., Mubita, A., Ng'andu, E., Mizinga, C. & Mwale, A. 2018. An Assessment of the Demand-Side of the Monitoring and Evaluation System of the Health Sector in Zambia. *World Journal of Social Sciences and Humanities*, 2018. 4(2): p. 75–86.
- [27]. Kanyamuna, V. (2021). Towards Building a Functional Whole-of-Government Monitoring and Evaluation System for Zambia: The Supply Side. *Advances in Social Sciences Research Journal*, 8(8). 163-195.
- [28]. Kanyamuna, V., Katowa, T., Mubita, A., Kanenga, H., Simui, F., & Kotze, D. A. (2020). Analysis of Structural and Organisational Arrangements of Monitoring And Evaluation Status For The Public Sector In Zambia. *Advances in Social Sciences Research Journal*, 7(6) 504-527.
- [29]. Mulonda, M., Kanyamuna, V. & Kanenga, H. State–Civil Society relationship in Zambia, *International Journal of Humanities, Art and Social Studies*, 2018. 3(4): p. 17-26.
- [30]. Kanyamuna, V. (2021). Towards Building a Functional Whole-of-Government Monitoring and Evaluation System for Zambia: The Supply Side. *Advances in Social Sciences Research Journal*, 8(8). 163-195.
- [31]. Kanyamuna, V., Phiri, M., Kanenga, H. & Mulonda, M. (2020). "Role of Actors Outside Government in Strengthening the Country Monitoring and Evaluation System in Zambia." *World Journal of Social Sciences and Humanities*, vol. 6, no. 1: 22-29.