
Research Coverage and Design in Geography Education: A Survey on Implementation in Universities in Northern Nigeria

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ABSTRACT

This study examined the methods of conducting research in geography education. This include the design of the study, coverage of the problems and providing necessary solution. A survey design was used in the study. The population of the study was 352. Simple random sampling was used in selecting the samples of 60. Documentary analysis was used in data collection from unpublished work of undergraduate students from Bayero University Kano and University of Jos. Data collected was analyzed using simple percentage to answer the research questions and t – test of independent samples was used in testing the research hypothesis. The study determined the contemporary issues that provide answers to geography education debate for stability and decision making in the subject. Findings of the study reveals that undergraduate students were generally using survey research design and the coverage of the researches were mainly on teaching and learning. The research hypothesis was accepted at α 0.05 level of significance. Therefore, there is no significant difference between the coverage and design of undergraduate research from Bayero University Kano and University of Jos. Recommendations were made on how to raise the status of geography education.

Key words: Geography Education, Research in Geography Education, Contemporary Issues in Geography Education Research.

INTRODUCTION

Geography is the science of synthesis and description of interaction of phenomena in space (Efe, 1996). Geography is alive and growing (Ofamata, 2001 in James, (1968). By implication it is undergoing series of changes at the same time suffering from contextual registration “jack of all”. Geography is a subject that integrates diverse ideological thinking of different thoughts at different era. Greater changes are always coming up to the field. In the early 19 century, geography has adopted the mission of problem solving across the macrocosm of human endeavor. It has contributed in different disciplines, (Hardwick and Holtgrieve, 1996). Today, the paradigm shift has made geography an e-science discipline. This is as a result of the systematic methods of data capturing, analysis, storage and communication, (Hey, Stewart & krist, 2009). Geography education is an integrated discipline that employ educational thoughts and principles in solving the problem of learning geography by presenting issues on environmental consciousness and spatial interaction. Various techniques and methods are used in geography education to relieve the discipline as a memorization of states and capitals. Dogeny, (2002) opines that purpose- conformant means and tools should be applied.

New technology techniques, methods and strategies are applied in geography education for better compliant with the curriculum at different levels of education. Adoption and integration of computer base lessons remain the biggest challenge and contemporary issue in the field. The failure of the Nigerian curriculum today, is the non-inclusion of geography to serve as a core subject because it exposes the learner to realities of the environment and interaction. Akinolu (2006) asserts that “learning become meaningless and difficult to comprehend if learning is in the abstract way” Geographical Education supports and promotes research in geography education in all nations and cross-nationally. Butt, (2010) aspires to developing an international culture of research in geography education to enable the development of policy and practices that enhance the quality of geography teaching and learning for all in formal and informal education. It encourages policy makers and geography educators to build capacity in research and its application to the classroom and wider learning contexts through understanding the current state of research and by elucidating current knowledge, needs and trends in order to identify future research intentions, priorities and practices and the means to bring these to fruition, (Kidman and Papadimitriou, 2012).

According to Downs, (2006), research in geography education is of paramount importance, as significant research is the key ingredient in assuring the success of geography education as the right ways of influencing decisions for proper legislation on the stand of the subject. This type of research will allow for recommendations of authority that exceed the current position of the subject today. Research is systematic, critical and self-critical enquiry which aims to contribute towards the advancement of knowledge and wisdom. Some key terms are used here. ‘Systematic’ implies a sense of order and structure: whilst some research relies more on innovative design than others, the implication is that there is a connectedness about research which involves the planning and integration of design, process, and outcomes. The terms ‘critical’ and ‘self-critical’ are clearly important: the assumption is that the research design, and in particular, its methodological integrity, should be open to the scrutiny and judgement of others, and that all aspects of research are subject to reflection and re-assessment by the researcher.

The study of education is both multi-disciplinary and inter-disciplinary. In part this is what makes educational studies exhilarating as well as challenging! A range of aims and purposes guides all educational research; decisions to ‘settle upon’ one research project rather than another are guided implicitly and explicitly by researchers’ practical, personal, professional and/or disciplinary interests, even if, at the start of the research journey, such interests may lack the coherence of later stages. Bassey (1999) is in no doubt about what constitutes educational research, and expresses this as: Critical enquiry aimed at informing educational judgements and decisions in order to improve educational action. This is the kind of value-laden research that should have immediate relevance to teachers and policy makers, and is itself educational because of its stated intention to ‘inform’. It is the kind of research in education that is carried out by educationists. (1999: 39) For others, research may be about using research for ‘working towards justice, fairness, and openness in education’ (Griffiths, 1998)

The outcomes of research in and relevant to geography education are to: provide and distribute evidence and/or conceptually robust arguments and practices that will improve the quality of geography education in national settings and internationally; encourage a research orientation among geography teachers and educators that enables reflective and critical engagement with habitual practices and a professional habit of mind that demands improvement

in the quality of geography education. Meaningful geography education research may encompass different aspects of the subject which include mathematical geography, teaching, attitudes, perceptions, ICT, GIS, sex education, methodology, instructional materials, class size, school plant, teacher training, mastery, and academic performance of learners, environmentalism, and general goals of the millennium development goals (MDGs) (2000). The most important researcher needed in geography education is the studies transformation and making teachers to be good agents that can expose the learner to the real-time issues and situations (Jeanne, 2012).

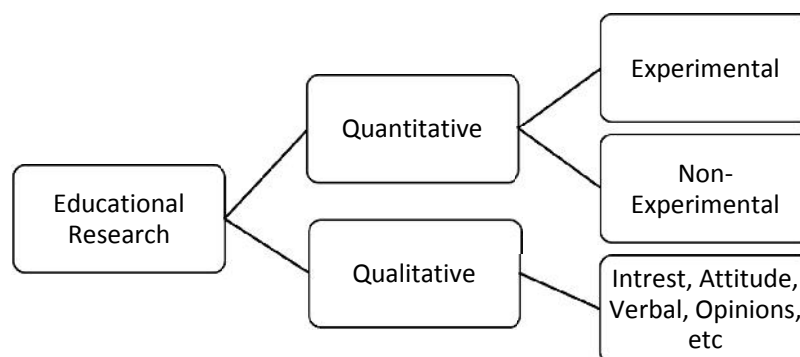


Figure 1: Traditions of educational research. **Source:** Cohen and Minion, (2011)

Downs, (2013) added that geography education research should accomplished the following:

1. To address diversity of students' by using a range of research method.
2. To set a baseline to see growth and trends,
3. To set clear goals for geography education in the class,
4. To create a support structure that would be a central organization with concentration in geography education.

In addition Bednarz and Bednarz (2004) in Jeanne (2012), emphasized that all research should be empirical that document the process of knowledge acquisition through an understanding of how learning is taking place and using the concept and relationships to develop models and theories, which are the fundamental processes of geographic learning and spatial thinking.

Therefore, to stabilize the changing faces of geography education and to explore standard techniques and contemporary curriculum, more empirical studies should the conducted.

LITERATURE REVIEW

Geography education like any other science discipline has two major research traditions. Namely- qualitative and quantitative research. Macmillan, (2000) states that "Both the two has different terminology, methods, and techniques. Qualitative research focus on understanding and meaning base on verbal narrations and observation rather than numbers. While quantitative research emphasizes on the use of numbers, measurement, deductive logic and control experiment.

Geography education research is geared towards achieving a particular level of stability in the 21st century. To achieve this, empirical researches are to be conducted. Bednarz, (2001) examines areas of interest to geography education, which include:

1. *Geography teaching methods and strategies.* This is an area that address issues in teaching and learning geography to improve classroom situations.
2. *Geography learning and thinking.* This aspect is beyond methodology and strategies. This demonstrates the process of knowledge acquisition through systematic and analysis of data. e g, studies on ability to understand basic environmental changes and physical landscape using geospatial techniques.
3. *Institutional geography education research.* This focuses on geography institutional sensitivity for making policy, programmes and the role of geography education within the system.
4. Lastly, the general interest on geography. This aspect only concentrate on the love of geography alone without education. E.g topics on human and physical geography. Issues like global warming, climatic changes, rainfall analysis and the importance of soil for agriculture.

The study of Ozey, (1998) in Yilmaz, (2010) suggested that historical survey and academic performance of learner dominate the concentration of some institution of learning. This type of study is not an empirical one. Sahin, (2001) conducted a study “geography education in theory and practice” the findings of the study include instructional materials, geography education and information science (ICT), other findings include measurement and evaluation, problems of geography teachers and the obstacle before geography education and its future. (Karabag & Sahin, 2007). Ozguc & turmatekin, (2000) find out that geography education researches are mainly on the role of science in the development of geography education. This is no doubt the types of research needed to be conducted.

Purpose of the study

The purpose of the study is to find out the coverage and design of Geography Education Research in Bayero University Kano and University of Jos respectively. With the following specific objectives:

1. To find out the aspects covered in Geography Education Research from Bayero University Kano.
2. To find out the aspects covered in Geography Education Research from university of Jos.
3. To find out the types of research design in Geography Education from Bayero University Kano and University of Jos.

Research questions.

1. What are the aspects covered in geography Education research from Bayero University Kano and University of Jos?
2. What are the aspects covered in geography Education research from University of Jos?
3. What are the research designs applied in geography Education from Bayero University Kano and University of Jos?

Research Hypothesis.

H_0 : There is no significant difference between the conduct of research in geography education in Bayero University Kano and University of Jos?

RESEARCH METHODOLOGY

The design of this study was a survey while the method of data collection was documentary analysis of unpublished studies from Bayero Kano University and university of Jos. The population of the study was 365 and the samples of the study was sixty (60) thirty (30) from each university selected through systematic random sampling technique from Bayero University Kano and university of Jos. Research questions were answered using simple percentage while the research hypothesis was tested using t – test of independent sample

RESULTS

Research question one: What are the aspects covered in geography education research from Bayero University Kano?

Table 1: Aspects Covered in Geography Education Research in BUK Kano and University of Jos

Aspect	Tally	Percentage
Teaching and learning	9	30.00%
Academic performance	8	26.67%
Instructional materials / I C T	7	23.33%
Social issues	6	20.00 %
Total	30	100%

The findings of table one show that 30% of researches conducted was on teaching and learning, 26.67% on academic performance. In addition, 23.33% was on instructional materials, and social issues remained 20%

Table 2: Aspects covered in geography education research from university of Jos

Aspect	Tally	Percentage
Teaching and learning	14	46.67%
Academic performance	5	16.67%
Instructional materials / I C T	6	20.00%
Social issues	4	13.33%
Total	30	100%

The analysis of findings from university of Jos show that 46.67% of students' projects were on teaching and learning, 16.67% on social issues, 20% on academic performance and lastly 13.33% on ICT respectively.

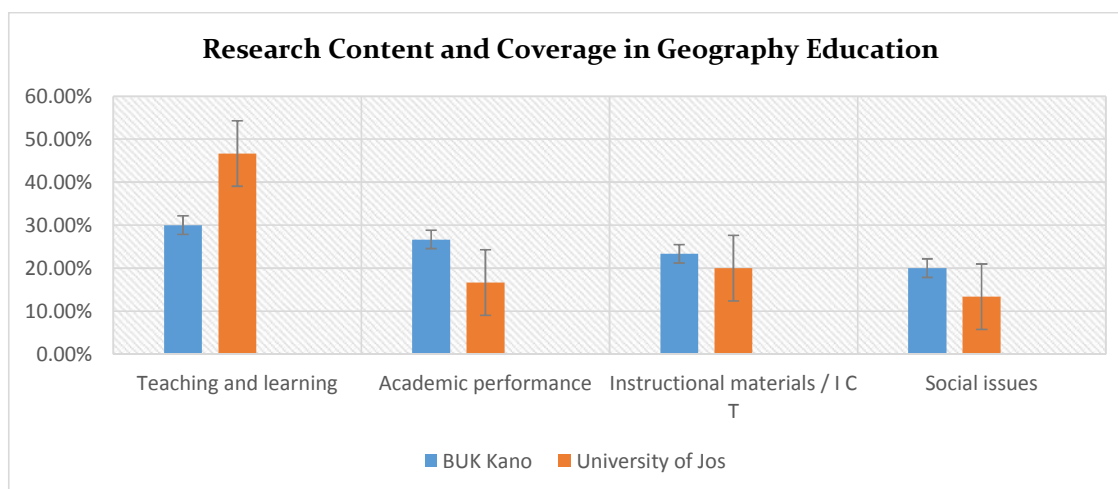


Table 3: Research design applied in geography education from Bayero University Kano and University of Jos

Design	Percentage
Survey	71.67%
Experimental	28.33%

Research findings in table three above shows that on the different research designs applied reveals that 71.67% was conducted on survey design while the remaining 28.33% was experimental designs respectively.

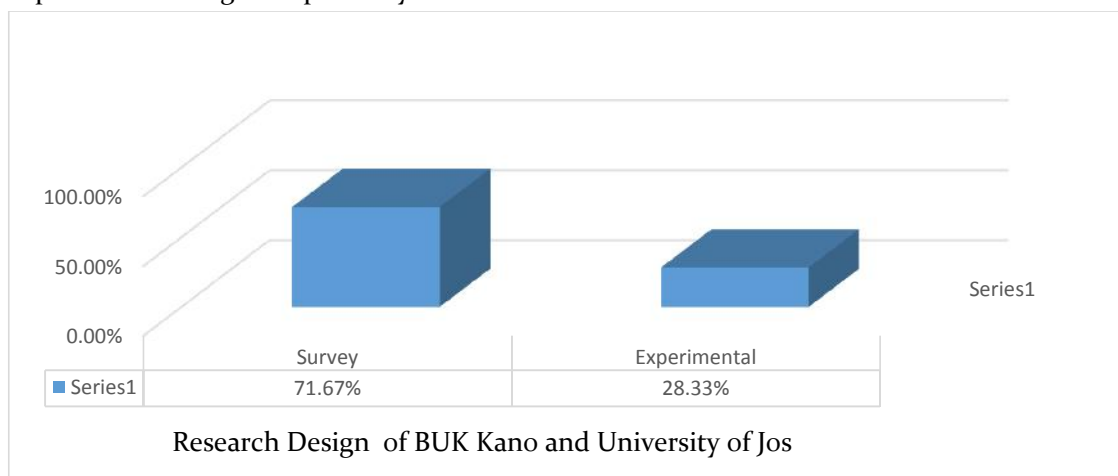


Table 4: t-test of difference between the conduct of research in geography education in Bayero University and university of Jos

Institution	Mean	SD	DF	t -test	P VALUE
BUK KANO	16.99	5.57	58	2.09	0.57*
UNI JOS	25.0	3.73			

*P > 0.05 significant

Table 4 indicated that the t- value was 2.09 with df 58 and p-value of 0.57. Therefore, the null hypothesis was accepted at 0.05 level of significance. That means, there is no significant difference between the aspects of undergraduate researches in BUK Kano and University of Jos.

FINDINGS

Based on the findings of this study, efforts were intensified in the aspects of teaching and learning to ensure effectiveness of the curriculum, class situation, method of teaching, etc. This is no doubt the key issues that were addressed in geography education during the 1960s (Downs and Bednarz, 2011) to promote geography education's place in the educational debate and provide empirical data for appropriate decision making (Butt, 2010). Survey design dominated the findings as more than 70% of the reviewed documents were survey design while less than 30% were experimental design. Also, the study found out that, there is no significant difference in the aspects of research in geography education of undergraduate students from Bayero University Kano and University of Jos respectively. Data were mainly analysed using simple percentage, mean and standard deviation.

CONCLUSION

In conclusion, the studies discovered that Bayero university Kano and university of Jos has the same research coverage and design in Geography Education and that there is no significant difference between the procedures of conducting research in geography education between Bayero University and University of Jos.

RECOMMENDATIONS

There is the need to encourage studies on contemporary issues in Geography Education that would integrate simulation and games to revive the method of thinking of the geography in education. This would raise the standard of the discipline and stabilize the shaking position of the subject. Intensifying effort should start from the academia in order to create awareness and understanding of the need to device innovative thinking. This is the target of e-science subject like Geography of today.

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