

**FACILITATING OBJECTIVITY AND RELIABILITY OF ISLAMIC STUDIES
RESEARCHES WITH THE USE OF (IBM SPSS) STATISTICAL PACKAGE FOR
SOCIAL SCIENCES**

By

Taofiki Ajani Salako

Department of Religious Studies, College of Humanities, Tai Solarin University of Education,
Ijagun, Ijebu-Ode, Ogun State, Nigeria.

salakota@tasued.edu.ng

Abstract

Statistical Package for Social Sciences (IBM SPSS) is a software package tool used for analysis in Social Sciences, Humanities, Education and partly in the Sciences. It is used in research analysis for establishing reliability and validity of instruments which culminate in reliable data and findings. Observations and interactions with Islamic Studies teachers and students indicate that they lack the knowledge of SPSS, a software tool used in analysis. The practice presently across the world is that no researcher runs analysis manually for the fact that it is time consuming, prone to errors and enables the researcher to tailor the findings toward his mindset. Use of SPSS on the other hand, helps to give accurate data, guides in coding, helps in tracking variables appropriately. It saves a lot of time in running analysis, helps in electronically establishing reliability of data, gives adequate information on the research, assists in tracking errors and helps in establishing independent results different from what the researcher had in mind. The rationale for this study is to introduce the use of SPSS into Islamic Studies researches and to make Islamic Studies researchers meet international standard as regards conducting researches with global standard practice. It is also to enable them write acceptable journals and win research grants which may be difficult to achieve without using software packages. The researcher adopted documentary and observatory approaches, reviewed and observed one hundred (100) articles written on Islamic Studies. Findings revealed that all the articles did not contain any use of SPSS or any other research software tool. There is need for basic knowledge and usage of SPSS software tool in Islamic researches to make Islamic researchers cultivate its usage in order to write empirically acceptable and fruitful researches to enable them meet international standard and global competitiveness.

Keywords: SPSS Software tool, Islamic Studies, researches.

Introduction

Research is a systematic way of carrying out investigation on any problem in order to find solution to the problem. The process of carrying out research in all fields of studies remain same and similar as there are basic rules and processes which must be followed irrespective of the field of discipline. Leedy (1974), describes research as the systematic process of collecting and analysing information (data) in order to increase our understanding of the phenomenon with which we are concerned or interested. Therefore, research in Islamic Studies is a systematic way of investigating an identified problem in the domain of Islam in a bid to find solution to the problem or shed more light on the problem for the purpose of proper understanding to correct wrong notion and to enhance better practice of the religion.

Characteristics of Research

According to Anderson (1998), there are eight characteristics of educational research. These same characteristics go in line with carrying out research in Islamic Studies:

i, Research must be purposeful

The purposes of research are to solve the problems, investigate knowledge, and establish the principles in educational phenomena. This focuses on solving problems and developing knowledge. This is applicable to carrying out research in Islamic Studies, solving problems, investigating knowledge, establishing principles related to Islamic Studies programme, faith, *aqidah* and *fiqh muammalat* - Islamic business transactions etc. There must be a purpose for which one carries out research in Islamic Studies, this must be explicit and clear. Any research which does not have a purpose to serve is useless and meaningless and so would not be taken as a good research material.

ii, Research is procedural

The procedure is an important characteristic of any research, it involves collecting data with accurate observation, objective interpretation, and verification. This is equally important when conducting research in Islamic Studies, the procedures cannot be bastardised. If the procedure is faulty, then the outcome of the research will be faulty as well and cannot result in any good findings and meaningful research.

iii, Role of researchers: The researchers need to be experts and are to be familiar with their field of study, using the data to develop solutions and increase knowledge. Like in any field of study,

a researcher in Islamic Studies has vital roles to carry out as an expert in the field. It is his role as the researcher to identify a problem, this problem is developed into a research topic, he conducts review on the topic, carries out the investigation, collects data, collates and analyse, but here, he may seek the services of a psychometric expert to help do analysis which he must understand and he does the report writing and presentation where need be. The researcher is not to commission his research work to anybody to help him do either for free or compensated.

iv. Research is empirical

Research in general and in Islamic Studies is empirical i.e. scientific in nature. It requires interaction with people and materials to be able to get information, gather facts, collect data and experiences which would be useful for the investigation. Empiricism is the concept that all knowledge is derived from a sense experience; this experience results in some information form—data— so that knowledge can be generated upon it. Researchers work upon data; this may involve organizing them, generating hypotheses, testing them and so on. Gone were the days when a researcher would sit in one corner of the room or library to complete a research work without interacting with people and the environment, this may not stand the test of time today.

v, Research is systematic

McMillan and Schumacher (1989) in Hassan and Al-Midani (2014) define research as “a systematic process for collecting and analysing information (data) for some purpose”. To make research systematic, researchers use the approach of scientific inquiry and scientific method. Carrying out research in Islamic Studies requires that a systematic approach be followed. For instance, a systematic research starts with identification of problem, generating into research topic, preparing the research questions, hypotheses if any, conducting the review of literature, identifying the methodology to use, considering, location, samples, subjects to be involved in the study, carrying out the investigation, conducting analysis and writing the research report. This approach makes a good research systematic. A few experiences observed from students are that they would have brought their reports of analysis before going to investigate the problem. This is unsystematic and cannot result in a good research work.

vi. Research should be valid

Researches must be based on facts, i.e. capable to be justified. Islamic Studies researchers are to present the results of their findings as they come out, they should not attempt to tamper with the outcomes of their results. However, this is possible where results are manually run, but where a

software is used in analysing the data, it is not always easy to change the outcome of the results and this is the more reason why the researcher is advocating for the use of software package. In a research topic like “Factors responsible for the poor performance of secondary students in Islamic Studies”, It is possible to manipulate some variables as may suit the researcher, but where appropriate software tool is used, experience has shown that the outcome of the result may be different to what the researcher has in mind before embarking on the research.

vii. Research should be reliable

The reliability of any research refers to the consistency of the research and the extent to which studies can be replicated. Reliability of Islamic Studies researches refers to consistency of data collection, analysis, interpretation under same conditions and settings. If a topic like “Problems facing Islamic Studies students at the Tai Solarin University of Education”, is replicated at Ogun State University, Ago-Iwoye and Lagos State University, Ojo, with variables like: low admission intake; inadequate number of lecturers; lack of innovation in curriculum; lack of conducive rooms for lecture; and time-table clashes with other courses; the result is likely to be the same in these universities. This will make the research reliable and valid because they have same environmental conditions. Reliability of research concerns the replicability and consistency of the methods, conditions, and results.

viii. Research takes different forms which lead to the following types of researches.

Types of Researches

Researches could be grouped into three major categories namely:

- a. Fundamental / Basic Research
- b. Applied Research
- c. Action Research

A. Fundamental / Basic Research

This is a type research which is for the sake of knowledge. This type of research has no immediate or planned application. Basic researches involve the development of theory. It is concerned with establishing general principles of learning. For example, conducting a research on Hajj and describing the principles of Hajj, ways and manners of performing hajj, the rites of hajj and the prohibitive acts during hajj.

According to Travers (1969), basic research is designed to add to an organized body of scientific knowledge and does not necessarily produce results of immediate practical value.

Basic research is primarily concerned with the formulation of the theory or a contribution to the existing body of knowledge. Its major aim is to obtain and use the empirical data to formulate, expand or evaluate theory. The main aim of basic research is the discovery of knowledge solely for the sake of knowledge. Another topic of basic research in Islamic Studies could be “Islamic perspectives on family planning”. What the researcher needs to do is to establish the rules and regulations guiding family planning in Islam. Most of the undergraduate and postgraduate researches which are requirements for graduations fall under basic researches irrespective of which field they come from.

B. Applied Research

The second type of research is aimed at solving an immediate practical problem. To Travers (1969), applied research is undertaken to solve an immediate practical problem. It is a research performed in relation to actual problems under the conditions in which they are found in practice. Through applied research, researchers are able to solve human problems. It should be pointed out that applied research uses the scientific method of enquiry. Observations in the practical situations serve to test theories and may lead to the formulation of new theories. For instance, in a topic like “Factors responsible for failure of Islamic Studies students at the senior secondary school level” can be targeted at solving a particular problem confronting Islamic Studies students. Another one can be “Obstacles confronting practical observance of salat for Muslim students in the secondary schools in South West Nigeria.”

Applied research has most of the characteristics of fundamental research, including the use of sampling techniques and the subsequent inferences about the target population. Its purpose, however, is improving a process – testing theoretical concepts in actual problem situations.

C. Action Research

This type of research is designed to uncover effective ways of dealing with problems in the real world situations. This kind of research is not confined to a particular methodology. For example, a study on the effect of *Ribba* on the economic activities of the people. This study will show the damages which *ribba* has done to local and global economy and proffer solutions to the problem. Thus the study shows that such researches have direct application to real world problems. As John and James (2013) put it, action research is focused on immediate applications. Action

research is a research undertaken by practitioners in order that they may attempt to solve their local, practical problems by using the enquiry method.

Mansour (2020) summarises the types of researches into two main groups namely: descriptive and prescriptive researches. To him, descriptive research aims at collecting and quoting all different opinions in the discussed topic without analysing them, using descriptive methodology, the researcher narrates the information without judgement. Contrarily, in prescriptive methodology, he analyses the data and suggests his opinion. Elements of both quantitative and qualitative approaches can be found in different research studies.

Qualitative Research

This is primarily exploratory research. It is used to gain an understanding of underlying reasons, opinions, and motivations. It provides insights into the problem or helps to develop ideas or hypotheses for potential quantitative research. Qualitative Research is also used to uncover trends in thought and opinions, and dive deeper into the problem. Qualitative data collection methods vary using unstructured or semi-structured techniques. Some common methods include focus groups (group discussions), individual interviews, and participation/observations. The sample size is typically small, and respondents are selected to fulfil a given quota (Wyse 2011).

Quantitative Research

This is used to quantify the problem by way of generating numerical data that can be transformed into usable statistics. It is used to quantify attitudes, opinions, behaviours, and other defined variables – and generalize results from a larger sample population. Quantitative data collection methods are much more structured than Qualitative data collection methods. Quantitative data collection methods include various forms of surveys – online surveys, paper surveys, mobile surveys and kiosk surveys, longitudinal studies, online polls, and systematic observations (Wyse 2011).

Outcomes: Qualitative research typically is exploratory and investigative in nature. Its findings are often not conclusive and cannot automatically be used to make generalizations. However, it is indispensable in developing a deep understanding of a given thematic complex and sound rationale for further decision making.

The decision of whether to choose a quantitative or a qualitative design method depends on the nature of the project, the type of information needed, the context of the study and the availability of resources like time, money, and human (Wyse 2011).

However, it should be noted that Qualitative and Quantitative approaches cannot be taken as categories of researches because these are just approaches that are used while carrying out researches under basic, applied or action groups. Same applies to other approaches like historical, factorial, observatory, questioning, experimental, documentary, teacher made test, interviewing, content analysis approaches etc depending on the topic and purpose of research.

Benefits of conducting research in Islamic Studies

1. Research equips Islamic Studies researchers with problem-solving and leadership skills and satisfaction of human curiosity i.e. being able to find solution to his problem.
2. Students' participation in research helps to provide very useful baseline data that can be used for planning purposes.
3. Research provides Islamic Studies teachers and students with marketable skills.
4. Research enhances the continuous professional growth of Islamic Studies teachers and also leads to improvement in teaching and learning and better performance of Islamic religious rites.
5. Research helps in developing in the Islamic Studies teachers and students the scientific attitudes of objectivity, curiosity and critical outlook and openness to ideas and divergent opinions on religion.
6. According to Muhammad Shah et-all (2016), there are many social issues which need proper research in the light of Islamic thoughts to solve the problems. Such are elimination of corruption, analysis of social norms and rites, and the use of internet, camera and television. Also, there is the need to improve the Muslims societies and to make them according to the real soul of Islamic thoughts.
7. Research helps in adding to what we know about religion, Islamic scholars and to be able to differentiate from genuine sources of Islam as against the fabricated and falsified sources of information.
8. Research allows us to extend what we know in ways we never conceived it, it broadens our knowledge, expands our hearts and builds in us sense of judgement and acceptability and expands our views and horizons in Islamic thoughts and jurisprudence.

Problems Confronting Research in Islamic Studies based on Researcher's Observations

1) Availability of Islamic Studies materials in Arabic Language

A good number of materials for use while carrying out researches in Islamic Studies are available in Arabic language. Meanwhile, a good number of teachers and students who conduct research in Islamic Studies are not well proficient in Arabic language, this debars them from making use of these valuable materials in the process of conducting researches in Islamic Studies. On the other hand, a group of teachers and students who are well proficient in Arabic language are not well grounded in English language, this constitutes a barrier for them to carry out researches in English language. This has consistently restricted the use and benefits of researches in Islamic Studies to certain locations and regions. For instance, those who are good in Arabic language make their researches thrive and circulate in Arabic countries and regions while those who conduct theirs in English language make theirs thrive and circulate in English speaking countries and regions where we have Muslim English audience. There have been occasions where these two groups contest on competency and rightful allegiance to correct and valid researches in some areas of Islamic Studies. One of such is in the area of family planning in Islam where Islamic scholars hold divergent views and opinions based on their background knowledge, available sources of information and different levels of interpretations.

2) Problem of Ideology

Issue of ideology is another problem facing research in Islamic Studies. Some Muslims who hold ideological beliefs tend to conduct researches that will suit and favour their ideological teachings. The shiites are a good example in this regards who teach and still uphold that there was a messiah after Prophet Muhammad (SAW), whereas the sunni Muslims consider Muhammad to be the last Prophet. Also, the *Ahmadi*s will continue to defend their doctrine which supports that an *Ahmadi* would not pray behind any other Muslim who is a non-*Ahmadi* based on their heretical belief and they will not support that an *Ahmadi* should marry a non-*Ahmadi*. (Salako, 2020).

3) Different levels of interpretation of the Quran

There are different levels of interpretations of the Holy Qurán which have been grouped under *Tafsir bi'l Ma'thuuru*, *Tafsir Bi'l-ra'y* and *Tafsir al-ishaari*. *Tafsir bi'l Ma'thuuru* is the interpretation of the Holy Qurán based on the interpretation of the Qurán by the Qurán, by the Prophet and by the Companions of the Prophet (SAW). This first level of the interpretation is the

explanation supplied by Allah, corroborated by the Prophet and his companions. This level of interpretation is taken in high esteem as Allah who says one thing in a verse and explains it further in another verse is in that position to explain what He meant. *Tafsir bi'l-ra'y* is the interpretation of the companions based on the opinions of Muhammad while *Tafsir al-ishaari* is the hidden interpretation of the Qurán. These different levels of *Tafsir* require in-depth knowledge of Islam, understanding certain criteria and rules to be able to delve into them appropriately. Corroborating this view, Yusuf (2015) opines that the concern of Islamic Studies researchers has been trying to determine the accuracy, authenticity, and reliability of interpretations of the message of Islam as contained in the Qur'an and Sunnah. However, a large number of researchers in Islamic Studies may not have adequate knowledge of *Tafsir (Ilmu-Tafsir)* and this would create a great setback for them while conducting researches in Islamic Studies as proper knowledge of *Tafsir* is inevitable in the conduct of researches in Islam.

4) Problems of authenticity of research materials on the Internet

Very many number of materials are now available on the internet and through the social media whose sources cannot be traced and are doubtful. Some unscrupulous people hide under this anonymous situation to put out information not genuine about Islam on the internet or through the social media. Their intention has been to dent the image of Islam and cause confusions for the practitioners of religion. Some politicians under the pretext of politics have gone as far as using religion as their instrument of politicking to ascribe whatever their opponents in political circle do to religion in order to defame one religion or the other. For instance, any time there is attack by *Boko-Haram* insurgents anywhere, some politicians and uninformed people are swift to saying that it is an attempt to annihilate the Christians in that community, whereas both Muslims and non-Muslims in the community suffer from the attacks. Common sense, logical reasoning and unbiased judgement reveal that one cannot ascribe the Niger Delta and Eastern country attacks by MASOBS and the likes to any religious group, one would expect that such opinion and stand should be the same whenever *Boko-Haram* insurgents unleash terror and attacks in any part of the country. For anyone therefore to use any information from the internet and social media, sources and genuineness of such information should be verified before use.

5) Everybody sees himself as an expert in Islamic Studies

It has become a common practice that when it comes to the matters of religion, every religious practitioner sees himself or herself as an expert in religion. Those whose little knowledge is only

sufficient for them to practice their religious worships see themselves as having all knowledge required in Islam to delve into all matters. Whereas, one who is in another discipline cannot claim to be full expert in Islamic Studies since this is another field. People cannot just dabble into law or medicine because of the prescribed procedures stated by the professionals, but because stringent procedures are not in place for religious experts, everybody believes he or she is a religious expert just because he professes the religion. This has constituted great problem to conducting researches in Islamic Studies because this group who are not experts but assume the position of Islamic Studies experts have made up their minds not to open up their hearts to any superior arguments even when evidences and facts are put before them. They prefer to hold to their opinions and mis-interpret whatever evidence put before them to suit their opinions. This is not good enough for the understanding and practice of the religion because such divergent opinions continue to circulate in the society and may cause confusions to Muslim believers and new converts to the religion.

6) Use of software applications for research in Islamic Studies

A number of software applications are presently in existence to validate researches, make researches reliable and truthful, independent of the prior opinion of the researcher. An observatory study of some Islamic Studies researches reveals that use of such software tools have not been explored in Islamic Studies researches. Observations show that larger number of Islamic Studies teachers lack the knowledge of these research software tools. This is corroborated by the view of Yusuf (2015) in his paper Introduction to Research Methodology in Islamic Studies where he confirmed that researchers in Islamic Studies are not trained to use methodology of scientists. By implication, if teachers of Islamic Studies lack this knowledge, the probability that Islamic Studies students would not have the knowledge is high since teachers are to teach the students the use of the software tools. It is this barrier which the researcher intends to bridge in this study. Although there are a number of these software tools like IBM SPSS - Statistical Package for Social Sciences; MINITAB - Data Analysis, Statistical and Process improvement Tool; AMOS - Analysis of a Moment Structures, added to SPSS model, also known as analysis of covariance or causal modelling software; Mplus - Statistical Modelling Programme; SAS - Statistical Analysis System; LISREL - Linear Structural Relations, a statistical software use for manifest and latent variables; EQS - Structural Equation Modelling

Software also known as Path Models (Albright & Park 2009, Anglim 2007) etc. The researcher has only chosen one for discussion in this study.

SPPS is used to test reliability and validity of research instruments, it is used for keying responses from respondents, coding the variables and running the analysis in quantitative studies.

Problem Identification / Topic Selection

The first critical step in any research process is problem identification, Islamic Studies not an exception. If problem identification is not correct, research will be wasted regardless of how well research is conducted. Often it requires some preliminary research to help identify the problem or select topic of research. This would be achieved through review of literature which commences from the identification of a research problem till the conclusion stage.

Sources of Generating Research Problems

There are different sources of generating research problems which eventually culminate into research topics namely:

i. Personal Experience

As individuals, one would have come across a number of problems, imperfections, inconsistencies, practices or some gaps which need to be dealt with in Islamic Studies. Through interactions with people and activities related to Islamic experiences, one may have discovered areas where knowledge is lacking and answers need to be found. This can be a good source of identifying a problem and generating such to a research topic.

(ii) Islamic Literatures

When one has an extensive review of Islamic literatures, it provides one with some researchable problems. Textbooks, theses and dissertations, research reports in journals on Islamic Studies and conference papers among others could provide some tit-bits on researchable problems or topics.

Apart from suggestions for further researches available in theses and dissertations in Islamic Studies, one may encounter contradictions, inconsistencies and unsatisfactory findings in some areas of researches and investigations. One can then carry out a study to fill in the gaps.

(iii) Islamic Scholars experts, Views and Opinions

Consultations with professionals in the field of Islamic Studies, research fellows, thesis advisers or supervisors, etc. could guide one in identifying problem areas. They could help to clarify one's thinking to achieve a sense of focus and to be articulate and concise in one's research topic. Students are fond of collecting previous research topics from same or other institutions to copy, this is not a good practice and is unethical in research.

iv) Government Publications

Severally, some government policies, statements and regulations bother on religion, this could be published through white papers, gazettes, newspapers, newsletters, educational policies, Radio and Television or even though circulars. Research topics could emanate in response to a Government identified problems that has direct effects on Islamic understanding and practices. E.g. The Government policy that says, "A Nigerian should not give birth to more than four children", how does this affect the Muslims? Another is the Universal Basic Education (UBE), the 9-3-4 system where Islamic Studies is lumped with national values. This has a lot of implications on the subject, teachers, students and on the Muslims.

(v) Internet Sources

Today, there is a vogue in electronic learning, people study by entering into any library across the globe to get current and updated information on Islamic Studies. With the help of internet, people avail themselves the opportunity of getting current research findings or write-ups on any areas of interest in Islamic Studies. People come across different opinions, views and ideas on one Islamic Studies topic or the other. Reactions to some of such opinions may form research topics on which intending researchers could embark on an investigation.

(vi) Innovative and Technological Adaptation

Presently, we are in the world of Information Communication Technology whose use transcends all disciplines. In this age, experts in Islamic Studies will need to adopt technology in carrying out *dawāh* activities to make it more meaningful and relevant in the present age. Also technology will need to be deployed for carrying out researches to meet global competitiveness and international standard. This can be source of research focus for Islamic Studies researchers.

(vii) Islamic Studies Related Problems

There are many problems related to Islamic Studies as a course of study. There are Islamic education related problems, comparative Islamic religious problems, Islamic financial related

matters, Islamic political matters, Islamic philosophical issues and Islamic medical problems and solutions to mention a few. Some of these and many more could be sources of generating problems to form research topics for Islamic Studies researchers. (Salako, 2014)

Criteria for Problem Selection in Islamic Studies

1) Researchability

For a problem to be researchable in Islamic Studies, it has to involve variables which can be defined and measured. Although there are problems which may not be subjected to scientific investigation, like many philosophical and ethical problems which cannot be studied empirically; these studies however could be researched on adopting documentary approach or the likes as may be suitable for the chosen topic.

2) Suitability

The problem of investigation in Islamic Studies should be suitable to the peculiarities of the research discipline. It should be relevant to the professional goal and add more knowledge to the field. The research should be meaningful and interesting. One should consider the availability of the required manpower, equipment, finance and other sources. One should avoid problems with many variables not to lose focus of the research. One should consider the time limit required to get appropriate solution to the problem within a realistic period.

Research Questions

Research questions are to focus on what the researcher intends to do in the research. This is to guide against derailing and to serve as watch steps for the researcher. It is important that a researcher itemize his research questions in a progressive manner. These could be in form of direct questions or in statement form.

Research Objectives

Objectives give more clarity to researchers as they will guide the entire process of research. A researcher is to list objectives in simple and ambiguous terms. The objectives are to be stated clearly to indicate what the researcher is trying to investigate. While conducting a research in Islamic Studies, the researcher would definitely aim at answering certain questions. The researcher should frame such questions in a praise way. A researcher is to avoid putting the objectives in the question form.

Research Hypotheses

Depending on the nature of Islamic Studies topic chosen, the researcher may formulate hypotheses. An hypothesis is an assumption put forward by the researcher which could be true or false at the end of the research. Formulation of hypothesis is an indication that the researcher has sufficient knowledge in the area and it also gives direction for data collection and analysis. A hypothesis has to be: (i) testable, (ii) have explanatory power, (iii) state expected relationship between variables. (iv) consistent with existing body of knowledge.

Research hypotheses are assumptions which John and James (2013) refer to as statements of what the researcher believes to be facts but cannot verify. If the researcher is proceeding with certain assumptions, then same need to be reported in the research.

Methodology, Sampling and Tools:

An Islamic Studies researcher is to state the method of research. The researcher is to mention how the study will be conducted. Depending on the nature of study be it qualitative or quantitative, the method of research needs to be stated along with justification. i.e. how particular method suits one's study should be discussed in brief. If it is survey, one needs to indicate further the type of survey to use. If it is experimental, one needs to mention specifically which type of experiment to conduct.

Research Setting and Location

This refers to the area where the research is going to be carried out or those to participate in the research exercise. Islamic Studies researchers are to mention subjects to be involved in the study and the location and specific settings. This is important to ensure that correct settings are with appropriate subjects and other materials and objects to use.

Population and Sample

An Islamic researcher is to describe the population along with total size. This is especially needed in case of randomization and stratification. Selection of sample needs to be detailed out along with its justification. In a qualitative research, the sample size is always small in number.

Sampling

Sampling is the process whereby a researcher chooses his sample for his study. The sample of a study can have a serious impact on the outcome of Islamic Studies research. Sample of Islamic researches is simply the participants in the study. e.g. students, teachers, parents, administrators,

Islamic bankers, accountants working in Islamic banks and Islamic financial institutions etc. These are the subjects that respond to the survey.

Variables

Variable is an important aspect of any research area Islamic Studies inclusive. A variable is any entity that can take on different values. Anything that can vary can be considered a variable. For instance, age can be considered a variable because age can take different values for different people or for the same person at different times. Similarly, religion can be considered a variable because a person's religion can be assigned a value. A variable is a concept or abstract idea that can be described in measurable terms. In research, this term refers to the measurable characteristics, qualities, traits, or attributes of a particular individual, object, or situation being studied. Variables are properties or characteristics of some event, object, or person that can take on different values or amounts (Mariecor 2018).

Variables are things that we measure, control, or manipulate in research. They differ in many respects, most notably in the role they are given in the research and in the type of measures that can be applied to them.

If a researcher is interested in the effects of teachers' quality and instructional materials on the Islamic Studies achievement of SS 3 students, the class level is constant, because all individuals involved are SS 3 students. This characteristic is the same for everyone; it is a 'constant' condition of the study. Teachers' quality and use of instructional materials would be measured with Islamic Studies achievement test. It is very unlikely that all the SS 3 students would receive the same score on this test, hence the score on the test becomes a variable, because different individuals will have different scores and not all individuals will have the same scores. Therefore, we say that the score on the Islamic Studies achievement test is a variable.

There is another variable in this example – the teachers' quality and instructional materials. Age is an example of continuous variable because all the students cannot be of the same age, also the number of male and female respondents is an example of categorical variable since we would have male and female students in the class. Variables have different categories based on the descriptive roles played in the research. These are classified into independent, dependent, extraneous, intervening and moderator variables (Linda & David 2018). These variables are measured by different research tools to arrive at conclusions.

Research Tools / Instruments

These are tools to be used which need to be reported with proper justification while conducting research in Islamic Studies. Steps of construction of particular tool need to be reported in brief. If ready-made tools are used, its related details need to be reported. The author, date, its reliability, validity, population meant for and norms, along with scoring procedure need to be reported to show why one is choosing the tool for use. However, it is important that while conducting researches today, one should avoid very old tools and researchers. A few of researchable tools are questionnaire, interview, observation, teacher made test, experiment, students' results etc.

Validity of research tools

This is to establish that the items of the research tool measured the variables they were supposed to measure loading according to used theory and whether the respondents responded well to the questions or not. This is to also ensure that the questions on the questionnaires were not misunderstood and that they matched the variables to be evaluated. It is important to stress that validity of any research instrument can be better validated by research software tool like SPSS.

Reliability of research instruments

Cronbach's Alpha is used to examine internal consistencies of the items involved in the research instrument and Islamic researches is no exception in this regards. Although there are many forms of reliability analysis or coefficients but the Cronbach's Alpha reliability test is said to be widely used by most researchers and has been considered effective when checking the reliability of instruments at face value. This again cannot be easily determined manually except with the use of research software tool and this has been put as default on SPSS. (Cross Sectional Analysis 2007, Coakes & Steed 2001). Most researchers across the globe agree that for any instrument to be valid and reliable, it must meet a minimum point of .7 and above. (Pallant 2010 and others).

Methodology employed in this Research and findings

The researcher adopted documentary and observatory approaches in this study. One hundred (100) articles written on Islamic Studies were selected from different journals namely:

- i. National Association for the Study of Religions and Education Journal (NASRED Journal Vol. 17). pub. 2018.

- ii. National Association for Teachers of Arabic and Islamic Studies Journal (NATAIS Journal). pub. 2015.
- iii. JOSIH: Journal of Studies in Humanities, (Vol 5). Tai Solarin University of Education, Ijebu-Ode. Pub. 2013.
- iv. Lapai Journal of Humanities. Journal of the Department of History and International Studies, Ibrahim Badamasi Babangida University, Lapai, Niger State, (Vol 10). pub. 2015.
- v. Ulum Islamiyyah: The Malaysian Journal of Islamic Sciences, (Vol 30). pub. 2015.
- vi. Al-Hikmah Journal of Humanities and Social Sciences. (Vol 5). pub. 2019.
- vii. Journal of Religions and Peace Studies (JORAP), Department of Religious Studies, Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria. Pub. 2016.
- viii. Allawh: Journal of Arabic & Islamic Studies, University of Maiduguri, Nigeria. Pub. 2015.
- ix. Oguaa Journal of Religion and Human Values. (OJORHV, Vol 4), Department of Religion and Human Values, University of Cape Coast, Cape Coast, Ghana. Pub. 2018.
- x. Religions' Educator: Journal of the National Association for the Study of Religions and Education (NASRED, Vol 16). pub. 2017.

These articles were observed, scanned through and studied. Among the hundred articles reviewed, none of them used any research software tool in their write-up, all followed the traditional pattern which people were used to in carrying out researches in Islamic Studies. Interactions with teachers and students of Islamic Studies revealed that a large number of them lack any knowledge of research software tools. This is transparent in all the Islamic Studies articles observed in the selected journals of Islamic Studies and related ones that did not make use of any research software tool.

It is important that the 21st century researches in Islamic Studies need to align with the global practice as students are trained today to practice in any part of the world. The inability of researchers in Islamic Studies to adopt the usage of well recognized research applications may be a disadvantage to findings and outcomes of the researches which are not substantiated with software tools.

Efficiency of (SPSS) Statistical Package for Social Sciences in Islamic Studies Researches

The use of SPSS helps in accurately validating research instruments and data reliability. Experiences and studies have shown that it is difficult and cumbersome to determine the validity and reliability of research instruments and data collected manually, but is safer, time effective and accurate and more reliable when software tool is used to ascertain the validity and reliability of data gathered.

However, to use research software tools, certain rules are to be observed, for instance, in the use of SPSS, minimum number of respondents must be 100, knowledge of coding is important, data cleaning, keying the data on SPSS software and ability to run the reliability test etc. These are basic knowledge which a researcher must have to enable him use the SPSS while carrying out researches in Islamic Studies. Use of SPSS helps to give accurate data, guides in coding, helps in tracking variables appropriately. It saves a lot of time in running analysis, helps in electronically establishing reliability of data, gives adequate information on the research, assists in tracking errors and helps in establishing independent results different from what the researcher had in mind. It gives accurate descriptive information of data collected like the frequencies, descriptive ratio statistics, provides procedures for data management and preparation. It is useful for ANOVA - analysis of variance and linear regression, cluster analysis and factor analysis etc. Its use will make Islamic Studies researchers meet international standard and global standard practice.

Conclusion

IBM SPSS - Statistical Package for Social Sciences has been adopted as a research software tool used for researches in social sciences, humanities and education and its use no doubt enhances validity and reliability of any research material. To further enhance the validity and reliability of researches conducted in Islamic Studies, it is imperative to adopt the use of SPSS in carrying out analysis of Islamic Studies researches. This will give glamour to the researches, make them very relevant, authentic, remove biases and make the studies meet international standard and global competitiveness.

Recommendations

The researcher hereby recommends that students of Islamic Studies both undergraduates and postgraduates in Nigerian universities be introduced to basic elements of SPSS to start with. With time, further developments will take shape and other research software tools will be

introduced to build up their capacity in research software knowledge. Basic elements of SPSS like data coding, data cleaning, how to key data on the software, test of reliability, running descriptive statistics and the rest should be introduced into the Islamic Studies research methodology course to familiarise them with the operation of the software package. Where there are no Islamic Studies lecturers to handle this aspect for their students, efforts should be made to request the services of lecturers in cognate departments to assist in teaching the students as the whole academia is presently talking of synergy in learning. This is believed would make Islamic researchers of today better, lucrative and more relevant in the use of technology in Islamic Studies researches.

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