ROLES AND PROBLEMS OF DATA COLLECTION FOR STUDENTS' EVALUATION AT THE JUNIOR SECONDARY SCHOOL IN NIGERIA

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ABSTRACT

This paper examined the roles and problems of data collection for student evaluation. They following areas are discussed. Meaning of data collection, roles of data collection for student evaluation, types of data collection viz-a-viz their roles in an evaluation process. Problem of data collection as it affects evaluation during teaching and learning process were also examined.
Keywords: *Data collection, observation Interview, Measuring Scale, Evaluation.*

INTRODUCTION

The desire of human being the world over is to satisfy or meet their needs. Unfortunately, human needs are highly insatiable. In the pursuance of these needs, therefore questions are often raised as to how, who, what, when these decisions could be accomplished. In an attempt to proffer a workable solution to these hanging questions, attempt were often made, to find out, to inquire and or to research into the areas where an acceptable solution could easily be found. Solutions that are indeed based on facts from empirical studies, facts that can be tested and prove beyond any reasonable doubt. These facts must be scientifically based, and for it to be so, data has to be collected, organized and analyzed.

Indeed, the task of data collection begins after a research problem must have been identified and defined and a research plan chalked out. Advanced learner dictionary of current English (2008) defined data as information, especially facts collected for examination and consideration made and then used to help in decision making. It could be information in an electronic form that can be stored and processed by a computer to provide meaningful information. Oladunni (1995) opined that, data in research refers to bits of information or fact obtained through scientific method.

Kolawole (2002) stated that, numerical facts are called data and the study of data is called statistics. Statistics in this sense is defined as science of collecting, classifying, analyzing, presenting and interpreting of numerical data that is useful for human being. Borisade (2002) viewed data as a set of raw or unrefined values collected for the response variables for which each of the elements belongs to the sample. For instance, Tunde entered into the college at the age of 20, his height is 4.5 meters. These pieces of data are the values of response for Tunde. In other words data serves as a piece of information when and only when it has been processed or refined. Evaluation, according to Ibeh (2006) is a continuous process of making careful observation upon which relevant judgement is made about an individual

ability. Bajah (1982) opined that evaluation is a device used for finding out the value or otherwise of an educational programme, Glock (1985) also defined evaluation as the systematic process of determining the effectiveness of educational endeavours in the light of evidence. Alonge (1989) sees evaluation as a process of determining the extent to which educational objectives are actually being realized. Borisade and Faloye (2009) Succinctly put it as the process through which a value judgment or decision is made from variety of observations on data collected: This was also the view earlier on expressed by Abatan and Sadiku (1996), who defined evaluation as the process of making value judgement or decision based on quantitative information obtained from measurement.

The definitions of Evaluation are therefore numerous and are all closely related. It all points to the process of determining the outcome of programme objectives. How has the means justify the end? How has the stated objective being realized. From the foresaid therefore, Data collection is a pre-requisite to thorough evaluation of students. For these reasons it is important to have an accurate, valid and reliable data if the expected outcome will be useful and dependable.

Data Collection

Unresolved educational problems have been found to be one of the major obstacles confronting national development, especially in the third world countries. In solving these myriad of educational problems, data are to be collected through documented past records, archives, museum, interviewing etc. These pertinent data are necessary for arriving at the solution to the problem on hand. It is the responsibility of the investigator to set up a research design that is capable of providing the data necessary to the solution of the already identified problems. The more clearly and thoroughly a problem and its many ramifications are identified, the more adequately the study can be planned and carried to a successful completion. The onus is therefore, on the investigator to synchronize the statement of the problems with the design to be used before going out for data collection.

However, as crucial as the collection of data seems to be, the exercise is by no means a simple one. Once the investigator has decided on what data to collect and from which source, then he have to choose an appropriate technique and relevant instrument to be used.Data collection from Wikipedia, The Free Encyclopedia, is defined as a term used to describe a process of preparing and collecting data with the ultimate aim of obtaining information to keep on record, to make decision about important issues or to pass information on to others. There are two major types of data. These are the primary data and the secondary data. Primary data are those data that are collected during the course of doing experiments in an experimental research, but in case of descriptive type, we can obtain primary data either through observation or through direct communication with respondents in one form or through personal interviews. In other words, primary data can be collected using different methods. These include, observation method, interview, questionnaire through schedule in

some cases, warrant cards (postal card) pantry audits etc. On the other hand, secondary data are data that are already available. That is data that have already been collected and analyzed by someone else. This includes, published data or unpublished data, such as newspaper, government books, magazines reports of various associations, historical document from archives or museum. Others may include diaries, letters, unpublished biographies and auto-biographies, private/public individual and organization.

Roles of Data Collection for Students' Evaluation

The roles of data collection for students' evaluation at the Junior Secondary School level are enormous. Observation technique is one of the methods often used for data collection. It serves as a formulated research purpose which is systematically planned, recorded and usually subjected to checks and control about its validity and reliability. Thus it is highly objective or subjectivity bias. These types of method provide information that is related to what is currently happening. That is, it is not in anyway complicated by either the past behaviour or future intention or attitude. It thus serves as impetus to teachers at the junior secondary school level to decide on what type of evaluation methods to use. The results of observation techniques also enable teachers at this level to know when and how to evaluate his/her students, the type of text to be given and the purpose of such a test.

In a classroom setting for instance, observation technique is often used to evaluate learner's reaction to an event or occurrence. Responses of the learners to issues enable the teacher to take appropriate decision on the way forward. Data collected through this method also gives room for the independent responses from the respondents. In other words, there is room for the respondents to respond willingly to the behaviour being described in its natural setting.

Data collected by means of interviewing also plays the role of given more information in a greater depth. That is, it can yield an almost perfect sample of general population. There is therefore room for flexibility as the opportunity to restructure questions is always there. Interview technique is also a good means of collecting supplementary information about the respondent's personal characteristics and environment which is often of greater value in interpreting results, which of course is an evaluation process on its own. It can assist in clearing and classifying issues that appears confusing, thus eliminates the possibility of misinterpretation on either side. The role played by data collected through questionnaire method is much more pronounced than any other means. This is because it is of low cost effective, it is widely spread geographically and always free from bias, respondents' privacy is not in anyway invaded. They are always assured of anonymity which enables him to respond with a very high degree of openness. The method is also good for classroom evaluation as learners are not under any burden while responding to the questionnaire. There is room for free will responses and answer could be given at ones convenient but within a given limited time.

Data could also be collected through case study technique. This case involves a careful and complete observation of a social unit, be that of a person, a family, an institution, a cultural group or the entire community. It plays the role of an in depth study as it lays much emphases on the full analyses of an event or condition and its interpretations. Odum (1929), opined that case study is a technique by which individual factor whether it be an institution or just an episode in the life of an individual or a group is analyzed in its relationship to any other person or group. Indeed, case study technique of data collection is presumed to be one of the best ways of evaluating learners in any area of comparative analyses or cases that involves correlates and investigative problems. The problem is taken holistically and treated purely in isolation from any other presumed problems arising outside the study area. In other words, it helps in formulating research hypotheses alongside with the data which may be helpful in testing them. It also helps at enhancing the experience of the researcher which in turn helps at increasing his analyzing ability and skillful presentation of his findings.

Another means of collecting data is using measuring scales. This can also serve as an evaluation instrument for teachers. These includes nominal scale which is a simply means of assigning number or symbols to events in order to label them or to differentiate them. The number assigned is not ordered. For instance, Male '1' and Female '2'. The '1' and '2' are merely used to differentiate males from female. The order is of no consequence, they are just convenient labels for the two classes of events. Another one is the ordinal scale. In this case unlike nominal scales, events are placed in order, but without significant attempt to make the internal equal. Hence it is a mere ranking of events. For instance, Samuel is ranked the 5th in the class and Sani: is ranked 20th. This does not imply that Samuel position is four times as good as that of Sani. Hence it is just a means of ranking items from highest to lowest. The third one is the internal scale. It has magnitude and equal intervals but lacks absolute zero point. It represents quantities of a given characteristics beginning at some arbitrary starting point such as temperature. And there is no zero temperature. The usual means of measurement of interval scale is the use of average, mode, media and mean, the range and standard deviation.

There is also the Ratio scale. It has an absolute measurement. It represents the actual amount of variables and is used in measuring physical dimension such as weight, height, length, distance etc. Indeed all these scales could be used by the classroom teacher to evaluate his students. Such a means could include Likert-rating scale which entails generating a list of statement about what is being measured. Students are provided with graduated response options such as:

Strong Agree	Agree	Disagree	Strongly Disagree	Undecided
5	4	3	2	1

Responses are weighted as shown with the higher value indicating a more positive response than the lower value. For instance to evaluated responses of the people to the statement "falling standard of Education in Nigerian".

However, the scaling may not necessarily be the type given above. It may be merely "Yes' or 'No' response. Or 'True' or False" response or just 'Agree' or 'Disagree'. All these are tools in the hand of teachers which can be used to evaluate students

Problems of Data Collection

One of the major problems often faced by our classroom teachers or a researcher is how to collect, organize, analyze and the interpretation of their data. It is a problem because, it may a times look very simple to gather relevant data, but how to organize, analyze and finally interpret them during the teaching and learning process may indeed pose the greatest challenges. For instance, some behaviour may not be observable, yet human beings exhibit them. In other words, the presence of the observers in the setting will usually lead to faking in the behaviour of those being observed. Unforeseen factors may also interfere with the observational task. Hence accurate observation cannot be ensured.

Data collection at any level is very expensive. An average junior secondary school teacher may not be able to afford the huge amount required to collect the data needed for their teaching learning process. On many occasions, interviewers have been found to be biased and even involve sentiment in their responses. There are also problems emanating from some government officials or executives or people in high income group, who are not easily accessible or approachable, under the pretence of official secret or bureaucracy. This, no doubt will hinder accurate and correct data, which in turn will affect the expected outcome.

High rate of obsolesce of data is another problem of data collection in Nigeria. How accurate is the data needed for national planning or historical perspective of Nigeria setting. How many of our museum or documents in most of achieves are correct? How do we match our death rate with documents on our birth rate in Nigeria? Which are the factors responsible for poor performance of students at NECO or WAEC level in the past, vis-à-vis the newly identified factors. These are posers that are really seeking for answers. The inbuilt inflexibility of questionnaire type of data collection is another big problem, because it is very difficult to amend the approach once the questionnaires have been dispatched. Thus, there is therefore room for ambiguous replies.

Level of our illiteracy in Nigeria is another impediment to data collection. There is less approach, carefree attitude and low rate of returns. There is danger of false generalization where case study technique is involved. For instance, using Ekiti State as a case study to give a general view of the entire country may be misleading and can therefore give a misconstrue idea to solutions to the problems under investigation. Much time is also required to collect accurate data. Apart from been expensive, the time required may not be there. Getting to some remote places may entail quite a lot of hardship and inconveniences, transportation problem coupled with bad roads may be a major hindrance and investigator may therefore carry out his research in a wishy-washy form. Thereby resulting in given a false or untrue

report. A times researcher may sit in his office or at home and give report to a problem without any recourse to data collection. There is also problem arising from intra-and interviewer variability. Human being as a natural object may display different mood at any given time. Thus the mood of the interviewer more often that not dictate the expected responses. During fatigue, when they are hungry or when other pressures occurs, may influence their responses to the question posed by the investigator. On the use of measuring scales, Kotharic (2007) opined that one important Limitation on Likert-types of scale is that, with the scales, we can simply examine whether respondents are more or less favourable to a topic, but we cannot tell how much more or less they are. In order word, there is no indication to shown that, the position indicated on the scale are equal. For instance, a 'Yes' or 'No' answer does not indicate 50/50 scores in the real sense. A 'yes' response may be much more absolute than the 'No' response and vice-versa. There are therefore the possibilities of people's responses based on what they think they should feel rather than how they do feel. All these make accurate data collection more of a ruse than reality especially when less qualified personnel are involved.

CONCLUSION

Despite the stated problems associated with data collection, discipline such as sociology, science or humanity cannot but carry out their researches using data collected as their major tools. There is no scientific experiment that can be done without putting the relevant materials in form of data collection in place. The success of any nation's educational sector depends squarely on the quality of her work force, which is a function of the experiences of the executor of the educational programme. Data collection therefore, within this context, include teachers preparedness for their lesson, the amount of inputs put into it, the extent of research work carried out, his methods of teaching, his worth of experience and other factors that aids teaching and learning processes. How to collect, organize, analysis and interpretation of data collected will go along way at assisting the effectiveness of teaching learning process in the classroom. Effective data collection therefore is a prerequisite for effective research and development. The process of providing sufficient and relevant instructional materials, ability to demonstrate skillfulness of professionalism, adequate and proper lesson plan, all fall within the purview of effective and genuineness of data collection which is also a pre-requisite to effective evaluation in the classroom during the teaching and learning process.

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