

METHODS AND SOURCES OF DATA COLLECTION FOR EDUCATIONAL RESEARCH

BY

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Abstract

A research opens door for a debate, especially about claims on contribution to knowledge as well as about methods and meanings. This paper therefore examines the methods and sources of data collection in educational research. First, the concept of research, educational research and data were looked into as given by various authors. It then focuses on observation, personal interview and questionnaire as a method of data collection. The study also goes further to examine the two sources of data collection which are primary data and secondary data. The paper therefore suggested that researcher should be careful in collecting data for research undertaking.

Keywords: Data, Interview, Observation, Research, Questionnaire

Introduction

Research to a lay-man is drawn from the word “search” which means “looking for”. From the academic point of view, research is a careful “search or inquiry”, or the “ability to discover new facts” (Nwobodo, 1997). According to Ibrahim, Landu and Opadokun (2002) research is a systematic attempt to find acceptable answers to questions or solutions to a problem through certain logically designed procedures. Research in education is the same as in any other behavioural sciences or humanities. The only difference is that educational researches are carried out mainly to solve educational problems to promote classroom teaching and learning. Researches in education are useful to all categories of people who are directly and indirectly involved in activities taking place in the school. School principals, classroom teachers, counselors, administrators, parents and students need information to make decisions and perform their role in academic programme. The objective of any research, from above definition is the discovering of truth. The qualities required of a good research are: width, depth and duration. Research must not only be wide enough to include relevant information, its depth must be such that transcends a superficial impression. Similarly, research must endure enough to get a reasonably complete picture of the subject under study (Rotimi, 1998).

To facilitate the understanding of research process in education, it is therefore necessary to study the methods and sources of data collection in educational research. The study is grouped into three sections: the first part introduces, the second part reviews the relevant literatures and the last part concludes and makes recommendations.

Data Collection

The importance of data to any research can hardly be exaggerated. While conducting research, data are needed for evaluation and for conclusions to be made. Investigator must be aware of where to collect the data and the appropriate methods and instruments to be used. Data are quantitative facts, observations or information in isolation and relating to the subjects of the study. Collection of data is mainly based on the kind of problem a researcher is focusing his

attention, for instance, some data are collected through census and sample surveys, where as others could be through controlled experiment as well as through administrative statistic (Lucky and Samuel, 1998).

Basically, there are the two sources of data collection. Primary data refers to documents or data generated by the researcher. The researcher conducts an interview based on questionnaire (Saliu & Oyebanji, 2004). And secondary data is a data collected by someone, a body or government establishment for researcher's use (Akuezuilo,1993: Asika,1991: Omotosho,1990: Osuala,1983). This type of data is not under the control of the researcher and in most cases, such data often quite distinct from the objective of the present user. Documents of secondary sources of data include: textbooks, government reports, theses, research projects, journal articles, newspaper, magazines and record kept by some organizations such as Central Bank, Federal Office of Statistics, World Bank, International Monetary Fund Etc.

Methods of Data Collection

According to Joseph (1999) methods of sourcing information for educational research include:

- (1) Observation: Observation is the selection, provocation, recording, encoding of that set of behaviours and settings concerning organizations in site which is consistent with empirical aim. Observation method is the oldest method of data collection. The basic point to note under this method of data collection is that the observer watches what behaviour or event is manifested or taking place then rate the same as it took place. This method is most useful in survey and experimental studies. The observational methods include:
 - (a) Participant observation: This is the least structured form of observation. In participant observation, the observer maintains a face-to-face relationship with the observed. It allows for a more detailed and comprehensive picture but is subject to the problem of the observer's is getting emotionally involved in the group.
 - (b) Non-participant observation: This is the type of observation in which the observed stands at a distance from the observed. The observer records the characteristics displayed by the observed that are of interest to him. However, he must be careful not to allow the observed become aware of his intent so as to control for the effect of change of behaviour.
- (2) Personal Interview: Personal interview is a kind of conversation carried out between the interviewer and the interviewee, with the objective of gathering desired data. It is a face-to-face interaction situation in which one person (the interviewer) asks another person (the interviewee) questions which are responded to orally. Personal interview can also be regarded as oral questionnaire. Telephone interview and panel interview are other forms of interview. Telephone interview is simply the use of telephone to obtain information essential to a study. The main disadvantage of this form of interview is inability to obtain complete information from the respondent. Panel interview enables the researcher to study changes in behaviour and attitude by re-interviewing and studying a respondent from time to time. Interview like questionnaire can also be structured and unstructured. A structured interview or closed ended interview is that in which the interviewer has planned a series of questions. The same questions are presented to various respondents in the same order, and the choice of alternative responses is restricted to a predetermined list. Unstructured interview or open ended interview is flexible with little or no restriction placed on the respondents. The respondents are usually free on giving out answers, while the order of the questions can

change or varied to suit the respondent. Personal interview is the best method used where literacy level is low and it can also be used for almost all segments of the population. Demerits of personal interview include: task of locating or selecting sample members, the task of obtaining interview with them and the task of recording answers as instructed (Akuezuiko, 1993).

- (3) Questionnaire: A questionnaire consists of a set of questions designed to gather information or data for analysis, the results of which are used to answer the research questions or used for the test of a relevant hypothesis (Asika, 1991). Questionnaire is grouped into two categories: Structured questionnaire which is also referred to as closed questionnaire or factual questionnaire. This type of questionnaire consists of prepared list of specific questions with a choice of possible answers. Examples of this form of questionnaire are two-way question otherwise known as: Male or Female, Yes or No, Agree or Disagree etc. Unstructured questionnaire is also referred to as open-ended questionnaire, or attitudinal questionnaire, which allows the respondent to offer his response with no restrictions as to the extent of response. This form of questionnaire consists of sentence completion which guides the respondent on how to structure his answer or response and is particularly useful in collecting data in an area where the researcher is not familiar with.

According to Nnamdi (2001), the followings should be taken into consideration in designing a questionnaire:

- every question in the questionnaire must be related to be research questions and the hypotheses (if any) for the research.
- the rules of scaling must be considered.
- a covering letter should accompany the questionnaire stating the purpose of the study and the use of the findings.
- the items of information needed and the structural arrangement of the questionnaire must be determined.

According to Saliu and Oyebanji (2004) a good questionnaire must be short, neat, tidy, attractive, straight forward and meaningful. And, it must cover the exact object of the inquiry.

Merits of a good questionnaire over personal interview are that: it is less expensive than the personal interview, it requires less skill to administer than personal interview, it is applicable to a large number of individuals and it can be sent through mails.

Conclusion

This paper is concerned with the various ways and source of generating data for educational research. Observation, personal interview and questionnaire have been discussed as well as primary and secondary sources of data collection. Research findings in education are based on the quality of data collected for the research efforts.

Suggestions

1. Care must be taken while collecting data for research undertaking.
2. Appropriate method of collection should be applicable.
3. The information collected must be real in other to contribute to the existing knowledge.

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