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Methodological Usefulness of Content Analysis in Social Science Research

Mustapha, Adesoye Isiaka
Department of Public Administration
University of Benin
Benin City, Nigeria.
E-mail: Isiakamustapha1961@gmail.com
GSM: +2348033552838

Ebomoyi, Ikponmwosa
Department of Political Science,
University of Benin,
Benin City, Nigeria
E-mail: ikponmwosaebomoyi@gmail.com
GSM: +2348168012618

Abstract

The thrust of this paper was to crystallize the methodological value of content analysis as a tool in social science research. In order to achieve that, it sets out to do a conceptualization of content analysis and situate it within the operational rubrics common to other research designs. The various stages in content analysis notably the problem identification, selection and definition of units of analysis in content analysis were succinctly considered. The usefulness of the method was finally discussed and particularly its strength which rests in its ability to handle the areas of weaknesses and challenges of other sister methodological tools. Among such strengths unique to content analysis is the economy of time and money in the research process; its ability

to effectively handle the situation of botched up data collection process in contrast to survey or field research; and the fact of its unobtrusive nature which is a major flaw of the rest methods.

Key Words: Content analysis, methodological tool, social research, data collection, usefulness

Introduction

Research is such an essential strong and powerful tool in guiding man towards progress. Without the use of systematic research, there would have been very little progress. Therefore, the importance of the role and function of research in human life cannot be overemphasized. "The secret of our cultural development has been research, pushing back the areas of ignorance by discovering new truths, which in turn, lead to better ways of doing things and better products" (Best & James, 1986). Scientific research has led to progress in the academic world. New products, new pacts, new concepts and new ways of doing and achieving things are being found due to ever-increasing significant research to the physical, biological, the social, the psychological field etc. It is no longer restricted to the science laboratory alone. To this extent different methods have been designed for the purpose of research. Central to the conduct of any research is the method. The methods essentially lead to collection of reliable data that would subsequently be analyzed in order to proffer solutions to the identified social problem that necessitated the research in the first instance. A number of such methods exist and social scientists have found them very useful depending on the nature of the study. Notable among the methods are experiments, survey, field research, use of available data, and content analysis. Content analysis as a methodological tool occasionally used or applied in social sciences researches remains a very important and useful unobtrusive tool of research analysis (Offiong & Moru 2003, p. 37). The method which is an observational technique focuses on data gathering and the examination and analysis of human statements, comments, speeches etc which could either be oral or written. Content analysis focus and focal point centre on comments, statements and write ups either in private or public spheres. In the private endeavors, it centers its analysis on the value and content of individual bibliographies, diaries, letters, memos etc. whilst in the public world, content analysis focuses its analysis on ancient records and archival materials. Conversely, content analysis involves the act of listening and reading with its emphasis on recorded human communications through which inferences are drawn. The utmost aim of the application of content analysis in social science research is to distinguish information and classifying such as negative and positive in order to make or produce inferences (Burnham et al 2004, p. 236). Such classification is essentially concerned with the characteristic of the content and the researcher's adherence and conformity to stated rules of application as put forward by scholars, writers and proponents of content analysis, guided essentially by both coding and accuracy.

Historical Account of Content Analysis

Different arguments and counter arguments have been put forward as to the origin and historical background of content analysis as there is no universal acceptable date as to the origin. The method gained general and greater popularity among the social science scholars as well as a method of communication research (Wimmer & Dominick 1994, p. 163). Its development as a scientific tool could be traced to the period of the World War II when the U.S. government undertook a project, using the content analysis to evaluate enemy propaganda under the directorship of Harold Lasswell. Content analysis became popular in social science research in the published articles and works of social science scholars such as in Bernard Bevel Son (1952),

Laswell (1965), further recent works includes those of Holsti (1968), Krippendorff (1980), Merten (1983), Maring (1994). Later on, content analysis as a methodological tool spread to other disciplines (Woodrum, 1984).

Conceptualization of Content Analysis as a Methodological Tool

Content analysis is described as a scientific study of content of communication. The word content refers to what is contained in a message, whilst, analysis goes to explain what is contained in that message. Content analysis as a methodological tool, is a method of observation which is useful for analysis. The content of message or a document in a broader sense, content analysis may be seen or viewed as a method. The content of the message forms the basis or centre for drawing inferences and conclusion about the content (Frankfort-Nachmias & Nachmias, 1996). Content analysis nevertheless, is situated between the interface of observation and document analysis. As a method of observation, instead of seeking or asking people to respond to questions, content analysis "takes the communication that people have produced and asks questions of communications" (Kerlinger, 1986). Therefore, as a form of definition, it is considered as an unobtrusive or non-reactive method of social science research.

A lot of definitions of content analysis are available as a social science methodological tool. According to Berelson (1952), "content analysis is a research technique for the objective, systematic and quantitative description of the manifest content of communication. Holsti (1968) asserted that it is any technique for the making of inferences by systematically and objectively identifying specific characteristic of a message or messages whilst Kerlinger (1986) defined content analysis as that method which is concerned with the studying and analyzing communication in a systematic, objective and quantitative manner for the purpose of measuring variables.

Content analysis is also defined as that technique for the making of replicable and valid inferences from data to their context (Krippendorff, 1980). As for Weber (1985), content analysis utilizes a set of procedures to make valid inferences from text. These inferences are about sender(s) of a message, the message itself, or the audience of the message.

Content analysis is purposed to develop systematic and objective criteria for transforming written text(s) into highly reliable quantitative data (Singleton et al, 1993). It can further be said to be a set of methods for analysing the symbolic content of any communication in a manner that meaning are deduced from a set of categories that are observable representation of certain characteristics of issues of research interest. For a research endeavour to qualify for content analysis, Singleton et al (1993) noted it must demonstrate the following in clear terms:

i. It must identify the categories into which the issues being investigated will be coded. For example, male versus female; different socio-economic backgrounds; Christianity, Islam and other religions; rural versus urban dwellers; etc.

ii. It must define the categories according to objective criteria that can be applied by anyone else;

iii. It must systematically select subjects (sample) and then code the samples in terms of those objective criteria;

iv. It must report the frequency of the categories into which the samples have been coded preparatory to analysis.

All the four-item process described in the immediate foregoing is found in other research methods notably systematic field observation studies, open or close-ended questions in questionnaires, experiments and experimental instrumentation etc.

A cursory examination of the above definitions shows emphasis being placed on such aspects or areas such as system, objective, quantification, context and validity with particular reference drawn from the communication content about the sender, the message or the receiver of the message. Thus, content analysis is all about a method of observation in the sense that instead of asking people to respond or reply to questions, it takes the communications that people have produced, ask questions and make deduction with such materials as newspapers content, letters, folk songs, radio and televisions etc.

Rationale of the Content Analysis Methodological Tool

Content analysis nevertheless shares differentiating features with other methodological tools depending on the nature of data, statistical principles and with a very few differences (Stempel, 1989, p. 132). Therefore, a detailed picture for the different rationale or purpose of content analysis can be drawn from the following:

    i.   To emphasize and describe the characteristics of the content.
    ii.   To describe and show the trends or pathway in communication content.
    iii. To relate the known character of the originator of the message to the message they produce.
    iv. To make inferences about the causes of content.
    v.   To be able to analyse messages in order to test hypothesis. (Berelson & Salter 1946).

It is on record that content analysis has been in time past used in the understanding and in the explanation of a wide range of themes in the areas of social change e.g. John Naisbitt analysis of the economic, social and political atmosphere in the United States as a basis for his forecasts of the new trend and directions (Frankfort-Nachmias & Nachmias 1996).

Stages of Content Analysis

Content analysis is conducted in several procedural stages; some of these stages are discussed as follows: (Nachmias 1996, pp. 102)

1. **Problem Identification**

The major reason behind any research is to find a solution to an identified problem. In other words, without problem, there is no research. It is central to research enterprise to the extent that it is the first step to take in research process. It is the commencement of the seven- stages research cycle called the problem (Nachmias and Nachmias 1996: 20); the beginning of research called specific problems or issues (Creswell 2003, p. 79); Zisk (1981) referred to it as the formulation of research problem and the first of the four major parts he divides the research process into.

A research problem is in most cases presented in form of questions or statements implying a question about the relationship between two or more variables (Zisk (1981). The research problems so identified should throw up a number of questions. Such research questions could be generated on the basis of existing theories, practical issues relating to the problem or anticipated responses to conditions that have attracted the researcher's attention. Through the

questions, which must contain measurable variables, a number of research objectives are formulated. The objectives are couched into hypotheses with variables depicting relationships that are measurable/testable.

2. Defining the Population or the Universe

This basically involves specifying and making known the boundaries of the body of the document content to be investigated or to be considered. For example:

i.   Specifying the sources of data collection e.g. newspapers, magazines, television, speeches etc to be analysed.

ii. Specifying the time period.

iii. Identification of the location used e.g. town, city or local government areas etc, justifying the above reasons.

3. The Selection of an Appropriate Sample from the Entire Population

Just as the medical laboratory scientist who wants to conduct a malaria parasite test on a patient only needs a very small quantity of the patient blood called the sample to solve the problem of the impossibility of draining the entire blood; so, it is always cumbersome, if not impossible, for the social scientist to study the entire population relevant to his study hence, the population sample. In the case of content analysis, the social scientist conducting a research may not study all newspapers, speeches, magazines etc over a given length of time and period. Sample is therefore selected for observation, which requires the application of any of the conventional sampling techniques or method or the combination of both depending on researcher's choice (Murty, 2001).

4. Selecting and Defining Unit of Analysis

Units of analysis in content analysis are the recording units. A rewarding unit in the element of the study text described by the content categories. These categories are many depending on how systematic the researcher was isolated and identified them as components of the issues under investigation. It will be a single word or symbol; a phrase; a clause; a sentence; a paragraph; or any other grammatical unit for that matter. It could also be concepts, variable or other demonstrable characteristics systematically identifiable in the social phenomenon under study. Weber (1990) cited in Singleton et al (1993) opined that smaller unit may be better reliably coded them larger units because they contain less information. Further to that, larger unit have the potentials for multiple information and even information overlaps. In contradistinction to the immediate foregoing, smaller units such as words have also been found to have a deficiency of extracting insufficient information and there may be too many such units for the researcher to manage (Singleton et al 1993).

It is important to note that content analysis also distinguish content units. By this, we wean the context within which a particular recording unit is used. The context will elucidate meaning of the unit in a manner that the researcher is able to make valuable deductions the aggregate which translates into scientific generalizations.

5. **Deciding on a Quantification System**

There appeared to be myriad of ways of quantifying data in content analysis. However, four most common systems have been identified. They are "time space system"; "appearance system"; "frequency system"; and "intensity system"; (Singleton et al 1993; 383-384; Frankfort-Nachmias and Nachmias, 1996, p. 329). As regards time-space system, while the "time" component could refer to the amount of time a news item is given or at what time in the news a particular advertisement features may be used as a yardstick for the determination of the relative importance given to the items; while the "space" for example in column inches in a newspaper or news item placed on the front page space in a newspaper can be rated as being more important than another placed at a hidden space within the newspaper.

Next is the appearance system. It may be sufficient at times to just record a given category that appears in a recording unit. This is especially important within the context where the category features. Within a particular paragraph for instance, a category may carry a weight relative to the weight carried by the entire recording unit instead of the weight of would carry if isolated from the context of the appearance. This is largely inferential.

Further to that is the frequency system. This appears to be the commonest method of measuring content. It deals with the number of ties a category appears in the contextual unit (Singleton et al 1993). Mustapha and Ebomoyi (2017) counted the frequencies of variables under each of the themes identified as categories. The frequencies when aggregated provided veritable data that could be subjected to quantitative analysis through appropriate statistical tools that could better handle the appropriate level of measurement where the categories could be analysed notably nominal, ordinal or internal levels. As important as frequency measures appear to be, two crucial assumptions of the system deserve to be examined. The first is the assumption that frequency of a category is a valid indicator of its importance, value or intensity; and the second being that every individual count is of equal importance, value or intensity (Singleton et al 1993, p. 384). It has been emphasized under "appearance system" that some categories should ordinarily be weighted more heavily than the others especially by virtue of where they appear in the newspapers, (Holst, 1968). Front pages appearance should weigh better than appearance in the rest pages of the newspapers. This should be taken care of in the assignment of values.

The last on the list of four is the intensity system. This is what the content analyst uses if what he or she is investigating involves "attitudes and values". He or she must resort to measuring intensity (Singleton et al 1993; Frankfort-Nachmias and Nachmias 1996). In public administration research, public policy impact assessment is better measured using intensity system. For example, instead of asking questions about the awareness of the people of a particular public policy, newspapers' reports about how such policy has affected the lives of the people since its implementation will be more appropriate. Instead of counting the frequency of the reportage, the intensity of its impact on the lives of the citizens will serve more useful purpose in the assessment/evaluation of such policies.

6. **Data Analysis**

To carry out analysis that will be scientific, the sampling procedure must be such that makes the information gotten from the sample generalizable. Probability sampling procedure could be preferable as it affords every member of the population equal chance of being selected. Three populations are identified to be relevant to content analysis. They include communication

sources and notably newspapers; documents notably pages within the documents (Singledon et al 1993, p. 384). Mustapha and Ebomoyi (2017) purposefully sampled national newspapers as communication source and randomly sampled four for their assessment of citizens' participation in the 2016 governorship electoral process in Edo State of Nigeria through content analysis.

After the selection of the sample, the next step is to code the materials following a particular coding category or identified themes (Mustapha & Ebomoyi, 2017) and of course a determined system of quantification. The quantity could be converted to percentages which would eventually enable the content analyst relate the different units of analysis within the same category or theme to one another and inferences can be made from the content and characteristics of related or interacting variables within the theme. Mustapha and Ebomoyi (2017), for instance, compared the frequencies of the occurrence of the variables "money inducement by political parties", "elite dominance content of parties", and "citizens' trust in the parties" within the theme "character of political parties impacted the outcome of elections results". They were able to draw inferences that "citizens' trust" had the highest intensity of influence on the election results than the other two variables in the 2016 governorship elections in Edo State of Nigeria.

Methodological Usefulness of Content Analysis

Specific and unique to content analysis is the economy of time and money in research process especially the data collection. A single researcher for example can successfully embark on data gathering all alone. That may not be possible with survey or field research. He or she may need to conduct an interview or administer a questionnaire to a set of respondents. He needs the cooperation of people along the line for him to succeed. For field researcher, he/she needs gate-keepers that would link him/her to the research location. He/she needs information depending on the type of observation he/she intends to do. These individuals would not perform all these functions for gratis. As long as the researcher is familiar with the systematic coding of the information in the existing documents relevant to his/her research, the quantity and quality of data is guaranteed without committing much time and money.

Comparative to survey or field research is content analysis strength of being able to handle the situation of a botched-up data collection process than the former (Babbie, 1986). If the process is botched up in survey, to repeat the whole process again may become cumbersome and unrealistic especially if the researcher is financially constrained. A field researcher whose data collection process at an "Igue" festival that comes up once in a year in Benin Kingdom is botched, apart from loss of resources, he/she cannot resume the process until a year later. With content analysis however, such limitations do not apply. It makes the research process more flexible. A portion of the study where the mistake is discovered can easily be repeated as the documents still remain the same contrary to events in a fieldwork that may not be reversible.

Also, unique to content analysis is the fact that it is unobtrusive (Babbie, 1986; Frankfort-Nachmias and Nachmias, 1996; Singleton et al, 1993). By this, it is meant that the researcher has no effect on the subjects studied. This is because the documents from where the researcher is to collect his/her data are already in written form and so the content analysis has no effect whatsoever on them. This kind of advantage is not present in other research methods.

Sequel to the immediate foregoing is the issue of replicability that is very difficult with other research methods because of the changing nature of humans who constitute the major sources of data in other research methods. This is equally one of the major constraints of social science research generally. With the data collection process highly systematized and coding procedure clearly stated, other content analysts will easily replicate the work earlier done by another content analyst. By that content analysis provides a sound basis for scientific study of social issues.

In the researches involving experiments, surveys, field study and even the use of available data, researchers often engage in a combination of methods to take care of limitation in these individual data collection techniques. This is technically referred to as triangulation (Singleton, 1993; Frankfort-Nachmias and Nachmias 1996). This is obviously an area of the strength of content analysis as it is able to handle majority of the limitations of other data collection techniques. For example, the limitation imposed on a respondent to items on structured questionnaire necessitates a supplement method of in-depth interview or focus group discussion (FGD); the modification of study samples' behaviour in field study especially participant observation may necessitate a combination of survey through interviews. In effect, most of the issues surrounding triangulation are not applicable when content analysis is done. This is simply so, because of the information is already in print and can no longer be modified.

Also, part of its usefulness is the handling of some ethical issues in social research. Among the issues of ethical concern is the informed consent. The researcher conforming to ethical standards must obtain the explicit or implicit informed consent of other subject to take part in an investigation (Singleton, 1993; Babbie, 1986). The ethical issue of informed consent and that of avoidance of deception make the data collection process in field research especially participant observation a near impossibility if the researcher must gather reliable data. Related to that is the ethical concern about the safety of the researcher in the study of criminals where he or she pretends to be a member in order to gather data about their operations. All these ethical concerns are effectively handled by content analysis as publications where data are to be gathered for analysis neither requires the consent of those who authored them in, for instance, newspapers before the materials are used as they are already documents in the public domain, nor exposes the researcher to any form of danger in the process of interacting with the documents.

As useful as content analysis is to social science research, its major shortcoming is its applicability to the Nigerian environment especially as it relates to the public sector organizations. Most government establishments in Nigeria do not release documents for the purpose of research. Even their various Departments of Planning, Research and Statistics that are supposed to be friendly to researchers who are external to their Ministries, Departments and Agencies are guilty of the same problem. Documents are tagged 'classified' while others are tagged "secret". This is especially problematic to research community when undergoing policy evaluation or in assessment research. The passing into law of the Freedom of Information Bill has not alleviated the challenges of researchers wanting to do a content analysis in that regard.

Conclusion

The paper has so far taken a theoretical view of content analysis as a methodological tool in social research. It has equally explored the cursory conceptualization of content analysis with a view to elucidating its status and distinct characteristics. This is done without prejudice to the

methodological characteristic it shares with other research designs which establishes content analysis as one of the methods in social science research. Its strengths in contrast to other research methods notably survey, experiment, field study and use of available data were succinctly considered with a view to underscoring its value in the social science research enterprise.

The limitation as to the 'hoarding' of official documents in Nigeria can be said to be limitation of the research environment rather than that of the methodological tool itself. Where documents are not made available to external researchers for security reasons, the same documents can be content analysed by the relevant departments in the MDAs established for the purpose of research.

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