

2. Research Methods in Mass Communication

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2.1 Introduction:

Just as the human body needs nutritious food for its healthy existence and healthy and brilliant functioning, so does the mind need knowledge. Knowledge is therefore, considered as the food of mind, thus Plato considered it as justified true belief. Knowledge can be defined as a familiarity awareness or understanding of someone or something such as facts, information, descriptions or skills, which is acquired through experiences or education by perceiving, discovering or learning. In research there are many ways of knowing. They are: authority, tenacity, and scientific method. However, research can be defined as a systematic and logical pursuit made by human beings to find out knowledge from any “phenomenon or relationship”.

However, in the field of mass communication, there are basically two research methods: the survey research method and the content analysis research method. However, others include observation, case studies, experimental, qualitative and quantitative, etc.

2.2 Survey Research Method:

Surveys are often used to collect information from large groups of people using scales that have been tested for validity and reliability. A researcher might be curious about how a supervisor sharing personal information with his or her subordinate affects way the subordinate perceives his or her supervisor. Survey research is a quantitative and qualitative method with two important characteristics. First, the variables of interest are measured using self-reports. In essence, survey researchers ask their participants (who are often called respondents in survey research) to report directly on their own thoughts, feelings, and behaviours. Second, considerable attention is paid to the issue of sampling.

The data is usually obtained through the use of standardized procedures to ensure that each respondent can answer the questions at a level playing field to avoid biased opinions that could influence the outcome of the research or study. The process involves asking people for information through a questionnaire, which can be either online or offline. However, with the arrival of new technologies, it is common to distribute those using digital media such as social networks, email, QR codes, or URLs.

The essence of survey method can be explained as “questioning individuals on a topic or topics and then describing their responses” (Jackson, 2011, p.17). In business studies survey method of primary data collection is used in order to test concepts, reflect attitude of people, establish the level of customer satisfaction, and conduct segmentation research and a set of other purposes.

2.3 Content Analysis Research Method:

Malik (n.d) avers that content analysis is used to count the number of occurrences of a phenomenon within a source of media (e.g., books, magazines, commercials, movies, etc.). Content analysis is a research tool used to determine the presence of certain words or concepts within texts or sets of texts. Researchers quantify and analyze the presence, meanings and relationships of such words and concepts, then make inferences about the messages within the texts, the writer(s), the audience, and even the culture and time of which these are a part. Texts can be defined broadly as books, book chapters, essays, interviews, discussions, newspaper headlines and articles, historical documents, speeches, conversations, advertising, theater, informal conversation, or really any occurrence of communicative language. Content analysis is a research method used to identify patterns in recorded communication. To conduct content analysis, you systematically collect data from a set of texts, which can be written, oral, or visual:

- Books, newspapers and magazines
- Speeches and interviews
- Web content and social media posts
- Photographs and films

Content analysis can be both qualitative (focused on counting and measuring) and quantitative (focused on interpreting and understanding). In both types, you categorize or “code” words, themes, and concepts within the texts and then analyze the results.

Advantages of Content Analysis:

- Directly examines communication using text.
- Allows for both qualitative and quantitative analysis.
- Provides valuable historical and cultural insights over time.
- Allows a closeness to data.
- Coded form of the text can be statistically analyzed.

Disadvantages of Content Analysis:

- Can be extremely time consuming.
- Is subject to increased error, particularly when relational analysis is used to attain a higher level of interpretation.
- Is often devoid of theoretical base or attempts to liberally to draw meaningful inferences about the relationships and impacts implied in a study.

2.3.1 Case Study Research:

A case study is a research approach that is used to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context. It is an established research design that is used extensively in a wide variety of disciplines, particularly in the social sciences. A case study can be defined in a variety of ways, the central tenet being the need to explore an event or phenomenon in depth and in its natural context.

It is for this reason sometimes referred to as a "naturalistic" design; this is in contrast to an "experimental" design (such as a randomized controlled trial) in which the investigator seeks to exert control over and manipulate the variable(s) of interest (Crowe, Cresswell, Huby, Avery and Sheikh, 2011).

Case study research has grown in reputation as an effective methodology to investigate and understand complex issues in real world settings. Case study designs have been used across a number of disciplines, particularly the social sciences, education, business, law, and health, to address a wide range of research questions. Consequently, over the last 40 years, through the application of a variety of methodological approaches, case study research has undergone substantial development (Harrison, Birks, Franklin and Mills, 2017). As a result, while case study research has evolved to be a pragmatic, flexible research approach, the variation in definition, application, validity, and purposefulness can create a confusing platform for its use (Anthony and Jack, 2009).

2.3.2 Observation Research:

Observation, as the name implies, is a way of collecting data through observing. Observation data collection method is classified as a participatory study, because the researcher has to immerse herself in the setting where her respondents are, while taking notes and/or recording.

Observational research is a social research technique that involves the direct observation of phenomena in their natural setting. This differentiates it from experimental research in which a quasi-artificial environment is created to control for spurious factors, and where at least one of the variables is manipulated as part of the experiment.

Observation as a data collection method can be structured or unstructured. In structured or systematic observation, data collection is conducted using specific variables and according to a pre-defined schedule. Unstructured observation, on the other hand, is conducted in an open and free manner in a sense that there would be no pre-determined variables or objectives.

Advantages of observation data collection method include direct access to research phenomena, high levels of flexibility in terms of application and generating a permanent record of phenomena to be referred to later. At the same time, observation method is disadvantaged with longer time requirements, high levels of observer bias, and impact of observer on primary data, in a way that presence of observer may influence the behaviour of sample group elements.

2.3.3 Experimental Research:

Experimental research is the most familiar type of research design for individuals in the physical sciences and a host of other fields. This is mainly because experimental research is a classical scientific experiment, similar to those performed in high school science classes. Imagine taking 2 samples of the same plant and exposing one of them to sunlight, while the other is kept away from sunlight. Let the plant exposed to sunlight be called sample A, while the latter is called sample B. If after the duration of the research, we find out that sample A grows and sample B dies, even though they are both regularly watered and given the same treatment. Therefore, we can conclude that sunlight will aid growth in all similar plants.

Experimental research is a study that strictly adheres to a scientific research design. It includes a hypothesis, a variable that can be manipulated by the researcher, and variables that can be measured, calculated and compared.

Most importantly, experimental research is completed in a controlled environment. The researcher collects data and results will either support or reject the hypothesis. This method of research is referred to a hypothesis testing or a deductive research method (Babbie 1998).

Experimental research involves the differentiation of two basic conditions: exposure and non-exposure to the treatment condition of the independent variable (Tanner, 2018).

2.4 Population, Sample and Other Terminologies Used in Research:

Population: In research terminology the population can be explained as a comprehensive group of individuals, institutions, objects and so forth with have a common characteristics that are the interest of a researcher. Nwagbara (2011, p.16) sees population as “the aggregate or totality of objects (both animate and inanimate) relevant to a specific area of investigation”.

Sample: Sample is the small part or portion of the population that is subjected to detail and critical/varied examination (Akpakwu and Adikwu, 2013, p.80). A population commonly contains too many individuals to study conveniently, so an investigation is often restricted to one or more samples drawn from it.

Sampling and Sampling Techniques: The process of selection or the drawing of the accurate representation of a unit, group, or sample from a population of interest is called as sampling. Thus, Orga (2009) opined that sampling “is the process of selecting a group of objects for study for the purpose of making inference about the whole population from which the group is drawn” (p.11).

Sampling can be done through various sampling techniques in accordance with the nature of the sample as well as the subject matter of the study. It is the Sampling procedure, which will decide the accurate representation of the sample selected for the study as well as the relevance of generalization made from the research.

Agbo and Ugwu (2015, p.20) and Eze and Agbo (2005, p.8) listed the following as reasons for sampling:

- To avoid bias in the selection
- Reduce cost of research works.
- Spread the process of research.
- Collect representative specimen of recorded observations where the whole population cannot be easily reached.

Hypotheses: A hypothesis (plural – hypotheses) is a specific statement of prediction. It describes in concrete (rather than theoretical) terms what you expect will happen in your study. Not all studies have hypotheses. The six most common forms of hypotheses are:

- a. Simple Hypothesis
- b. Complex Hypothesis
- c. Empirical Hypothesis
- d. Null Hypothesis (Denoted by "HO")
- e. Alternative Hypothesis (Denoted by "H1")
- f. Logical Hypothesis
- g. Statistical Hypothesis

Theory: A theory consists of a set of assumptions (or hypotheses), and conclusions derived from those assumptions. Theories are logical exercises: if the assumptions hold, then the results follow.

Theoretical Framework: A theoretical framework is used to limit the scope of the relevant data by focusing on specific variables and defining the specific viewpoint [framework] that the researcher will take in analyzing and interpreting the data to be gathered.

Error: Error is the collective noun for any departure of the result from the "true" value.

Abstract: A clear and concise summary that communicates the essential information about the study. In research journals, it is usually located at the beginning of an article.

Operational Definition: Refers to the way in which the researcher defines the variables under investigation. Operational definition are stated in such way by the investigator specifying how the study variables will be measured in the actual research situation.

Assumption: Basic principle that is being true on the basis of logic or reason, without proof or verification.

Variables: A variable is a quantity of something which varies and you are interested in. According to Okoro and Liman (2009, p.43) “variables refer to the characteristics whereby the members of a group or set differ from one another”. There are two types of variables: the dependent variable and independent variable.

Validity: Validity refers to an accuracy of a measure. A measurement is valid when it measures what the researchers supposed to measure (Gregory, 2007). For example, IQ tests are supposed to measure intelligence and depression tests are supposed to measure depression level or symptoms of respondents. Normally, the inferences drawn from a valid test are appropriate, meaningful, and useful.

Reliability: Reliability is important because it enables researchers to have some confidence that the measure, they taken are close to the true measure. Reliability is synonym of repeatability and consistency. The degree of reliability can decide whether the scores or data that researchers obtained can be relied to measure a variable or construct (Essays, 2018).

Construct: In the context of survey research, a construct is the abstract idea, underlying theme, or subject matter that one wishes to measure using survey questions. Constructs are broad concepts or topics for a study.

Concepts: This refers to a mental idea of a phenomenon. Concepts are words or terms that symbolize some aspects of reality. E.g., Love, pain. A concept is "an abstraction based on characteristics of perceived reality."

Fact: In science, an observation that has been repeatedly confirmed and for all practical purposes is accepted as "true." Truth in science, however, is never final and what is accepted as a fact today may be modified or even discarded tomorrow (NCSE, 2016).

Conceptual Framework: This is interrelated concepts or abstractions that are assembled together in some rational scheme by virtue of their relevance to a common theme. It is also referred to as theoretical framework.

Measurement: Measurement is the process of observing and recording the observations that are collected as part of a research effort.

2.5 Data Collection, Presentation and Analysis:

Data can be defined as a systematic record of a particular quantity. It is the different values of that quantity represented together in a set. Data may be qualitative or quantitative. Once you know the difference between them, you can know how to use them.

Data analysis is the process of developing answers to questions through the examination and interpretation of data. The basic steps in the analytic process consist of identifying issues, determining the availability of suitable data, deciding on which methods are appropriate for answering the questions of interest, applying the methods and evaluating, summarizing and communicating the results.

Coding is a process in which quantitative or qualitative data is categorized to help analysis. This can be used by geographers to help analyse questionnaires results, newspaper articles or interview transcripts. The coding process involves searching the text for similar themes, ideas, concepts and key words and then marking those passages with a code colour.

Test of Hypothesis and Result

The Chi-square formula is:

$$X^2 = \sum \frac{(O-E)^2}{E}$$

Where X^2 = calculated chi-square value

\sum = summation sign
O = Observed frequency
E = Expected frequency

NB: the level of significance = 5% or 0.05 and degree of freedom (d.f) = 1.

The expected frequency (E) is calculated by adding all the observed frequency (O) and dividing by the number of observations.

Decision Rule: If the calculated Chi-square value (χ^2) is greater than or equal to the table at 0.05 level of significance, the alternated hypothesis (H1) is accepted, but if the calculated Chi-square value is less than the table value, the null hypothesis (H0) is accepted.

2.6 Conclusion:

The centrality of communication in modern life makes knowledge about communication processes crucially important. Research, especially in the field of communication, is conducted to help people understand complex and challenging communication phenomena as well as the mundane and apparently simple everyday routines like ordinary conversation. Many areas of communication research demonstrate the complex, multifaceted nature of communication. Systematic and rigorous research means that researchers study worthwhile topics, ask relevant questions, build on previous theory and research, design and conduct careful research, analyze data appropriately, and discuss the significance of the findings. Systematic communication inquiry adds to the body of communication knowledge by providing meaningful descriptions and trustworthy explanations about complex communication phenomena. Research about communication is thus needed for two reasons: to extend the growth of the Communication discipline and to apply what we know.

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