Strengths and weaknesses of qualitative research in social science studies

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ABSTRACT

This study aimed at examining the strengths and weaknesses of qualitative research in social science studies. The study conducted a systematic literature review of 22 published journal articles to achieve the objective. The review revealed that the qualitative approach was flexible, offered in-depth and detailed information, allowed the use of multiple data collection methods and minimised the chance of having missing data. Moreover, the approach was found to integrate human touch, was cost-effective and was indeed the only option in some cases of research problems. On the other hand, the approach is prone to researchers’ subjectivity, involves complex data analysis, makes anonymity difficult and has limited scope in its generalizability. Similarly, the approach makes replication of findings challenging, and the findings may be influenced by the researcher’s bias. It is concluded, therefore, that researchers should take necessary precautions when using the approach to ensure that weaknesses of qualitative research do not bar them from achieving research objectives.

INTRODUCTION

In undertaking a scientific study, one begins with the dilemma of which research approach to employ. Mehrad and Zanganah (2019) argue that the choice is usually between qualitative and quantitative research approaches. The two approaches, founded on constructivist and positivist schools of thought, respectively, have invited a never-ending debate (Kang & Evans, 2021).

Constructivists underscore the inductive meaning-making process that results in a subjective approach to theory building and research problem solving, and positivists emphasise theory testing, which, according to Coşkun (2020), provides an objective approach to problem-solving. Both approaches, however, have been used in different settings for varied reasons (Dawadi et al., 2021). A qualitative approach, for instance, is often preferred in social sciences studies as it is believed to suit the achievement of objectives in social sciences (Mohajan, 2018).

The quantitative approach, conversely, is preferred in most natural sciences due to its ability to hypothesise objectively and reliably. However, qualitative research has been subject to more criticism than quantitative research (Borgstede & Scholz, 2021). Opponents of the qualitative approach, for example, are concerned about its appropriateness in yielding expected results (Coşkun, 2020; Noble & Smith, 2015). The criticism is usually grounded on the subjective nature of the process involving human interpretation, which may limit the generalizability of the conclusions. The proponents, on the other hand, underscore its ability to approach a problem with an open mind without seeking to confirm preconceived beliefs, assumptions, values or theories.

The quantitative approach, on the other extreme, is questioned for approaching a problem with preconceived assumptions, which as a result, tend to limit its ability to allow meaning-making that comes with unexpected experiences. In view of the two sides of the debate, evaluating the strengths and limitations of each research approach is worth undertaking (Hammargerg et al., 2016). It is this understanding that helps a researcher to mitigate the effects of the flaws of the selected approach.

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This paper conducts a systematic literature review in the quest to identify the weaknesses and strengths of qualitative research with reference to 22 published journal articles. The choice of the qualitative approach is based on the fact that most social sciences employ the same as most preferred approach.

**Literature Review**

**Theoretical and Conceptual Background**

**What is qualitative research?**

Qualitative research seeks to explore a social phenomenon, reveal feelings associated with the problem and understand the subjective experiences of people associated with a research problem. The approach focuses on understanding how people make meaning of their social realities. Although qualitative research has existed for centuries, it was not until between 1925 and 1945 that it was shaped into its current form (Bailey, 2015). The approach has been popular in social science studies due to its ability to explain social realities (Mohajan, 2018). Kumar (2011) opines that qualitative research aims at understanding, explaining, exploring, discovering and clarifying situations, feelings, perceptions, attitudes, values, beliefs and experiences of a particular group of people.

**Paradigms in the qualitative approach**

In simple terms, a research paradigm is the lens through which the researcher views the world. Tracy (2013) defines paradigms as preferred ways of understanding reality, building knowledge and gathering information about the world. Different research approaches have different paradigms to suit their specific needs. Paradigms provide guidance on how to solve a particular research problem. Qualitative research, according to Punch (2013), contains three major research paradigms which are positivist, interpretive and critical paradigms.

**Positivist paradigm**

The Positivist paradigm begins with the assumption that knowledge and reality should be free from human conception and construction. The paradigm, in this regard, relies on established facts or evidence as a means of approaching a research problem. Through positivism, a researcher is expected to verify or contradict what is already known in the body of knowledge. According to Park, Konge and Artino (2020), positivism relies on the hypothetico-deductive method to verify a priori hypotheses and predict the future. Positivists strive to seek to establish patterns and trends as a means of understanding the social world, as is the case with the natural world (Rehman & Alharthi, 2016). Although the paradigm has been used in qualitative studies, it is more popular in quantitative studies. The popularity of the paradigm is based on the fact that quantitative studies are more interested in the objectivity of the facts as separate entities from the researchers’ values and beliefs.

**Interpretive paradigm**

The interpretative paradigm is concerned with how research sees the world from a subjective point of view by interpreting meanings from data collected. A researcher interprets what a respondent experiences in a particular social phenomenon. Ryan (2018) opines that interpretivism believe that truth and knowledge are subjective, as well as culturally and historically situated, based on people’s experiences and their understanding of them. Interpretivism holds that a researcher cannot be completely separated from their own values and beliefs while undertaking a study (Kivunja & Kuyuni, 2017). This means human beings can have an influence on what is considered to be the truth or reality.

**Critical Paradigm**

The critical paradigm was initially presented by Horkheimer, Adorno and Marcuse from Frankfurt School. Horkheimer (1982) defined a critical paradigm as one that seeks to liberate people who have been enslaved by different circumstances. The paradigm finds its roots in Marxist views. The critical paradigm sees the main role of research as fighting against inequality and helping the minority in society through scientific investigation. Social science researchers may seek to address known societal problems relating to existing inequalities (Kivunja & Kuyuni, 2017). In view of its role in bringing about societal changes, the paradigm is also referred to as the transformative paradigm.

**Data collection methods in a qualitative approach**

In order to have relevant data for drawing conclusions, qualitative research tends to use various data collection methods. These methods include interviews, focus group discussions, observations, open-ended questionnaires and documentary reviews which are discussed here under.

**Interviews**

The interview is the most common data collection method in qualitative research (Barrett & Twycross, 2018). It involves the collection of data through conversations between a researcher (interviewer) and his/her respondent (interviewee). Interviews may be conducted face-to-face or through technological means such as telephones or video conferencing. Usually, a researcher sets up pre-determined questions that guide what to ask during interviews. The list of questions is termed an interview guide. Interviews may either be structured, semi-structured or unstructured (Hammargerg et al., 2016). In structured interviews, each respondent is asked the same
questions without any additional questions out of the list, while in unstructured interviews, a researcher may have leading questions and ask extra questions to allow the collection of more data from the respondents. In unstructured interviews, researchers do not prepare any questions in advance (Roopa & Rani, 2012). Subjects are asked questions that a researcher finds appropriate at a particular time and based on prevailing circumstances. Effective interviews require researchers to have relevant skills to enable him/her achieve intended objectives. This method normally leads to a collection of bulk data that needs the researcher to apply appropriate data analysis skills to avoid biased interpretation and presentation of data.

**Focus group discussion**

In focus groups, a researcher creates one or more manageable groups that are used to collect data through dialogues. The researcher tends to chair the discussions within a group and, therefore, controls what has to be discussed and who has to speak (Mwita, 2022). The method requires effective facilitation skills to ensure active participation among group members and control respondents who tend to dominate discussions (Thomas, 2014). Like in interviews, this method may produce a lot of data, and some may be irrelevant to the study; therefore, researchers need to be careful about what to use and what not to use for the study. The method also tends to use a considerable lot of time, especially when groups are large. For effectiveness Barrett and Twycross (2018) recommend each group to have a minimum of 6 and a maximum of 12 participants.

**Observation**

Observation is a method that is used to collect data by watching the behaviour and characteristics of subjects in their natural setting. The researcher uses his/her sense organs to observe events, people, things or particular prevailing circumstances under investigation (Smit & Onwuegbuzie, 2018). To limit the amount of data to be collected using this method, researchers are advised to have an observation checklist that contains a list of things or themes that a researcher is interested in collecting data about them (Mwita, 2022). Generally, observation can be categorised into participatory and non-participatory observation (Busetto et al., 2020). In participatory observation, a researcher joins the subjects and becomes part of what they do as he continues to collect data. On the other hand, non-participatory observation involves observation of the subjects without direct involvement in their day-to-day dealings or activities.

**Open-ended questionnaires**

A questionnaire is a document containing a list of statements or questions prepared for collecting data from the targeted respondents. The questionnaire may either be close-ended or open-ended. Close-ended contains questions with proposed options that a respondent has to choose the correct option(s) that corresponds to a particular question (Roopa & Rani, 2012). On the other hand, open-ended questionnaires, which are the focus of qualitative research, contain questions that allow a respondent to write his/her response without being limited with several multiple choices (Allen, 2017). Open-ended questionnaires offer flexibility on the side of the respondents to express feelings and opinions on the particular question asked or a statement. Like any other qualitative method of data collection, this also may lead to a collection of a large amount of data. Questionnaires may also be administered online through emails or special computer applications that allow respondents to offer information using digital devices.

**Documentary review**

Data may also be collected from different written materials. Qualitative research may seek relevant information from newspapers, organisational reports, books of accounts and other relevant written sources (Dalglish et al., 2020). Reviewing and collecting data from these sources is known as documentary review or document analysis. To make this process effective, a researcher is advised to prepare a checklist that shows what to review and which documentary sources to access for the same. This will help to limit the scope of review, save time and therefore increases chances of accuracy. Although this method has been underused yet, it is important in qualitative research. Document analysis may help to collect data from people who can no longer provide information in person due to different reasons, including death but had their information documented. Moreover, dangerous situations may restrict researchers to collect data directly from subjects who may risk the lives of researchers, such as terrorists (Morgan, 2022).

**Methodology**

This study involved a systematic literature review to obtain relevant data. A total of 22 published journal articles were included in the review. The list of articles is attached to this paper as an appendix. Criteria used to select an article for review were the year of publication, methodology used in the article, and type of journal that published the article. Articles included in the review were those published between 2019 and 2022 in four purposefully selected journals, namely Social Science Research, Journal of Humanities and Applied Social Science, Journal of Applied Social Science and Social Studies of Science. A total of 87 articles were downloaded from the selected journals.

Sixty-five (65) articles were excluded from review resulting in 22 journal articles that were used. Out of 22 journals reviewed, 11 articles used qualitative research, and the other 11 articles made use of quantitative research. The decision to include quantitative research journals was made to help the comparison and hence identify what qualitative research can do that quantitative research cannot and vice versa. All 22 reviewed articles are attached as an appendix to this paper.
Findings and discussion

This part presents the major findings from the literature to highlight on strengths and weaknesses of qualitative research.

Strengths of qualitative research

Flexibility

Out of 11 qualitative articles journals reviewed, 10 used either semi-structured interviews, open-ended questionnaires or both, which provided their subjects with an opportunity to offer more explanation and perhaps clarifications since they were not confined to a specific limit on what to respond to. In view of the findings, it can be derived that the qualitative approach offers a considerable amount of flexibility in undertaking research. It allows the researcher to observe and identify other issues that were not initially thought of or included in the inception stage of the study. In illustrating the flexibility of qualitative studies, Kim et al. (2017) use an example of how research questions change as the study continues. In their study, they found out that the approach allows more data to be collected, which, in some cases, may affect the quality of the findings.

The positivist argument is that research should be objective and, therefore, the limited scope is expected; however, researchers may find more insights that seem to be relevant to a particular study and therefore opt for flexibility. The same view is held by interpretivism, which allows researchers to provide interpretations from collected data, and interpretations may vary from one person to another. In Filomeno (2019) it shows that during data collection, some questions were modified to be more culturally appropriate for the respondents (immigrants) since they were not comfortable with how they were framed in the first place. This can only happen with qualitative research, as Daniel (2016) notes that quantitative research has linear and non-flexibility nature that demands researchers to follow a particular order.

In-depth and detailed information

Out of 11 qualitative research articles reviewed, eight indicated that although some data had to be discarded after data saturation was reached, the data collected were sufficient to construct relevant conclusions. It was established that the qualitative approach allows researchers to collect more data and information hence being in a better position to understand the details of the research problem. Qualitative methods such as interviews, observation and open-ended questionnaires give a researcher an opportunity to probe and seek more detailed information. As a result, a researcher may end up with detailed information for his or her study. This may help result studies to achieve data adequacy and, therefore, effectively answer research questions.

The use of multiple data collection tools

In the review, 8 of 11 qualitative research articles used more than one data collection method and all 11 qualitative research articles used only one data collection method. Involving multiple methods makes qualitative research data more credible since the strengths of one research tool supplement the weaknesses of the other. Qualitative research can easily involve numerous data collection methods and therefore allowing triangulation of research tools and data. A researcher may opt to use one or a combination of tools such as interviews, observations, focus group discussions, documentary reviews and open-ended questionnaires. The use of multiple tools may allow respondents to choose a particular tool that they are comfortable with.

Integration of human touch

In qualitative research, researchers interact with the respondents. This gives a researcher an opportunity to understand the actual feelings and experiences of the respondents. The magnitude of the research problem can be easily understood through narrations from respondents. Anger, happiness, readiness, attitudes and perceptions of the respondents can easily be studied and understood through qualitative means of data collection. In the review, it was found that interaction between researchers and their subjects was one of the critical factors for understanding how their subjects felt about various issues.

Eberle and Elberle (2019), for instance, focused on studying the experience of a person who suffered from a neurological event. Through their interactions during data collection, it was easier for the researchers to adequately explain how the respondent felt before, during and after sickness. On the other hand, another reviewed quantitative article by Budig et al. (2021) confessed that their study could not measure or explain sufficiently the behaviour of their respondents since the quantitative approach could not manage to do that.

Minimising chances of missing data

In quantitative research, respondents tend to ignore some questions that seem to be unclear, especially when a close-ended questionnaire is used. With qualitative research, a researcher collects data until what is considered to be sufficient is attained. In case a respondent does not understand a particular question, a researcher has an opportunity to make clarifications of unclear questions or asks the question in a different way. In the review, none of the qualitative research articles reported any missing data. On the other hand, six quantitative research articles reported strategies for handling missing data, and seven offered justifications for using a sample size lower than expected due to non-response. Qualitative research does not encounter this problem regularly because of the small sample size used, and communication in qualitative research is two-way; therefore, effective communication takes place easily.

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Cost-effectiveness

As previously mentioned, small samples are preferred and used in qualitative research allows research to be conducted with a reduced number of financial resources as compared to quantitative research that requires larger sample sizes. In view of this, research problems can be solved with a minimum amount of money.

Some of the studies in the reviewed qualitative research articles used small samples of 2 respondents to achieve their research objectives. For instance, the study by Eberle and Elberle (2019) used a sample size of two (2) respondents, and Bunuyenah (2021) used four (4) respondents. This can help researchers to use minimum resources to solve research problems. When a small number of resources are used in conducting studies, it helps to make research projects affordable and therefore increases the chances of solving research problems even for people whose access to financial resources is limited.

Overcoming the limitation of quantitative research

While qualitative research is highly criticised, and some criticisms are discussed in this paper, it helps to answer research questions that cannot be answered quantitatively (Busetto et al., 2020). Understanding exactly how people feel and experience particular phenomena can only be done through the narration of their own stories, which cannot be quantified. This makes qualitative research an important approach to revealing the feelings, perceptions, attitudes, values and beliefs of people.

Good examples in the reviewed qualitative articles are Bunuyenah (2021), which aimed at understanding the psychological state of single mothers and Ndi et al. (2021), which aimed at understanding the experiences and perceptions of sampled households members during Covid-19 lockdown. These studies could only be done qualitatively to achieve the intended research objectives.

Weaknesses of qualitative research

Subjectivity

In the review, the majority of qualitative articles involved the identification of themes which were subject to researchers’ interpretations, unlike quantitative articles whose research variables and sub-variables were defined prior to data collection. It should be noted that in some situations, people may provide different interpretations of the same thing based on varied reasons, including how they feel at that moment, their social and cultural background and other external factors.

On the basis of that, the qualitative approach is generally interpretive. Researchers have the task of interpreting what they hear, see, taste, touch or smell. This brings an important question on whether individuals have the same interpretation of what they hear, see, taste, touch and smell. What one interprets as good or bad is not necessarily interpreted the same way by another person. This makes qualitative research subjective.

Generalizability

Qualitative studies tend to use small samples. In the reviewed qualitative articles, samples ranged from 2 to 138, with an average of 38 respondents for each article. On the other hand, quantitative articles had samples ranging from 49 to 12,686 and an average of 2,488 respondents for each study. The debate on whether the findings of qualitative studies are appropriate for making generalisations has existed for decades. The issue of small sample sizes used in qualitative research has raised some doubts. Moreover, qualitative researchers tend to include small samples as one of the limitations of their studies and admit that this can make generalizability questionable (Vasileiou et al., 2018).

Five (5) of the qualitative research articles in this study admitted that their samples could not be sufficient for generalisation. As a result, findings were considered specific for the group of people where a study was conducted with limited chance of using the findings to generalise to the rest of the population not included in the study.

Difficulty in enhancing anonymity

One of the ethical research principles is anonymity. Informants should feel secure when providing data, and therefore their identities have to be kept confidential. The principle of anonymity serves different purposes, which include making respondents free to provide data with the assurance that no one knows who said what. As a result, protects the respondents from being victimised in case data are sensitive. In qualitative research, this may be difficult since, in collecting data, a researcher gets into direct contact with respondents. One may argue that respondents’ information and identities are always protected, yet respondents may not be comfortable offering certain information to the researcher.

In quantitative research, respondents may provide information in the absence of the researcher while their identities are unknown. This always makes them feel secure and comfortable in providing research data.

Complex data collection and analysis procedures

Qualitative research may make the data collection process difficult and less manageable. This could be due to the fact that qualitative data collection methods such as focus group discussion, in-depth interviews, open-ended questionnaires and documentary reviews
tend to leave researchers with bulk data. Analysis of data may be difficult and complex since the researcher has to examine collected data and retain only the relevant information.

Hern et al. (2019) are one of the reviewed qualitative research articles that showed the amount of data collected. The study explained that researchers ended up with 219 pages of qualitative written data comprising more than 82,000 words. This made data analysis tedious and time-consuming.

**Difficulty in replicating findings**

One of the important aspects of research is the ability of the research findings to produce similar results under the same methods and under similar circumstances. Replication in a qualitative study is indeed challenging since people have varied feelings, experiences and backgrounds, and therefore producing similar results may not be practical in some cases. Moreover, qualitative researchers tend to opt for different data collection methods based on different circumstances, unlike quantitative researchers, that tend to opt for close-ended questionnaires in most cases. As noted earlier, 8 out of 11 qualitative research articles used more than one data collection method. Moreover, in similar studies, one study may use one tool and the other use another just to suit the needs of their subjects. Variation in methods makes replication difficult since different methods may lead to varied findings and conclusions.

**Data may be influenced by the researcher’s bias**

All reviewed qualitative research articles indicated that researchers had direct contact with their subjects during data collection. Direct involvement of a researcher with the respondents may consciously or subconsciously affect collected data. Since researchers are human beings, they may be tempted to report what did not actually happen and exaggerate or understate the actual situation found in the field. A researcher may also be sympathetic after hearing a response from the respondents, something which may also influence how he or she reports the findings.

The respondents may also decide to deliberately create an environment that may force a researcher to record information that is not exact compared to the actual situation through voice tone and facial expression. Other factors such as gender, nationality, race, faith, and accent of a respondent are among the factors that may influence a researcher to become biased during data collection and reporting. Conversely, in most quantitative studies where data collection is done by using close-ended questions, respondents are not given an opportunity to express themselves, and physical contact between a researcher and his or her respondent may be avoided.

**Conclusion**

The study focused on evaluating the relevance of qualitative research in social science studies. The purpose was to identify the strengths and weaknesses of the same. A systematic literature review has revealed different strengths and weaknesses. One may use the strengths of the approach to a specific study as justifications, but the question remains whether one has to use its limitations as justification for not using it. This question raises the argument that no research approach is short of flaws. In view of this, one has to seek ways of ensuring that weaknesses of the qualitative approach do not limit a study from achieving its objectives.

The fact that there are studies that cannot sufficiently be done by using another approach or protocol other than the qualitative one makes this approach important in solving a particular research problem. There is an argument from various researchers that in order to avoid the weaknesses of each approach, one may opt to use a mixed approach that merges both qualitative and quantitative research. While the argument is logical and valid, nevertheless, some research problems may only be approached qualitatively. Attempting to use a quantitative or mixed approach may negatively affect the findings and conclusions that the study draws.

This study, however, is not without limitations. The scope of the study is based only on four research journals making use of 22 research articles. Future researchers may opt to increase the number of articles to enlarge the scope of their studies and see the possibility of using primary data as well.

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Appendix: List of reviewed journal articles