

Critique of Qualitative Research Methods and Quantitative Research Methods in Linguistics

1.0 Introduction

Linguistic studies, broadly speaking, refers to the systematic study of language such as its structure, use, and cognitive process. Practitioners and researchers often investigate how languages are formed, evolve and function in contemporary societies, especially regarding how it is processed and used in situations like media texts (Li and Zhao, 2021). In the future, I would like to explore the topics of sociolinguistics, particularly in exploring how one's social identity may influence their language usage. For example, how their social status and cultural symbols can influence their language choice, and so on. According to Craft et al. (2020), negative stereotypes or perceived discrimination linked to specific social identities can impede language learning by inducing anxiety or discouraging participation. Social identity is integral to the development of language communities, where people share common linguistic features shaped by their affiliations to particular groups.

Basically, there are two research methodologies, naming qualitative research and quantitative research. Quantitative research methodology guides researchers to collect numeric data while qualitative research methodology is to explore based on qualitative research methodology (Litosseliti, 2024). Although both approaches prioritize gaining knowledge, quantitative research focuses on numerical data and objectivity, addressing questions such as when or where events occur. In contrast, qualitative research delves into subjective aspects that cannot be quantified, such as the varied ways individuals experience grief (Litosseliti, 2024). In this paper, I will make a critique of the two research methodologies, including defining them and addressing the strengths and limitations. Based on the critical assessments, I will advocate for a more suitable methodology for the future research of personal interests.

2.0 Overview of Qualitative Research Methods

Qualitative research is described as "the study of the nature of phenomena," focusing on aspects like their quality, various manifestations, the contexts in which they arise, and the perspectives through which they can be viewed, but excluding factors such as their frequency, range, and position within an objective cause-and-effect sequence (McNamara and Plonsky, 2020). A more practical way to understand it is that qualitative research typically involves data in the form of words, not numbers (Nassaji, 2020). Given its flexible, open, and context-sensitive nature, the processes of data collection and analysis in qualitative research are often interwoven, rather than following a strict, sequential order as in quantitative research. As Nassaji (2020) states, sampling, data collection,

analysis, and interpretation are connected in a qualitative research process, rather than a linear step-by-step method. This approach allows researchers to make informed choices about the methods they use, how they apply them, and the units they focus on. Qualitative methods are especially effective for examining intricate and multi-layered interventions or systems. They allow for investigation into more than just what is effective, focusing instead on understanding what works for specific groups, under what circumstances, in what ways, and for what reasons. These methods prioritize enhancing interventions over merely confirming their success (Litosseliti, 2024). In linguistics research contexts, qualitative research can provide insight into the less tangible aspects of treatment.

Qualitative research excels at uncovering detailed insights into the behaviors, values, opinions, and social dynamics of specific populations. It focuses on the "human" aspects of an issue, such as emotions, beliefs, relationships, and individual perspectives, rather than relying on numerical data (Oranga and Matere, 2023). Moreover, qualitative methods are particularly effective at capturing abstract factors like socioeconomic status, cultural norms, ethnicity, gender roles, and religious influences. Similarly, Tracy (2024) describe qualitative research as an approach that delves deeply into real-world challenges by exploring participants' experiences, behaviors, and perceptions. It seeks to answer questions about the "hows" and "whys," as opposed to "how much" or "how many." Central to this methodology is the use of open-ended questions, which allow participants to articulate their thoughts, feelings, and experiences in their own words. Unlike quantitative methods, which may struggle to measure abstract phenomena like attitudes and lived experiences, qualitative research provides a framework for participants to explain their perspectives on why and how events unfolded or what they were thinking and feeling during specific moments (Lan, 2020).

There are also limitations of qualitative research. Qualitative research typically does not use large-scale datasets due to the significant time and financial resources it requires. A common critique of qualitative methods is the challenge of ensuring validity and reliability (O'Connor and Joffe, 2020). For example, when doing linguistic studies, it is hard for researchers to get a larger data set to support the data result and outcome although it may contribute to data result depth. The subjective nature of qualitative data, often derived from specific contexts, makes it difficult to meet traditional reliability and validity standards (O'Connor and Joffe, 2020). For instance, the researcher's active role in data generation means that qualitative studies cannot be easily replicated, like when they are trying to explain the personal situations of using languages when they are in certain social and cultural status. Additionally, the processes of data collection, analysis, and interpretation are time-

intensive. Interpreting qualitative data is complex and demands specialized expertise in the subject area as researchers have to take care of distinguishing between the participants' words and the reliability of the information when doing linguistic researches (Mirhosseini, 2020). Careful attention is crucial during analysis, especially in sensitive areas such as identifying symptoms of mental illness.

3.0 Overview of Quantitative Research Methods

Unlike qualitative research, quantitative research focuses on numerical data or data that can be transformed into numbers. The primary methods for analyzing numerical data are referred to as "statistics." Statistical techniques involve organizing, analyzing, interpreting, and presenting numerical information (McNamara and Plonsky, 2020). Statistics is a broad field with extensive applications in various disciplines, including information systems and other research areas related to information (Litosseliti, 2024). The rise of computers, especially personal computers, has made statistical processes for handling and analyzing data more accessible. However, a potential risk is that data may be analyzed without a clear understanding of the correct statistical tests to apply and how they should be used (Litosseliti, 2024).

Quantitative research is often linked to a positivist or post-positivist approach, where researchers strive to minimize biases, maintain objectivity, and avoid personal involvement with their subjects, all while testing or empirically confirming their hypotheses (Omodan, 2024). The focus is on deduction, theory development, and ensuring that findings can be generalized across different times and contexts, often in the pursuit of identifying natural laws or universal principles. Objectivity and impartiality throughout the research process—particularly in interactions with participants—are considered essential and contribute to the "rhetorical neutrality" (Litosseliti, 2024) that characterizes the formal, detached, and technical style commonly found in quantitative empirical studies. Quantitative research seeks a universal standards of participant responses and examine numerical facts of the world (Litosseliti, 2024) by utilizing methods like surveys and questionnaires, as well as other types of data that are converted into quantifiable forms for analysis.

One key strength of quantitative research is its capacity to generalize results across diverse samples and subgroups. It is often associated with the enhanced the credibility of quantitative findings, especially among influential stakeholders like policymakers when the research involves experimental designs (e.g., random assignment) (Riazi and Farsani, 2024). However, quantitative

approaches are sometimes critiqued for overlooking the complex facts of the behavioral modes of human beings as well as the psychological processes, together with the significance of local context and influences on developmental outcomes, especially for individuals from historically marginalized or oppressed communities (Riazi and Farsani, 2024).

4.0 Comparative Analysis of Methods

A key distinction between qualitative and quantitative research lies in their underlying approaches. Qualitative research is inherently inductive, meaning theories emerge from the findings of the study (Litosseliti, 2024). For example, Johnson (2021)'s investigation in a Utah High School examines how teenagers of "European American" (white) backgrounds use language to construct ethnic and social identities, considering various linguistic features. This method allows her to uncover patterns that shape identity formation, demonstrating an inductive process where theories arise from textual data (Litosseliti, 2024). Besides, qualitative research is inherently creative and interpretive. Researchers do not simply collect large amounts of empirical data and effortlessly document their findings. Instead, qualitative interpretations are carefully constructed, utilizing various analytical approaches to understand the data. These may include methods such as content analysis, grounded theory, thematic analysis, or discourse analysis (Litosseliti, 2024).

Although modern research often engages with existing theories, qualitative methods do not focus on testing specific hypotheses, such as "white teenagers use linguistic feature X more often than African American teenagers." Conversely, quantitative research employs a deductive approach, starting with established theories to develop hypotheses that are tested empirically (Okoli, 2023). Hypotheses, which propose relationships between variables (e.g., "the older a learner, the more swear words they use"), must be structured to allow verification or falsification (Okoli, 2023). They must avoid tautologies—statements that are always true regardless of evidence. Effective hypotheses are clearly defined, testable, and capable of being proven incorrect. For more comprehensive insights, refer to works like Scott (2014), which explore how hypotheses and broader laws contribute to forming coherent theories.

Linguistic analysis, as typically conducted today, is mainly qualitative. Descriptive methods in phonetics, phonemics, morphology, and syntax generally focus on examining the nature and diversity of linguistic phenomena rather than measuring their magnitude or frequency (Reed, 1949). However, as previously noted, this type of qualitative analysis is essential for successful

quantitative research, providing a solid foundation for quantitative studies. Given the depth and thoroughness of qualitative linguistic analysis over time, it seems now is an opportune moment for linguists to start shifting some focus to quantitative methods (Reed, 1949). There have been, and continue to be, linguistic studies with a primarily quantitative focus. Any linguistic text—whether from historical periods in standard orthography or from contemporary dialects in phonemic transcription—contains both quantitative and qualitative data (Cucchiari and Stirk, 2021). For example, a glossary created from such a text, which lists occurrences of various linguistic forms with references to specific lines, makes the quantitative data more accessible. Taking this a step further, quantitative analysis can be advanced by counting and tabulating these occurrences in the glossary or directly within the text to generate raw totals.

5.0 Justification of the Preferred Approach for Research

For my future research into the sociolinguistics, specifically about how their social status and cultural symbols can influence their language choice, and so on, I find that qualitative research methods are most suitable for reasons. First of all, from the review of relevant literature, it is found that sociolinguistic research needs the further exploratory research design into how individuals' social status, cultural symbols and community-based characteristics or affiliations can influence their language choices. By nature, qualitative is particularly suitable for examining these subjective and context-dependent aspects by focusing on human aspects of facts rather than statistical evidence. Different from quantitative research which focused more on measurable data, qualitative methods enable researchers to dig into certain phenomenon in a more in-depth manner, catering into the topic of how human experiences and social contexts influences human's choice of language (Litosseliti, 2024). Besides, I intend to take advantage of semi-structured interviews between individuals coming from different social backgrounds, social status, and cultural features about the choices of languages, given certain conversation and communication scenario. Comparisons of their reported word and linguistic structure, as well as the semantic analysis will be analyzed to trigger the further understanding of "hows" and "whys" of language usage.

Besides, qualitative research holds its feature as being flexible and context-sensitive, which enable the researcher to adapt their methods to the specific situations in the specific interview context. For example, the researcher can observe the interviewees' facial expressions, as a supplementary information of their verbal cues. The flexibility is important for seeking a deeper understanding of the dynamics and complex social identities that may change depending on the specific cultural,

social, and historical factors. The example can be found in the thematic analysis methods or discourse analysis to enable the researcher like me to identify the patterns in language use within their particular social and cultural settings. I can then understand and uncover how language may function as a tool for identity formation and social interaction in the interactive processes between people.

These advantages cannot be brought by quantitative research methods in sociolinguistics. Based simply on data, the numeric evidence may not fully capture the complexity of human behavior and social interactions by considering human factors. It is because although quantitative research may rich in data, it often overlook the rich, qualitative aspects of language use, like emotions, beliefs, and social relationships. In sociolinguistics, the intangible factors are rather significant for understanding how language can reveal and also shape individuals' identity and certain social cultural characteristics (Litosseliti, 2024). Further, it is thought that quantitative research methodology may be trapped into the limitation of the lack of consideration of the contextual factors in influencing language use. For instance, social status and cultural symbols can influence their language choice, but this cannot be testified through numerical data generally. Hence, quantitative research methodology may lead to the consequences of missing the underlying reasons or motivations behind the phenomenon.

6.0 Conclusions

In conclusion, qualitative research methodology and quantitative research methods are two different research methodologies. Given the nature of my research interests in sociolinguistics, and I want to explore how social identity and cultural context may shape language use, I think the qualitative research methodology is the more preferred approach that suits my research design. qualitative is particularly suitable for examining these subjective and context-dependent aspects by focusing on human aspects of facts rather than statistical evidence. Besides, qualitative research holds its feature as being flexible and context-sensitive, which enable the researcher to adapt their methods to the specific situations in the specific interview context. For example, the researcher can observe the interviewees' facial expressions, as a supplementary information of their verbal cues. These advantages cannot be brought by quantitative research methods in sociolinguistics. Based simply on data, the numeric evidence may not fully capture the complexity of human behavior and social interactions by considering human factors. However, in the implementation of the research following qualitative research methods, I should also take care of the potential limitations. A

common critique of qualitative methods is the challenge of ensuring validity and reliability. For example, when doing linguistic studies, it is hard for researchers to get a larger data set to support the data result and outcome although it may contribute to data result depth. The subjective nature of qualitative data, often derived from specific contexts, makes it difficult to meet traditional reliability and validity standards

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