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The Importance of Quantitative Research in Language Testing and Assessment: In the Context of Social Works

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Abstract---These studies, in multiple fields, use many statistical analysis techniques and practices for these current studies. Some of these researchers like to be attributed to quantitative studies. Investigators are therefore intensely sharply divided, and they start competing to point out the advantages of their very own preferred techniques and technologies. However, both techniques and technologies possess pros and cons for all research teams. The objectives of this research are to know the advantages and disadvantages of using statistical research methodology for language measurement and evaluation. Focusing on ethical considerations, this study also found some strong points in the use of grounded theory for language assessment and research testing, such as the generation of more in-depth insights into the design, management, and interpretation of assessment and testing; and the exploration of behaviour, perceptions, feelings, and ability to understand of test subjects. A few other weak points are, for instance, smaller sample sizes and time-consuming quantitative research methods. However, on the other hand, they involve a large sample size and therefore do not necessitate a sufficiently long time to conduct. Several other restrictions are whether quantitative studies start taking snapshots of a phenomenon, not in-depth, and ignore the thoughts and feelings of test-takers and reviewers and also what they mean by someone or something. Quantitative are influential in the field of language measurement and evaluation in this research paper.

Keywords---advantages, disadvantages, language testing assessment, quantitative research, research methods, social works.

Introduction

Quantitative research approaches and techniques have been usually observed to be more frequently shown in diverse educational fields of study, including sociology, psychology, history, and so on. So far as the research designs were also involved, so-called framework wars persist, in which observers will be observational and constructive in the two distinct detention centres. The optimistic outlook of investigators is that the social environment consists of a tangible as well as an unchangeable reality that can be rationally measured. Because while interpretive oppose rationalist belief in actuality; as well as argue that, conversely, human knowledge is socially constructed that can be altered and acknowledged quantitatively (Corbetta, 2003; Marcon & Gopal, 2005; Kroeze, 2012).

Focusing on methodological warfare, there are several concerns regarding the superiority of research methodology: if quantitative evidence is preferable to qualitative findings, or vice versa. In this respect, it is essential to illuminate the context of the development of paradigms to explain the dominant study process. In the first half of the twentieth century, the positivist approach dominated social and educational study, giving priority to the use of structured measures and systematic observation, innovative thinking, quantitatively analyzed, and statistical analysis (Villa et al., 2021; Biletska et al., 2021). In other words, the process of quantitative analysis has been beneficial. However, in the 1960s, new methods such as symbolic interpersonal communication ethnology, theoretical science, progressives, phenomenography, discourse analysis, and other forms were put into practice due to the influence of Kuhn's work (Hammersley & Traianou, 2012). In other words, there has been a shift from quantitative to qualitative research methods, and the superiority of quantitative research has not been as influential as before. The growth of qualitative research also stemmed from the unhappiness of positivism studies in the developing knowledge of the century (Sandberg, 2005). With comparison to research methodology and approaches, legal issues have now been implemented in the scientific community, but they also preceded scientific techniques and practices. This is apparent at this point that various forms of analysis approaches and procedures have been used in different fields of qualitative and quantitative study. Similarly, a variety of methods and approaches Bachman (2000), have also been encountered in standardized English research, e.g. VELC Test score classification methods used by Kumazawa et al. (2016), discriminant function Assessment (EFA) and structural equation assessment (CFA) used among Sims & Kunnan (2016); case studies in Cambridge English Language Research (2016); the goal of the research is to be scientifically informed of the advantages and drawbacks of utilizing quantitative methods and techniques for language assessment and evaluation (Jones, 2009; Akçayır & Akçayır, 2017). The study started with an overview to research methods and strategies. The presentation would be accompanied by a summary of the language assessments and the evaluation. This also describes the pros and cons that include systematic techniques, processes, and reviews prevailing analysis strategies for language learning outcomes.

Literature Reviews

Oberoi Destiny Apuke, (2017) said on "Quantitative Research Methods a Synopsis Approach" the objective of this study is to clarify the quantitative research method. This study found that quantitative research focuses on quantifying and analyzing variables to obtain results (Langfield-Smith, 2006; AlHassan & Wood, 2015). This involves the use and analysis of phenomena by gathering quantifiable data techniques to answer questions such as who, how much, what, where, when, how many, and how many. It also describes the methods used to explain the issue or concept by collecting data in statistical values. The study also shows that quantitative methods can be categorized into survey research, correlational research, correlational studies, and correlational-comparative study.

Eyisi Daniel (2016), Said Research in Science Education is all about finding out the truth that includes a variety of reasoning and perspective. To identify effective teaching strategies that are essential for teaching science students teachers problem-solving skills, various research approaches have been used by academic scholars based on the collection and analysis of data shown at a particular time. Although quantitative research methods are based on a separate continuum, they aim to identify a particular problem that used a different strategy (Wacker, 1998). This study examined critically the usefulness of quantitative approaches to research on problem-solving skills in the curriculum of science education. In doing so, six articles on problem-solving have been evaluated to demonstrate the usefulness of quantitative research methods to academic research. It demonstrated the benefits, drawbacks, weaknesses, and strengths of quantitative data. Ethical consideration about research on problem-solving instructions has been discussed as well as recommendations for future studies. Coghlan et al. (2014), this quantitative approach have been a widely researched social structure. It defines a series of approaches, techniques, and generalizations used to analyze behavioural, social, and economic processes via observational type studies.

The exploratory study organizes a range of statistical data. Some of the statistical data are inherently quantitative, while the statistical framework has been applied in other situations. The compilation of accurate details allows analysts to carry out essential. However, highly complex statistical analyzes to display mixed results (e.g. ratios, percentages), the association between results (e.g. 'Students with lower grade point ratios appear to perform lower on a depression scale') or equate them through aggregated data (e.g. the US has a higher gross national product than Spa) Quantitative project involves approaches and procedures such as survey queries, formal interviews or tests, and similarities and correlations with empirical studies. The quantitative approach involves surveys, disorganized and in-depth interviews, and evaluations of documents for the aspect of subject questionnaires, individual questionnaires, measurement techniques and assumptions, and evaluations of documents for numerical or measurable data. A primarily deductive approach process used to implement hypotheses and theories. A distributed database process being used test predetermined theories, constructs, and hypotheses that make up the theory. More abstractly, explains the issues or situation from the perspective of those encountering it more rationally, presents the measured effects of these factors on the problem or topic Text-based Number-based the most in-depth information on several cases less

than in-depth and more lengthy data across such a vast percentage of cases semi-structured or unstructured response options adjusted multiple choices.

Language testing and assessment

In a positive sense, the measure seems to be something that illustrates one's leadership ability-incompetence, capacity-inability; and that demonstrates someone's viewpoint in the spectrum, composed of different factors like incompetence, having to pass, normal, acceptable, high and very high. The educational test will help to make big decisions about whether or not a learner would be allowed to cross along to the next stage. It can check the learning performance and suggest whether or not such a learner needs more support and allow us to analyze the accuracy among learners. Besides, the test acts as an essential tool of public policy, as national examinations are carried out at the same standard across the country to ensure that only the top performers can be admitted to the next educational level (Douglas, 2014). A university entrance test is a tool of its kind. In language assessment, these same participants have been determined by the extent to whom the test can produce scores that reflect actual the individual's ability in a given area, like reading, writing critical essays, vocabulary development, or trying to speak relations with students (Weir, 2005).

Along with all other standardized testing, language tests are a tricky concept (Fulcher, 2013). However, it is an essential aspect of education that benefits the community in social structure, like development, job opportunities, permanent residency, border security, or refugee, which relies on having to pass a language test. Another significant element for language assessment in education would be that it determines what ought to be learned (McNamara & Roever, 2006). So, the discourse so far suggests that language requirement had had a significant role to play in the lives of many people (McNamara, 2000). However, most have addressed the reliability and validity of language tests, for example. Fulcher & Davidson (2007), argued that every book and article on language assessment describes the validity of the test to some extent, which is the core concept of testing and assessment. Several concepts are indeed seen to be involved in language measurement and evaluation, and it is a decent place for academic research. 'English should not be the property of one country; should be internationalized. English language tests should be designed "impartially" (Khan, 2009).

Quantitative research approaches and methods

Bryman (2012), defined the quantitative method as "a research approach that affirmation in data gathering. It means that quantitative research is worth anything. This qualitative research seeks to examine the answers to research problems, having started to how many, what other, to some of what extent (Rasinger, 2013). In other words, the method places a great deal of stress on measuring something or variables that existed in the social world. Payne & Payne (2004) said, "Quantitative methods seek frequency in human life by separating the social world into empiric components called variables that can be statistically described as frequency range or rates, the correlations of which could be discussed by statistical methods, and obtained through scientist-introduced

stimuli and estimation suggests. Quantitative research focuses on those aspects of human behaviour that can be measured and designed, instead of merely classifying and describing the meanings that people introduce with their behaviour. It is worth mentioning another aspect of quantitative research that is favourable and encompasses quantitative study.

Weber (2004), referred to his colleague, Jorgen Sandberg, who described moralism as being different from rationalism, individual and actuality; objective truth is far beyond the human experience; research approaches are stats and grounded theory; reliable information truly evaluates actuality; the accuracy of research findings can be replicated; research area seems to have positive attributes that also act separately of fact; Besides, Bryman (2012), recognized moralism as post-positivist studies (that also produces constitution-like or particular response); in relativism, information is acquired from the scientific investigation (Richardson, 2012). However, interpretivism in research design appears to have been contrary to rationalism when researchers argue that interpretivism is ideographic research (the study of specific cases or activities) (Kelin & Myers, 1999) and also that information is acquired from the significance of activities (Richardson, 2012). It is also evident from this debate that a framework war continues to exist in the research field in which investigators have to live in two separate shelters, although Weber (2004), argues that the concept of positivism versus objectivism is empty. Besides, Bryman (2003), argued that, such as qualitative research methods, "quantitative methods" are also the umbrella term for different types of research.

Quantitative research in social work

Social work, which is a multidisciplinary field of study, emerges from many traditional professions such as psychology and sociology, whose research foundations are based on empirical science. In this context, empirical exploration and understanding of quantitative research in social work is seen as an important method.

Quantitative research has certain advantages for social scientists who seek to provide important evidence in their field. By transforming variables into viable form, quantitative research seeks to measure change, allowing important comparisons to be made and correlations to be quantified. It also aims to be generalizable with large samples.

Qualitative research is applied as an alternative method for social science research, focusing on explanations through interviews and observation. However, quantitative methods are known subjectively. Therefore, many researchers need to apply the mixed method approach. When designing a research project in social work, the rule to guide its development is:

If your research focuses on difference and correlation, the following questions may be asked:

....?

How much...?

To what extent...?

Is there a relationship between quantitative methods can be used that allow you to operationalize variables and examine issues of variability and variation.

If your research focuses on process and connections, the following questions may be asked:

How...?

Meaning...?

Effect...?

Qualitative methods can be used to explore "what these meanings and effects are and how they are involved in these events and activities".

Conversely, the relationship can be reversed if a specific approach to research (qualitative or quantitative in social work) is to be used in their findings, blending qualitative research with quantitative measurements.

To become a Social Worker in the UK you need two essential things: relevant qualifications and experience and good English language skills.

Before becoming a Social Worker in the UK, passing the IELTS with a minimum overall score of 7.0 and a minimum of 6.5 in each section is required. That's why your English skills are so important. [Lietz & Zayas \(2010\)](#), the questions that social workers can ask while evaluating the situation in qualitative inquiry in the field of social work emphasized that it determines the quality of a qualitative research study. National Association of Social Workers (NASW) Code of Ethics when social workers work with individuals (1999), according to with the clause "social workers should critically examine the situation and keep up to date with emerging problems" Social Education Council (CSWE). "Research-based practice and practice-based research" ([Holloway et al., 2009](#)). It is appropriate for them to carry out their work in the context of clauses 2). Also, evidence-based practice (EBP) The movement has increased the expectations of social workers to actively focus on research ([Howard et al., 2003](#); [Jenson, 2005](#)).

Benefits

Quantitative results are probably also to be population get an equal opportunity or subgroup as those who require a more significant number which is randomly selected ([Carr 1994](#)). In addition to sampling, data assessment requires less effort, unlike statistical analysis software, including SPSS ([Connolly, 2007](#)). [Powers & Powers \(2015\)](#), in about their studies on TOEIC test results, these were indicated that the sample population takes into account a more significant portion (2300) of the TOEIC test-taking community, which helps to make the study accurate. The exploratory study would then be to be based on the interpretive approach of statistical assessment ([Kauber, 1986](#)). Language proficiency evaluation studies conducted, besides instance, by [Carroll & Bailey \(2016\)](#), show that there are various factors, like learner and quasi-EFL students, and tests in four sub-domains: speech, trying to write, listening and reading. It is also noted in the research of second-language proficiency by [Préfontaine et al. \(2016\)](#), that different problems were used, like class variables: earliest stages, intermediate or advanced; native-speaking factors, British, American and Canadian.

Drawback

There is a lack of all the research methods, and the quantitative approach also is the same, given the above strong points, quantitative data also has drawbacks. The research approach of rationalism tends to leave out the underlying criteria of the social phenomenon (Denzin & Lincoln, 1998). It also fails to ascertain the real meaning and justifications underlying it. The study of Bouwer et al. (2015), evaluated the influence of attitude on writing average score involving various types of difference, such as man or woman, gender, gender, gender-based tasks, gender-based tasks, rated tasks within different genres, and random error. However, the study did not describe the rationale for the impact and the significance of the effect in that specific context. A further characteristic of current studies is that relativism could not contribute to how the real-world is formed and maintained or how people can interpret their decisions and others (Blaikie, 2007).

Quantitative language testing research has shown that the studies are just trying to investigate and assessing communicative skills, skills, goals scored, and so forth. A study by Katzenberger & Meilijson (2014) on the assessment of the Hebrew language for preschool children in which the mother tongue-impaired Hebrew-speaking preschool children are to be recognized or whether the test can make a distinction between improving and dialect-impaired children. However, the research did not investigate why confident kids learn their learning process and why some kids are intoxicated. Such that, the researchers decided to leave over the actuality or the children's awareness of the learning style of the Hebrew language. Another weakness of the quantitative research strategy since it tends to hold a snapshot of a concept. Measures different factors at such a specific point in time and disregards whether the photograph caught one of the greatest or started to look exceptionally led by the state Schofield (1993), for example, the Fidalgo et al. (2014), study implicated a total number of participants (400) to prove statistically significant results for the experiment.

It was hence not necessary to take the set clear, and instead, it gave the overall view of the factors. Then, Hammersley (2007), pointed out how the disparagement of unresolved issues in "positivist" studies is also apparent, such as the difficulties in defining the relevance of this study. The significance of the English language test, for example, for an immigrant to be resolved in the United Kingdom, cannot be evaluated quantitatively. Finally, the quantitative research approach overlooks the perspectives and experiences of participants in strictly controlled settings (Ary et al., 2013), because there is no direct link between researcher and the respondents in data gathering. As a result, the process of getting data to become impartial.

The research of Gu (2015), implicated 498 research participants of the language skills test by the allocation of test lets. This demonstrates that the research had been unable to elicit the perceptions of the participants, because as scientists had no relation with them; it is only able to move the test. Although the above disadvantages exist with quantitative studies, a significant amount of work is being developed in the field of language testing and assessment using statistical analysis techniques and practices (Bornmann, 2014; Talebian et al., 2014).

Language assessment does have a philosophy of using quantitative processes and a strong alignment of the quantitative approach focusing on the legitimacy of standardized tests (Purpura, 2011). Also, language testing is taken into consideration as a measure. It is noted that structural economics' quantitative-structural phase with language assessment focused on construct validity and developed the concept of language assessment as a measure (Morrow, 2012). From this idea, consequently, academic language seems to have been measurable instead of descriptive.

Dominant method for language testing and assessment

Agreeing to pay interest to the benefits and drawbacks of using the quantitative research approach, this section will focus on the new language testing research method. In the field of language development and analysis, the quantitative research approach appears to be used rather than the qualitative research design. Jang et al. (2014), commented, "The Language evaluation and analysis (LTA) area had also historically been controlled by a quantitative methodology," as language designers continue to be using statistical means of test validation. That being said, the quantitative study design was not the only method used in research projects, but instead, several other methods are often used in language tests language requirements to start exploring the reliability of the questionnaires. Research-based techniques, such as self-reflection and deep introspection, also are widely used in the validation of test results (Alderson & Banerjee, 2002).

There is a significant shift in the area of language testing research. (2002) mentioned that the most positive change in language assessment is the beginning of qualitative research methods for the design, description, and validation of language requirements in particular. I might well make the argument that the quantitative research approach still is advanced in terms of language development and empirical study, even though language testing investigators use the statistical analysis methods besides their studies (Read, 2008; Gómez, 2014; Weigle, 2007). Almost all studies, for example, included quantitative research strategies in the January 2016 issue of the journal 'Language Testing.' Also, quantitative analysis methods were used in almost all articles published on four factors in the language learning Quarterly Journal, 2015. Thus it is apparent that quantitative data is indeed a dominant method of research in the area of language assessment.

Ethical concerns

Ethical concerns are of utmost importance not just in the research method, but also in the use of supplementary data sources, since there are ethical concerns linked with fair and honest reference analysis and processing (Farrimond, 2012). So, Hack (1997), in Blaxter et al. (2001), emphasized that "It is good enough to justify having to stand back for a second and taking into consideration what impact your intentions may have had on someone else, as a consequence from which this could be quite destructive to them self-there seem to be several problems associated in ethical concerns. Like in the "explicit consent" of the attendees, refers to the studies where the respondents were also engaged, who is collecting data, as well as the outcomes. Data protection of results, as well as the

confidentiality of attendees, are also essential to such issues (Black, 1999). That being said, there is probably no certainty as to the confidentiality of the material sent through email, because it can be effectively delivered and tried to copy. Users can exploit publicly or privately institutions' customer information (Blaxter et al., 2001).

The global language Testing organization: ILTA (2016) also mentioned that "confidential information could not be justified, particularly in which documents concern students who could remain competitive for enrolment as well as schedules." in those other words, confidential information could not be retained in all ways. Even then, it is essential to maintain confidentiality. Around the same period, the ILTA (2016) emphasized which "a balancing act should be sustained between maintaining confidentiality as a fundamental aspect of the legal practice of the language analyzer and the larger obligation of the analyzer to society." It is, therefore, the obligation of the language developers top is persuasive in their testers. Hamersley & Traianou (2012), pointed out five widely stated principles: to getting around the fact, to respect the independence, to ensure security, to offer mutuality, and to treat everyone equally. In terms of language testing, language developers should regard the human race and integrity of each one of their study participants (ILTA, 2016).

Consequently, as with other disciplines, the accepted pattern in language assessment is to create suitable instructions, such as the ethical code and the standards of conduct. The recently retired shows the moral standards and principles of the profession, although the latter tends to focus on the standards and code of moral principles (Karavas, 2013). That being said, these concepts, but not all, seem problematic, such as respect for autonomy by allowing students to make the decision not whether they take part in studies means because they are at risk of abuse. Ethical issues are also mentioned as moral norms were also relevant in the context. Related to historical variability, respondents in one cultural value may concur on a concept; but they may disagree with another. In some advanced countries, such as the United Kingdom, the United States, Canada, and Australia, there is indeed a system of ethical research of all human-related studies. That being said, many developing nations do not even have a formal ethics committee procedure for sociologists (Farrimond, 2012).

Some other examples of the ethical issue described by Loizos (2000), would be that the issue of surveillance without assent is handled as a violation of privacy. At some moment, he mentioned that the ethics board in scientific science should adjust the interests of the patient to concerns of public interest. In general, the effects of not following the above principles are adverse. However, it may well be helpful to disregard certain ideals. Dane (1990), described the massy tavern trade plan, in which it would be smarter not to inform the people about both the purpose of the subject since it could cause mental damage to each other. Throughout regards, Jones (2011), argued that even a commitment to site storage is difficult, as it might be hard to achieve confidentiality for a research topic.

It is assumed that ethical concerns are more particularly worried about research design than with quantitative studies. A descriptive study, especially for human services, experiences difficulties related to ethical factors, including in-depth

interviewing and inference, which can be quite intrusive even though a person's intensely personal problems are being interrogated (Darlington & Scott, 2003). Also, Blaxter et al. (2001), argued that ethical concerns occur mainly with a study design that uses qualitative methods as there is an emotional bond between researches debate. Finally, ethical challenges are designed to demonstrate that there were no straightforward, essential guidelines for choosing not whether a specific research process or technique is moral (Crano et al., 2014). Further than that, what is regarded to be "moral" in one society and culture may not be seen in the other. Different countries have different ethical or moral theories. Morality could never be fully functional or ultimate, and moral norms could not be generally done (Karavas, 2013).

Purpose of the study

According to Apuke (2017), quantitative research aims to make awareness and comprehension of the social environment. Quantitative analysis is utilized by social psychologists, particularly communication scholars, to identify patterns or activities involving people. Social sciences are involved in people's research. Quantitative research is a way to learn about a specific group of people known as a sample population. Using science analysis, a quantitative study is focused on results that are collected or analyzed to answer concerns regarding the respondent population.

Conclusion

The study aimed to closely analyze the weaknesses and strengths of two critical educational research concepts qualitative and quantitative-based on language measurement and evaluation. This can be asserted that the study aims to illustrate the advantages and cutbacks analytically within each qualitative research and framework, as well as ethical concerns. The advantages of using descriptive study in language testing and assessment study have included a depth insight into the development, governance, and explanation of language assessment; an easy-to-understand applicant behaviour, questioner attitudes, interlocutor attitudes, and cross-cultural behavioural influences during speech tests, score or grade, and intricate features. Limitations, even so, are: small samples occasionally end up making a significant difference and exposed; and policymakers may well not ask for qualitative research.

However, on the other hand, the study recognized the benefits that use quantitative study in the area of language development and validation research, including a larger sample and factors that make the lab experiments trust acceptable. The downsides, even so, are that quantitative data tends to leave out the interpretations and effects of a specific method, such as that the testing process is not concerned with such a comprehensive view of the factors. Also, the study found that the dominant method for language learning and assessment study is quantitative, basically for its rate of use by researchers. Together with the merits and demerits with research methods and approaches, the study suggested that perceived aspects relating to the research project being conducted have become very critical problems. However, it implies that there are no critical guidelines for deciding not whether a specific research process or method seems

to be ethical. The research seems to have concentrated on the critical issues of the topic, but it has not been able to cover all of the issues in a small-scale study such as this, as the study approaches and methods are significantly complete objects of research. Further study needs to occur in the long term, therefore.

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