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Quantitative Inquiry in ELT: Exploring English Teacher Educators' Experiences and Insights

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Abstract

This paper explores the role of quantitative inquiry in English Language Teaching (ELT) and applied linguistics which focuses on its methodologies, applications and contributions to the field of ELT. Quantitative research, rooted in positivist and post-positivist traditions, utilizes statistical analysis to examine relationships, identify patterns, and explore causal links in language learning and teaching. Using a qualitative approach, this study collected data from four university English teachers with extensive experience in conducting and applying quantitative research in ELT. The findings highlight that quantitative methods provide objectivity, scalability, and precision in ELT research. However, these methods also pose challenges such as, capturing social and contextual details, designing reliable instruments, and ensuring meaningful interpretation of data. Participants emphasized the significance of mixed-methods approaches to complement quantitative findings with qualitative depth, making research outcomes more applicable to real-world teaching and learning contexts. Additionally, the study underscores the need for interdisciplinary integration and methodological refinement to enhance the impact of quantitative research in ELT. By critically evaluating the strengths and limitations of quantitative inquiry, this study contributes to ongoing discussions in ELT and applied linguistics, advocating for a balanced and contextually sensitive application of statistical methods to support data-driven decision-making in language education.

Keywords: Quantitative Inquiry, Positivist Research Paradigm, Statistical Analysis, ELT, Applied Linguistics

1. Introduction

Research in English language teaching (ELT) plays an integral role in addressing pedagogical challenges, informing curriculum development and advancing theoretical understanding. Among the various research paradigms, quantitative inquiry has established itself as a cornerstone for generating data-driven insights and testing hypotheses systematically. Quantitative research method is rooted in positivist and post-positivist traditions which emphasizes objectivity, measurement and statistical analysis, enabling researchers to examine patterns, relationships and causal connections in language learning and teaching.

Paltridge and Phakiti (2015, p. 6) state, "Quantitative research generally seeks to explore or determine the relationship between variables. Such relationships can be linear (two variables can increase or decrease in value in tandem) and causal (one variable can change the characteristics of another variable)." Quantitative researchers employ variables to denote their subjects of investigation (e.g., language competency, anxiety) and utilize objective measurements or assessments to extract variables as sources of research data. Similarly, Dornyei (2007) states that "quantitative research involves data collection procedures that result primarily in numerical data which is then

analyzed primarily by statistical methods. Typical example: survey research using a questionnaire, analyzed by statistical software such as SPSS" (p.24). Likewise, Gay, Mills and Airasian (2017) assert Quantitative inquiry (QI) is "the collection and analysis of numerical data to describe, explain, predict, or control phenomena of interest. However, a quantitative research approach entails more than just the use of numerical data" (p.7). Quantitative research generally seeks to explore or determine the relationship between variables. Such relationships can be linear (two variables can increase or decrease in value in tandem) and causal (one variable can change the characteristics of another variable).

In addition, Mackey and Gass (2005) argue "Research in which variables are manipulated to test hypotheses and in which there is usually quantification of data and numerical analyses" (P. 363). Creswell and Creswell (2018) define quantitative inquiry as,

an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures. The final written report has a set structure consisting of introduction, literature and theory, methods, results, and discussion. Like qualitative researchers, those who engage in this form of inquiry have assumptions about testing theories deductively, building in protections against bias, controlling for alternative or counterfactual explanations, and being able to generalize and replicate the findings. (p. 44)

Quantitative inquiry (QI) is a robust, well-developed framework for studying elemental concepts in English language teaching (ELT) and applied linguistics such as how languages are learned, how motivated learners are, how effective teachers are, and how assessments are carried out. It utilizes organized methods such as, experiments, surveys, and data can be gathered from large groups of people. This increases the generalizability of research findings. The growth of quantitative research has come from better statistical tools and methods, making it easier to understand complex data and influencing policies and practices.

This paper investigates the principles, methodologies and applications of quantitative inquiry in ELT and applied linguistics. It explores how this research paradigm contributes to evidence-based decision-making, highlights its potential for addressing pressing challenges in the field of ELT and examines the practical considerations for designing and conducting rigorous quantitative studies.

2. Fundamental Premises and Methods

Quantitative research often entails the use of numerical data, quantification and statistical analysis to tackle a study issue or purpose, often necessitating a substantial sample size. Quantitative research is characterized by two types of statistics: descriptive statistics and inferential statistics (described below). Quantitative research designed to examine the attributes of a population (e.g., census survey, national literacy assessment) or the opinions, perceptions, and attitudes of learners (e.g., perceived efficacy of a language program, learning anxiety, and language requirements) may primarily seek to present an average score, a percentage, or a ranking for all participants. This form of quantitative study uses descriptive statistics. Another form of quantitative research seeks to do more than only present an average score, ranking score, or percentage. Researchers may seek to investigate a causal or linear relationship among many variables, such as those influencing language acquisition (e.g., age, gender, language competency, and/or aptitude of students, as well as the instructional techniques utilized).

This type of quantitative study employs inferential statistics. The inception of quantitative research was rooted in positivism, a philosophical viewpoint that seeks to comprehend the universal principles or laws that regulate human behavior. A positivist adopts a realism perspective, asserting that reality exists independently of the observer and the circumstances of examination. Contemporary quantitative researchers typically adopt a post-positivistic stance, a refined iteration of positivism. It differentiates ideology from actuality. Proponents of this perspective assert that an object of inquiry cannot be comprehended with absolute precision.

3. The Objectives

Quantitative research plays a vital role in ELT and Applied Linguistics by offering systematic, data-driven insights into language learning and teaching. This paper aims to look into the fundamental principal and methods of quantitative research. It underlines how this organized approach helps us study patterns, connections and causes in language education. Additionally, it aims to study the practical uses of quantitative research, showing its role in solving educational challenges, informing curriculum development and supporting evidence-based decision-making in ELT. Further, the study critically evaluates the strengths and limitations of quantitative inquiry in relation to English language teaching and applied linguistics.

4. Methodology

The study employed a basic qualitative design with a semi-structured interview approach to explore the perspectives of four university teachers, each holding a PhD in ELT or applied linguistics, having at least two publications using a quantitative approach. The participants had been teaching ELT and linguistic courses at Tribhuvan University for over 12 years. The participants were purposively chosen to ensure they had extensive expertise in conducting and applying quantitative research in language education. This methodological framework allowed for an in-depth examination of their experiences, challenges and contributions to ELT. The flexible yet structured nature of the interviews facilitated rich discussions on how quantitative methods inform teaching practices, assessment strategies and curriculum development, ensuring a comprehensive understanding of their impact on ELT.

5. Findings and Discussion

This section reports insights and experiences from English teacher educators on how they perceive the role of quantitative methods in ELT and applied linguistics research. The participants' experiences illustrate how quantitative methods help data-driven decisions about teaching practices, assessment strategies and curriculum development. These reflections highlight the strengths quantitative research such as the ability to identify trends, establish relationships and provide empirical evidence. In addition, the section acknowledges its limitations in adequately capturing contextual and social factors.

5.1. Pathways into ELT and Applied Linguistics: Participants' Experiences

The profession of English Language Teaching (ELT) demands both academic knowledge and practical experience. ELT professionals typically enhance their understanding through formal education, research, and real-world teaching, which influences their methods of language instruction. Feedback from participants emphasizes the importance of academic exposure, professional development, and ongoing learning in shaping their careers.

The participants shared a range of interconnected experiences in ELT. Participant 1 (P1) recounted his journey, which started with a solid academic background in applied linguistics, enhanced by years of experience in teacher training and curriculum development. The participants shared varied yet interconnected experiences in ELT. Participant 1 (P1) described his journey as one that began with a strong academic foundation in applied linguistics, complemented by years of experience in teacher training and curriculum development. "My master's studies in ELT deepened my understanding of language pedagogy, and my role as a teacher educator allows me to bridge the gap between theory and practice," he shared. Participant 2 (P2) emphasized the role of hands-on teaching in shaping his career, stating, "Starting as a secondary school teacher helped me realize the complexities of language learning, which led me to pursue further studies in applied linguistics." His transition into teacher training enabled him to guide new educators in adopting research-informed instructional methods. Participant 3 (P3) highlighted the interdisciplinary nature of his background, explaining, "My studies in linguistics and education provided me with insights into both the structural and communicative aspects of language teaching." His research in classroom discourse and pragmatics has influenced his approach to fostering interaction-based learning environments.

The responses suggest that ELT professionals acquire expertise through diverse pathways, integrating theoretical knowledge, hands-on teaching and interdisciplinary insights to enhance their pedagogical practices. While some enter the field with a strong academic foundation, others develop their expertise through direct teaching experience and further studies. Effective language teaching in ELT requires academic training, hands-on experience, and continuous professional development. Richards and Farrell (2005) highlight the need for reflective teaching that integrates theory with practice, while Burns (2021) and Rose and Galloway (2022) emphasize teacher agency and adaptability in multilingual settings. Canagarajah (2013) explores translingual practices, Medgyes (2022) examines native and non-native teacher dynamics and Norton (2021) discusses identity and investment in learning. Larsen-Freeman (2020) applies complexity theory to teacher development. These perspectives stress that beyond credentials, effective teaching depends on engaging with research, reflection, and adaptability.

5.2. The Growth of Interest in Quantitative Methods for ELT Research

Quantitative research has turned into an essential tool in English Language Teaching (ELT) and applied linguistics, providing organized and generalizable insights into the teaching and learning processes. Researchers frequently cultivate an interest in quantitative methods through a combination of academic exposure, professional challenges, and personal curiosity. In this study, participants have shared how their experiences and motivations shaped their engagement with quantitative methodologies.

P1 described his interest in quantitative methods as stemming from a desire to bring objectivity and clarity to his research. "I was initially drawn to quantitative methods because they allow for the measurement of patterns and trends in a way that feels concrete and actionable," P1 shared. Similarly, P2 reflected on how professional demands led him to explore quantitative methods. "I needed to evaluate a teacher training program, and while qualitative feedback was insightful, I required concrete data to present to policymakers," P2 shared. Using pre- and post-assessments helped him measure impact effectively, and the experience sparked a lasting interest in quantitative approaches. P3 highlighted the influence of interdisciplinary exposure, stating, "I was inspired by studies in psychology that used quantitative methods to explore learner behavior and outcomes." P3 shared an example of using regression analysis to identify factors affecting students' listening comprehension, noting, "The systematic nature of quantitative methods and their ability to address complex questions keep me engaged."

The participants' responses suggest that researchers develop an interest in quantitative methods due to their need for empirical rigor, practical applications and interdisciplinary insights. People are often attracted to this field either through formal education and training in statistical tools or by recognizing its significance through their job roles and the necessity for data-driven decision-making. This perspective aligns with Creswell and Plano Clark's (2018) argument that academic exposure and practical experience are essential in nurturing an interest in quantitative research. Recent studies by Nassaji (2020) and Loewen (2022) have pointed out that interdisciplinary learning and professional demands play a significant role in steering researchers toward quantitative approaches. Similarly, Plonsky (2017) notes that greater access to statistical software and training has boosted researchers' confidence in using quantitative methods in ELT.

5.3. Experiences with Publications

Quantitative research has proven to be a vital tool in ELT and Applied Linguistics, offering robust and generalizable insights into various educational phenomena. Participants in this study shared their experiences with publishing quantitative research articles in different ways.

P1 described two studies that focused on analyzing language learning strategies among secondary school students. "In one study, I examined the relationship between the frequency of strategy use and students' performance in English proficiency tests," P1 explained. "The second study explored how socio-economic factors influenced students' choice of strategies." P1 noted that quantitative methods allowed them to analyze patterns across large sample sizes, using tools like correlation analysis and regression to uncover relationships that might have otherwise gone unnoticed. P3 shared her experience with two technology-related studies. "One study measured the impact of gamified learning platforms on vocabulary retention," P3 explained. "We used pre- and post-tests to compare

student performance before and after introducing the platform, and the results showed significant improvement.” Another study by P3 evaluated engagement levels in online versus in-person classes, using survey data from over 500 students and descriptive statistics to identify trends. Meanwhile, P4 reflected on their work in teacher training programs. “My first study assessed the impact of workshops on teachers’ ability to implement communicative language teaching (CLT),” P4 added “I used pre- and post-training evaluations to measure changes in their understanding and application of CLT principles.”

The responses highlight that quantitative research in ELT enhances English teachers' comprehension of language learning processes, examines educational technology and assesses teacher training programs. By employing statistical methods and analyzing extensive datasets, researchers can pinpoint significant trends, assess the effects of interventions and provide valuable insights for educational and policy decisions. These findings align with key viewpoints in the literature on quantitative research. Dornyei (2007) points out that quantitative methods are particularly effective in delivering generalizable insights and tackling complex research questions, as demonstrated in studies focused on learner strategies and technology integration. Creswell and Plano Clark (2018) emphasize the usefulness of statistical tools for identifying trends and measuring changes. Contemporary scholars like Nassaji (2020) and Loewen (2022) highlight the critical role of quantitative methods in evaluating educational technologies and professional development programs, further affirming the significance of these research initiatives. Likewise, Sato and Loewen (2023) note the growing reliance on experimental and quasi-experimental designs, and Marsden and Kasprowicz (2023) highlight the role of replication studies in strengthening research validity and reliability.

5.4. Challenges in Conducting Quantitative Research in ELT

Quantitative research in ELT and Applied Linguistics yields important insights, but it also introduces specific challenges, particularly in the areas of study design, execution, and interpretation. Participants in this study recounted their experiences dealing with these challenges, highlighting aspects like instrument development, logistical difficulties, and data analysis.

P1 shared the challenges they faced in developing research instruments, stating, “Designing reliable survey items to measure constructs like learning strategies was more complicated than I expected. It required multiple rounds of piloting and revising to ensure that the questions were clear and relevant to the participants’ contexts.” P1 also emphasized the difficulty of balancing theoretical constructs with practical applicability. “It was challenging to operationalize abstract concepts into measurable variables without oversimplifying them,” P1 explained. Similarly, P2 highlighted the logistical challenges of data collection, sharing, “Recruiting enough participants for a statistically valid sample was one of the toughest parts. Many students and teachers were reluctant to commit due to time constraints.” P2 added, “Scheduling data collection during regular class hours was tricky, as it often required negotiating with teachers to avoid disrupting their lessons.” P3 reflected on the analytical challenges of working with large datasets, noting, “Interpreting statistical results in ways that are meaningful for practitioners was a constant struggle. Bridging the gap between numbers and their practical implications for teaching required a lot of thought and careful wording.”

The participants’ responses highlight key challenges in conducting quantitative research in ELT, particularly in designing research instruments, managing logistics, and interpreting data. Creating effective survey items necessitates several revisions to guarantee clarity and validity. Gathering data can be challenging due to participants' hesitance and scheduling issues, which complicates the process of obtaining a statistically valid sample. Furthermore, handling large datasets introduces analytical difficulties, as it takes careful interpretation to convert statistical results into actionable insights for educators. These obstacles underscore the complexities of quantitative research and the need for thoughtful methodological planning. These challenges align with existing literature on quantitative research methodology. Mackey and Gass (2005) discuss the logistical difficulties of conducting research in naturalistic classroom settings, reflecting P2's and P3's struggles with participant recruitment and data collection. Furthermore, Tracy and Seilhamer (2022) emphasize the importance of presenting findings in accessible but accurate ways, echoing P3's focus on making statistical results meaningful for non-researchers. Recent studies further substantiate these challenges. Phakiti, De Costa, Plonsky and Starfield (2021)

highlight the complexities of quantitative research design in applied linguistics, particularly in balancing theoretical and practical considerations in instrument development.

5.5. Methodological Insights with Quantitative Inquiry

Quantitative methods have emerged as a fundamental aspect of research in English Language Teaching (ELT) and Applied Linguistics. They provide systematic and generalizable insights into the processes of language learning and teaching. By utilizing these approaches, researchers can identify patterns, examine relationships, and offer data-driven recommendations that enhance both theoretical understanding and practical application.

P1 emphasized the ability of quantitative methods to identify trends and relationships in large datasets, sharing, “Quantitative research allows us to see patterns across large groups of learners. For example, when I analyzed the use of learning strategies, the data revealed which strategies were most effective for improving specific skills like reading and speaking.” P1 added that statistical techniques such as correlation and regression analysis provided clarity and precision in understanding these relationships. Similarly, P3 highlighted the objectivity and scalability of quantitative methods, stating, “When I studied the impact of gamified learning platforms on vocabulary retention, the use of pre-and post-tests gave us measurable evidence of their effectiveness.” P3 also noted, “Using surveys, I was able to collect data from hundreds of students, which provided a broader perspective than smaller-scale qualitative methods could achieve.” P4 reflected on the practical value of quantitative findings, explaining, “In one study, I assessed the effectiveness of teacher training programs using pre- and post-training evaluations. The results showed measurable improvements, which convinced stakeholders to invest further in similar programs.” P4 also mentioned the role of quantitative methods in making cross-context comparisons, adding, “By analyzing data from multiple schools, we were able to adapt programs to fit the unique needs of different regions.”

The responses highlight the advantages of quantitative research in ELT, including its ability to identify patterns, measure effectiveness, and support data-driven decisions. Its ability to scale allows it to generalize more, while statistical tools boost accuracy. Quantitative results also help to improve policies and education making them useful for both the research and real-world use. These thoughts match up with what experts say about quantitative research in applied linguistics. Dornyei and Taguchi (2010) emphasize the importance of survey-based quantitative approaches for understanding learner motivation and engagement, which resonates with P3’s use of large-scale data collection. Similarly, Brown (2014) discusses the significance of experimental and quasi-experimental designs in language testing and assessment, supporting the findings of P4 regarding evaluating teacher training programs and their impact.

5.6. Addressing Criticisms of Quantitative Methods in ELT

Quantitative methods are fundamental to ELT and Applied Linguistics research, offering generalizable and measurable insights into teaching and learning processes. However, these methods often face criticism for oversimplifying the complexities of language learning and teaching by focusing primarily on numerical data. Participants in this study shared their strategies for addressing such criticisms, emphasizing the importance of complementing quantitative methods with contextual depth, thoughtful design, and practical applications.

P2 highlighted the importance of incorporating contextual variables into research design, stating, “Quantitative methods can capture more complexity when socio-cultural factors are included. For instance, in a study on task-based learning, I accounted for variables like class size and students’ educational backgrounds to ensure the results were meaningful in real-world contexts.” P2 also underscored the value of mixed methods, explaining, “After collecting quantitative data, I often conduct follow-up interviews or focus groups to understand the reasons behind the patterns observed. This adds depth to the findings.” P3 focused on refining research tools to address potential biases, sharing, “Pilot studies are crucial for identifying gaps or biases in survey instruments or tests. This ensures the tools are sensitive to diverse learner experiences.” P3 also emphasized triangulation, adding, “Combining data sources, such as test results, classroom observations, and teacher feedback, provides a more comprehensive picture of the learning environment.” P4 stressed the importance of linking quantitative findings to practical applications, stating, “In one study on teacher training, we used pre-and post-training assessments to measure impact but also

included follow-ups with administrators to see how the training translated into classroom practices.” P4 also highlighted the value of longitudinal studies, explaining, “By tracking changes over time, we could examine how interventions adapted to different contexts, which added depth and relevance to our findings.”

The responses highlight strategies for addressing criticisms of quantitative research in ELT by incorporating contextual depth, refining research tools, and ensuring practical relevance. Researchers enhance quantitative studies by integrating socio-cultural variables, using mixed methods for deeper insights, and piloting instruments to minimize biases. Triangulation and longitudinal studies further strengthen findings, making them more comprehensive and applicable to real-world teaching and learning contexts. These reflections align with established literature on addressing the limitations of quantitative methods. Dornyei (2007) highlights the importance of careful instrument design and contextual sensitivity, echoing P2’s focus on incorporating socio-cultural factors. Additionally, Nassaji (2020) and Loewen (2022) advocate for the use of triangulation and longitudinal studies to capture the dynamic and evolving nature of language learning and teaching.

5.7. Connecting Quantitative Findings to Classroom Practices in ELT

Quantitative research plays a crucial role in improving classroom practices in ELT by bridging the gap between theoretical insights and practical applications. These methods provide data-driven recommendations that inform teaching strategies, enhance learner engagement and guide curriculum design. By identifying patterns and trends, quantitative studies ensure evidence-based decision-making that can be tailored to specific teaching contexts. Participants in this study shared how their findings contribute to practical outcomes, emphasizing the importance of interpreting data in ways that address classroom realities and resonate with the needs of teachers and learners.

P1 shared how their research findings guide teachers toward adopting more effective strategies, stating, “The primary contribution of quantitative findings is in identifying patterns that lead to higher engagement levels. For example, my study on student motivation showed that collaborative activities significantly improved participation.” P1 explained that they share these findings with teachers during professional development sessions, which enables practitioners to implement evidence-based techniques in their classrooms. P2 reflected on using quantitative research to assess specific teaching methods, such as task-based learning. “The results of my study showed significant improvements in students’ reading comprehension, and sharing these findings allowed teachers to make informed decisions about their instructional practices,” P2 noted. P2 also emphasized the importance of contextualizing findings by considering cultural and linguistic factors, adding, “Collaboration with educators during dissemination ensures that the research is interpreted effectively and adapted to local contexts.” P4 highlighted how quantitative findings contribute to broader curriculum development and policy decisions, sharing, “In one of my studies, data on the relationship between class size and student achievement in English proficiency tests was used to advocate for smaller class sizes.” P4 stressed the importance of aligning findings with real-world teaching environments, explaining, “I work closely with policymakers to ensure that data-driven decisions are realistic and sustainable.”

The responses highlight how quantitative Inquiry (QI) informs classroom practices in ELT by identifying effective teaching strategies, assessing instructional methods, and influencing curriculum decisions. Findings help educators adopt evidence-based techniques, ensuring that research outcomes are applicable to real-world teaching contexts. Collaboration with teachers and policymakers further enhances the relevance and sustainability of data-driven improvements in language education. These reflections align with the perspectives of scholars who emphasize the practical applications of quantitative research in ELT. Brown (2004) highlights how quantitative research offers actionable insights into teaching practices when interpreted within specific contexts, which resonates with P1’s and P2’s emphasis on tailoring findings to classroom needs. Ellis (2008) underscores the importance of connecting findings to classroom applications to ensure their relevance to teachers. Recent scholars, such as Nassaji (2020) and Loewen (2022), advocate for integrating quantitative findings into teacher training programs to bridge the gap between research and practice.

5.8. *Quantitative Inquiry in Teaching and Curriculum Design in ELT*

Quantitative research in ELT has a powerful role in shaping teaching practices and curriculum design, offering evidence-based insights that inform decision-making at various levels. Participants in this study provided concrete examples of how their research findings were applied to real-world educational contexts, influencing teaching strategies and policies. They highlighted the significance of tailoring findings to local needs and ensuring the practical relevance of research outcomes for teachers and learners alike.

P2 shared, “My study on project-based learning (PBL) in English classes showed that it significantly improved students' speaking confidence and collaborative skills.” The findings were presented in teacher training workshops, where educators were encouraged to implement PBL. “Teachers reported that students became more engaged and used English more naturally during group tasks,” P2 noted. To ensure practical implementation, P2 worked with teachers to adapt activities to different school contexts. P3 explained, “In a study on vocabulary retention, I found that contextualized tasks yielded better retention than isolated word lists.” This led to changes in assessment design, incorporating scenario-based tasks. “Teachers observed that students retained vocabulary better and applied it effectively in speaking and writing,” P3 shared. P4 discussed curriculum reform, stating, “My large-scale study showed a strong correlation between digital tools and student engagement.” This resulted in integrating interactive platforms for grammar and listening practice. “Training teachers and providing technical support ensured sustainable classroom changes,” P4 concluded.

The responses illustrate how quantitative research influences teaching practices, assessment methods, and curriculum design in ELT. Research findings help educators implement innovative strategies like project-based learning, improve assessment authenticity, and integrate digital tools to enhance student engagement. Collaboration with teachers and administrators ensures that these evidence-based changes are practical, adaptable, and sustainable in diverse educational contexts. These examples align with the perspectives of Brown (2004) and Ellis (2008), who emphasize the importance of applying research findings to real-world educational contexts. More recent contributions, such as Nassaji (2020) and Loewen (2022), highlight the growing importance of technology and contextualized learning in ELT, reinforcing the participants' emphasis on adapting research findings to meet the evolving needs of learners and educators.

5.9. *Alignment with Qualitative and Mixed Methods Approaches*

Quantitative research plays a crucial role in ELT by providing measurable and generalizable insights. However, its scope compared to qualitative and mixed methods often prompts reflection, as each approach offers unique strengths and limitations. Participants in this study shared their experiences and perspectives on how quantitative methods align with or differ from qualitative and mixed methods in ELT research. Their responses highlighted the importance of selecting an approach that fits the research objectives and addresses the complexity of language teaching and learning.

P1 highlighted the value of quantitative methods for identifying trends, stating, “I’ve used surveys to examine students’ attitudes toward blended learning, and the statistical analysis provided clear, actionable results.” However, they noted its limitations, adding, “That’s where qualitative methods come in.” P1 emphasized mixed methods, explaining, “Quantitative data gives me the bigger picture, while qualitative data helps explain why those trends exist.” P2 echoed this, noting that while quantitative methods effectively evaluate interventions, they lack depth in understanding learning dynamics. “In one study, I paired pre- and post-tests with observations and interviews. The test scores showed improvement, but qualitative data revealed motivation’s key role,” P2 shared. P3 agreed, stating, “Quantitative methods establish causal relationships but don’t always account for social and cultural factors.” They explained, “I started with quantitative tests but followed up with focus groups to understand learners’ challenges. This combination helped refine instructional materials.”

The responses highlight that while quantitative research provides objective and generalizable insights, it often lacks the depth needed to fully understand complex ELT phenomena. Combining qualitative methods helps capture learner experiences, motivation, and contextual factors, making research findings more applicable to real-world

teaching. These perspectives collectively emphasize that while quantitative methods excel in objectivity and generalizability, integrating qualitative methods adds depth and context, making the research more applicable to real-world ELT scenarios. These reflections align with Creswell and Plano Clark's (2018) argument that mixed methods provide a holistic approach to research by integrating quantitative breadth with qualitative depth. Bryman (2012) further highlights the complementarity of research methods, emphasizing that mixed methods bridge the gap between numerical analysis and contextual depth. Moreover, Paltridge and Phakiti (2015) argue that combining approaches enhances the validity of findings in applied linguistics, ensuring that research reflects both broad trends and individual learning experiences. Finally, Riazi and Candlin (2014) stress the necessity of methodological pluralism in ELT research, advocating for a balanced integration of different research paradigms to achieve comprehensive insights.

5.10. Advice for Early-Career Researchers

Quantitative research plays a vital role in ELT, offering measurable and generalizable insights into teaching and learning processes. It enables researchers to identify patterns, establish relationships, and provide evidence-based recommendations for classroom practices and policy decisions. However, for early-career researchers, successfully implementing quantitative methods requires careful planning, methodological rigor, and an understanding of how to connect findings to real-world contexts. Participants in this study shared their experiences and advice on how to navigate the challenges and opportunities of quantitative research in ELT, emphasizing practical steps and strategies to ensure impactful research outcomes.

P2 highlighted the importance of aligning research questions with the strengths of quantitative methods, sharing, "Quantitative research excels in identifying patterns and testing relationships between variables." P2 stressed the value of piloting instruments, explaining, "Before administering large-scale tests, conduct a pilot study to save time and improve the quality of your data." P3 focused on the necessity of mastering data analysis tools, advising, "Early-career researchers should invest time in learning statistical software like SPSS or R. A strong command of analysis methods allows you to interpret your data accurately and present it meaningfully." P3 also emphasized the importance of contextualizing numerical results, stating, "Quantitative data can sometimes seem disconnected from real-world implications. Frame your findings in ways that directly relate to classroom practices." Meanwhile, P4 stressed the ethical and practical aspects of quantitative research, noting, "Ensure your studies adhere to ethical guidelines, such as informed consent, anonymity, and transparency, to maintain trust with participants." P4 also underscored the importance of disseminating findings effectively to practitioners, stating, "Present your findings in accessible formats like workshops or practitioner-focused publications to bridge the gap between research and practice."

The responses highlight key advice for early-career researchers in ELT, emphasizing the need for careful planning, methodological rigor, and practical application of quantitative research. Piloting instruments, mastering statistical tools, and contextualizing findings enhance research quality and relevance. Ethical considerations and effective dissemination ensure that research findings contribute meaningfully to teaching and learning practices. These reflections align with Dornyei's (2007) emphasis on methodological training and ethics, Creswell and Plano Clark's (2018) focus on piloting and data analysis, and Nassaji's (2020) call for practical dissemination.

5.11. Exploring Underutilized Areas for Quantitative Methods in ELT

Quantitative research has long been a cornerstone of ELT, offering valuable insights into language teaching and learning processes. However, there are still several underexplored areas where quantitative methods could make a greater impact. Participants in this study identified domains such as long-term learning outcomes, teacher development programs, and the integration of technology in language acquisition as areas where quantitative approaches could fill critical gaps. By addressing these underutilized areas, researchers can generate robust evidence to improve educational practices, guide policy decisions, and enhance the effectiveness of ELT methodologies.

P1 highlighted the need for quantitative research on long-term learning outcomes, stating, “We often see short-term results being measured, but the long-term impact of instructional methods on language retention and fluency is rarely explored using quantitative data.” P1 added that tracking students’ progress over several years through statistical analysis would provide invaluable insights for curriculum design and policy-making. Similarly, P2 emphasized the potential for quantitative studies in teacher development programs. P2 remarked, “While qualitative research has explored teacher beliefs and practices extensively, large-scale quantitative studies measuring the effectiveness of professional development programs are scarce.” P2 suggested using pre-and post-assessments to identify which training modules lead to measurable improvements in classroom practices and student outcomes. Meanwhile, P3 focused on the integration of technology in language learning, stating, “There’s a lot of qualitative work on perceptions of digital tools, but we need more quantitative studies to measure their actual impact on learning outcomes.” P3 explained, “Analyzing test scores or engagement metrics before and after the implementation of digital platforms could provide concrete evidence of their effectiveness.” P3 also stressed the importance of longitudinal studies in this area, noting, “Technology evolves rapidly, so measuring its long-term impact on skills like writing, speaking, or listening would help institutions make informed decisions.”

The responses highlight underexplored areas where quantitative research could enhance ELT, including long-term learning outcomes, teacher development programs, and the impact of technology on language acquisition. Tracking student progress over time, measuring the effectiveness of professional training, and analyzing digital tools' impact with statistical methods can provide valuable, data-driven insights. Expanding quantitative research in these areas would strengthen curriculum design, guide policy decisions, and improve teaching methodologies. These reflections support Bachman's (2004) argument that test-based quantitative research for assessing language proficiency and instructional impact, while Norris (2015) underscores the role of large-scale empirical studies in validating assessment frameworks and pedagogical interventions. Furthermore, DeKeyser (2017) argues for the necessity of experimental quantitative approaches to investigate language learning processes. Recent scholars such as Ellis and Shintani (2022), Plonsky (2023) and Taguchi (2021) emphasize the increasing role of data-driven methodologies in language acquisition, testing, and teacher training research.

6. Conclusions

This study has explored the pivotal role of quantitative inquiry in ELT research which considers its systematic approach to investigating pedagogical challenges, assessing instructional efficacy, and informing curriculum development. The study employed a basic qualitative design with semi-structured interviews, allowing for an in-depth exploration of experts’ perspectives on the relevance and application of quantitative methods in language education. The findings demonstrate that quantitative methods in language education offer objectivity, scalability and statistical precision. However, they require careful instrument design, validity checks and contextual sensitivity to maximize their applicability in ELT.

The study also shows that effective quantitative research in ELT must go beyond statistical generalization to ensure practical relevance for educators and policymakers. This is achieved through integrating robust data analysis techniques, such as inferential and descriptive statistics, and linking findings to classroom realities. Addressing common criticisms of quantitative research, participants emphasized the value of mixed methods approaches, contextual adaptations and longitudinal studies to capture the complexity of language learning and teaching. By advancing methodological practices and fostering interdisciplinary collaborations, quantitative research will remain an indispensable tool in shaping ELT policies and pedagogical innovations.

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