Textbooks

CRITICAL REVIEW ON ELT RESEARCH

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FOREWORD

Praise be to Allah SWT, the Giver of Knowledge, thanks to His Grace and Gifts, so that we can complete the Textbook entitled Critical Review on ELT Research. We have compiled this book to the best of our ability and received assistance from various parties so that we can expedite the creation of this book. For this reason, we would like to express our thanks to all parties who have contributed to the creation of this textbook. Apart from all that, we are fully aware that there are still shortcomings both in terms of sentence structure and grammar. Therefore, with open arms, we accept all suggestions and criticism from readers so that we can improve this textbook.

Finally, we hope that this book about Critical Review on ELT Research can provide benefits and inspiration to readers, may Allah SWT always make it easy for us to understand the contents of this book.

Medan, 27 June 2023

Author Team

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CHAPTER I

INTRODUCTION

A. INTRODUCTION

As a potential English teacher, you must be able to interpret as well as collect research reports linked to teaching English. The research report provided information. In reality, it is really beneficial for boosting the quality of your learning. Johnson (1992) emphasized that reading research reports is not only useful for increasing the reader's knowledge, but it should also be able to make the reader critical in responding to other people's research, in asking questions (research questions) asked in the research, the methods used, the findings obtained, and the conclusions given.

Aside from that, readers should be able to benefit from the research results language used by others and carry out their own study. Module 1 of the Research course in ELT covers subjects linked to research in English language instruction. Module 1 covers the following topics:

1. Key challenges in English instruction,
2. Classroom research library studies,
3. Case study literature review,
4. Action research literature review.

It is hoped that after finishing Module 1, you would be able to:

1. Identify issues in English language education;
2. Apply the findings of library studies on classroom research to improve the quality of English language instruction.
3. Apply the findings of case study research literature reviews to enhance the quality of English language teaching;
4. Apply the findings of action research literature reviews to improve the quality of English language teaching.

CHAPTER II

ENGLISH LANGUAGE TEACHING ISSUES

A. ENGLISH LANGUAGE TEACHING ISSUES

We shall explore major issues in English education in the sections that follow. In general, issues or topics that are regarded essential at a given moment are heavily influenced by the (educational) paradigm that is in place at the time. For example, several study areas referred to behaviorism theory during its golden age, which lasted from the 1950s to the 1970s. In linguistic research, we frequently come across names like The Role of Pattern Practice Toward Students' Speaking Ability or Teaching Grammar Through Drills.

When a new understanding emerged in the 1960s, namely Cognitivism, which believes that the learning process is shown not only by changes in behavior as espoused by behaviorism, but also by changes in schema structure in a person's cognitive area, which cannot always be observed, research titles such as The Effect of Motivation on Students' English Achievement (The Influence of Motivation on Students' English Mastery) or The Relationship between Attitude and Students' Sp Linguistic researchers are striving to determine how powerful or significant cognitive structures are in the language learning process, both in English as a first language and in English as a second or foreign language.

Understanding social constructivism developed as a new approach in education around the end of the 1980s. Adherents of this philosophy think that knowledge (which is one of the learning objectives in school) is learned through the learners' own social activities. In other words, knowledge is socially constructed, according to them. This new perspective is then followed by classroom learning activities based on social constructivism theory.

In language education, the terms peer teaching, cooperative learning, and scaffolding are frequently used. Furthermore, research titles that are indirect applications of contemporary thinking are rife with phrases from social constructivism theory. We frequently see names like The Effects of Cooperative Learning on Students' Speaking Ability (The Effect of Group Learning on Students' Spoken English Ability) or Improving Students' Writing Through Peer Revision. faced in the recent decade.

The terms peer teaching, cooperative learning, and scaffolding are widely used in language education. Furthermore, study titles that

are indirect applications of modern thinking are related with social constructivism theory words. In the last decade, we've seen names like The Effects of Cooperative Learning on Students' Speaking Ability (The Effect of Group Learning on Students' Spoken English Ability) or Improving Students' Writing Through Peer Revision.

The first is how pupils learn from the process of learning itself (Learning from Instruction). Second, subject matter learning components and how the teacher communicates educational information (Teacher Talk); third, everything connected to student behavior (Learner Behavior). Student conduct is essential in linguistic study in the classroom because it is related to more than just the language used by students. It is also related to the learning strategies employed by students and the social interactions that take place within the classroom. Fourth, there is interaction in the classroom (Interaction in the Classroom). The four major issues that determine the success of a learning process and are topics of linguistic study, particularly those connected to English language teaching research, will be addressed in the next section.

B. PRACTICE 1

Do the following task to strengthen your knowledge of the content presented above!

1. What assumptions underpin English language teaching?
2. What is the distinction between behaviorism, cognitive constructivism, and social constructivism?
3. What factors influence the success of a teaching and learning process?

C. LEARNING FROM INSTRUCTION

The Acquisition-Learning Hypothesis idea proposed by Krashen (1981) is well-known in the field of teaching English as a second language. According to Krashen's idea, learning a second language (and other foreign languages) will be more effective if the learning context is natural or natural. Krashen (1981) distinguishes language acquisition from language learning. Language acquisition is the process of learning a second language, which is similar to children acquiring their mother tongue (L1).

So that the process of learning a foreign language can run well, a natural and meaningful communication situation (meaningful interaction) is needed, that is, the speaker does not need to worry about linguistic rules but rather prioritizes understanding the

message he wants to convey. According to Krashen (1981), the language acquisition process takes place in the subconscious (subconscious) of the language user. Language learning, on the other hand, is a process of learning a (foreign) language, in which the learner consciously uses the language learned in a formal classroom context and corrects errors made (error correction), usually provided by the teacher. In the language learning process, language rules (grammar) are also taught explicitly.

According to this view, Krashen believes that formal foreign language training in the classroom (foreign language instruction) has a very limited impact (Krashen in Chaudron, 1989). To overcome the formal learning process's limited benefits, Krashen proposes that teachers be able to create a conducive learning environment in order for the learning process to take place optimally. Teacher support that is thought to be capable of overcoming the constraints of formal foreign language (English) teaching is affective support.

D. PRACTICE 2

Do the following task to strengthen your knowledge of the content presented above!

1. What factors contribute to good language teaching?
2. What is the distinction between language acquisition and learning?

E. TEACHER TALK

Theoretical focus on intelligible and accessible official/formal learning leads to a degree of L2 research interest in teacher dialogue or teacher speech, also known as teacher talk (teacher speech or discourse). In the first approach, research demonstrated a picture of the L2 sides or angles of the teacher's discourse or utterances that differ from the students' L2 in non-learning exposure. Although sociolinguistic variation in utterances or conversations for learning purposes is intriguing in and of itself, the primary goal of research has been to understand what makes teacher discourse useful for teaching and learning.

If input for pupils must be comprehended, what features distinguish the teacher's speech in the classroom as suited to the child's L2 classmates? The research in this section typically seeks to characterize and assess numerous aspects of teacher discourse that can be developed/modified with the degree of conversation, grammar, vocabulary, pragmatic function, and so on.

Aside from teacher development/modification study, the instructor's discourse in the classroom is evaluated in general, particularly symptoms that can influence students' opportunities to participate or integrate instructional content. This talk specifically refers to:

1. The level of teacher discourse in comparison to student discourse in class;
2. The diversity of teacher discourse in terms of pedagogical/teaching and meaningful movement or behavior;
3. The reasonableness of the teacher's explanation in delivering teaching materials;
4. Teacher activities in a reciprocal or two-way relationship with children educate.

F. PRACTICE 3

Do the following task to strengthen your knowledge of the content presented above!

1. What research is conducted in teacher or teacher conversations?
2. What features or aspects of the instructor's discussion or teacher speak can be researched?
3. What is the research emphasis of attention from teacher discussions or teacher talk?

G. BEHAVIOR OF LEARNERS

L2 acquisition researchers such as Gardner and Lambert (1972), Horwitz and Young (1991), and Schumann (1975) in Samimy (1994) agree that affective variables such as motivation, feelings of tension or nervousness (anxiety), and the willingness to risk language errors (risk taking behavior) are critical factors that can explain why one language learner succeeds while another fails. As a result, teachers should pay attention not only to students' cognitive components, such as simply presenting lessons (what to teach and when to teach it), but also to the three affective variables, such as motivation, anxiety, and risk taking. student conduct

Creating a pleasant learning environment (non-threatening learning time) should be on the agenda of any English language teacher. Here, the teacher will be faced with the situation of how to teach (how to teach) specific English material so that students can have high learning motivation, learn in a pleasant atmosphere because

there is no tension or nervousness, and students know that the teacher and other students in the class can provide tolerance for language errors made. Aside from the three elements mentioned above, studies on students' learning styles have gotten a lot of interest from English language scholars.

H. PRACTICE 4

Do the following task to strengthen your knowledge of the content presented above!

1. What kind of study was done on teacher conversations?
2. What features or parts of teacher discussions can be researched?
3. From teacher exchanges, what is the focus of research attention?

I. INTERACTION IN THE CLASSROOM

Aside from the four challenges mentioned above, another significant issue that we have recently encountered in English teaching is the change in time for kids in Indonesia to learn English formally through school for the first time. If English was formerly taught to pupils in the first grade of junior high school, it is now advised that it be taught as local content in primary schools and even kindergartens or playgrounds. This has ramifications and implications for both school institutions, in this example elementary schools that opt to teach English to their kids, and LPTKs where these English teachers are prepared.

Among the ramifications of this new policy is the necessity for elementary school English teachers to grasp proper methodology for teaching English to primary school children. There should also be courses that equip prospective teachers with knowledge of methodology and developmental psychology for elementary school age children, so that English language teaching can take place effectively in LPTKs where English instructors are equipped.

If you've recently heard of the topic English For Young Learners, it's because it arose as a response from the world of education - in this case English language education - to the need for knowledge about the methods and materials that must be taught to young English learners. This new teaching area is actually very intriguing to explore since, aside from being a relatively new subject of study in Indonesia, there do not appear to be as many experts as those who have been focusing

on the study of English language teaching at the junior and senior high school levels.

Techniques and strategies for teaching English that are appropriate to the age of children (usually those in the age range of 5 to 12 years), the allocation of materials that must be provided, and techniques for evaluating the learning success of elementary school age children are among the study areas that the author considers important and interesting to study in the area of English For Young Learners.

Aside from the issue of English for Young Learners, there is another topic worth discussing: the use of the internet for English instruction. Many websites are created by English language teaching developers to aid English teachers in producing topic matter as well as to provide referrals or references linked to English language learning.

That not all instructors in Indonesia have access to computers with modems to obtain information over the internet; perhaps this might be addressed by giving these facilities in schools. Forward-thinking school principals should agree that the school's investment in providing free internet access for teachers at school will undoubtedly have a good influence on teachers' professional development, and therefore on pupils at that school. At the end of study Activity 1, there is a list of websites that provide English study and teaching materials.

J. PRACTICE 5

Do the following task to strengthen your knowledge of the content presented above!

1. Discuss the importance of teaching English in primary schools!
2. Describe the motive that drives scholars to investigate the subject of English for Young Learners!
3. Mention something different than English For Young Learners!

K. SUMMARY

Various educational ideas have arisen over time, one of which being Behaviorism (1950), which inspired research such as The Role of Pattern Practice toward Students' Speaking Ability and Teaching Grammar via Drills. Then came Cognitivism (1960), which gave rise to research titles like The Effect of Motivation on Students' English Achievement and The Relationship Between Attitude and Students' Speaking Ability. So it was Social Constructivism (1980) that gave

origin to the terms peer teaching, cooperative learning, and scaffolding, as well as the research title The Effects of Cooperative Learning on Students' Speaking Ability and Improving Students' Writing Through Peer Revision. As technology advances, four major challenges concerning the success of a class teaching emerge:

1. Learning from Instruction.
2. Teacher Talk.
3. Learner Behavior.
4. Interaction in the Classroom.

CHAPTER III

CLASSROOM RESEARCH

A. STUDY 1: ENGLISH AS A SECOND LANGUAGE STUDY

It is not reasonable to gather data (information) regarding learning events as a method of expanding your understanding of language learning and its usage when a language class is clearly identified as giving birth to learning. In keeping with Stenhouse's (1975) sense of guilt that no research is as it is, you can understand the significance of the rising corpus of expert opinion relating to research in the language classroom.

Spada (1990) provides examples that simplify classroom research exercises. Because the research employs a simple observation tool (instrument), it is directly related to classroom research concerns. comprehended (complete) - the COLT (Communicative Orientation of Language education) scheme: a simple monitoring chart for language education. Originally, this chart was intended to capture many features of communicative language use in the classroom.

This graphic is divided into two halves, A and B. Part A is a communicative language teaching viewpoint that incorporates organizational and pedagogical components (administration and educational structure) of the class. Part B is anticipated to reflect (give feedback) on research discourse on first and second language acquisition research, as well as components of the record (document) of the teacher-student relationship. The tool has been utilized in a variety of instructional contexts, including second language teaching for children (ESL for children), core education, and special education.

One of the experiments that Spada recounts in detail is a comparative inquiry (comparative investigation) of three adult ESL classes held over a six-month intense summer session. After a four-week period, each class was watched for five hours daily, once a week. The investigation tries to ascertain the following:

5. how various teachers understand language teaching theory communicatively in terms of (in terms of) classroom practice;
6. whether diverse class activities affect learning outcomes. Process-product research refers to studies that attempt to identify causal correlations between classroom activities and learning outcomes. These studies are often difficult to carry out.

Students are given a set of tests (test) at the start of the experiment, which includes the Comprehensive English Language Test (English Comprehension Test), the Michigan test of English Language Proficiency (English Language Proficiency Test from Michigan), teacher-made reading, writing, and conversation skills tests, and multiple choice questions on sociolinguistics and linguistic discourse tests.

Class A, for example, takes twice as long as basic activities (form-based labor) in class C, and three times longer than class B, according to qualitative examination of convincing class differences. To determine if the variations explain students' (learners') second language abilities L2 competence), baseline test scores and test scores following treatment (before and post-treatment test scores) were compared in a differentiating analysis (analysis of covariance).

According to a qualitative study of convincing class differences, class A, for example, takes twice as long as basic activities (form-based labor) in class C and three times longer than class B. To see if the differences explain students' (learners') second language abilities (L2 competence), baseline test scores and post-treatment test scores (before and after therapy) were compared in a differentiating analysis (analysis of covariance).

In other words, the result that some students improved much more than others on post-treatment exams will not be interpreted (uninterpretable), indicating that researchers did not identify qualitative data in distinct class instruction.

B. PRACTICE 1

Do the following task to strengthen your knowledge of the content presented above:

1. What qualities distinguish classroom research?
2. The COLT chart is made up of.....
3. What is studied in the field of English as a second language research?
4. What equipment is utilized for preliminary well testing?
5. What type of analysis is required in classroom research?

C. SUMMARY

Classroom research employs:

1. One of the observation tools that is very simple to grasp (comprehensive).

2. The COLT (Communicative Orientation of Language instruction) scheme: a simple language instruction monitoring chart.

Two classes are designated as trials (experimental), while the remaining six are designated as analysis or analysis classes (analytical). The first example from this study demonstrates that the gathering of initial test data and during testing was insufficient.

CHAPTER IV

CASE STUDY RESEARCH

A. CASE STUDY

It can be difficult to tell whether a study is a case study or not. In actuality, there are numerous ways and more to limit case studies, thus it is simple to conclude that this is not a case study. While it is easier to say that observations of students learning a language as a problem or case, and this includes observations of classes as a problem or case, it is also an investigation of the entire school or even the entire region (for example, one sub-district, one district, one municipality, or one province).

Adelman, Jenkins, and Kemmis (1976) stated in an important paper that uses case studies in the field of education that case studies should not be confused with observational studies because this would ignore the history of case studies and case studies are not as simple as initial experiments (pre- experimental) and is not a term for a methodical group of measures. The case study method is a hybrid, which is a separate section that normally uses a number of ways to gather and explain information (collecting and analyzing data) rather than limiting the use of one stage (limited to a single procedure).

Adelman, Jenkins, and Kemmis (1976) stated in an important paper on the use of case studies in the field of education that case studies should not be confused with observational studies because this would disregard the history of case studies and case studies are not as simple as preliminary experiments (pre-experimental) and is not a term for a methodical group of measures. The case study approach is a hybrid, which is a different segment that typically uses a variety of methods to gather and explain information (gathering and analyzing data) rather than limiting the use of one stage (restricted to a single procedure).

1. Research Area

Schmidt set out to investigate the effects of social and interactional variables on the acquisition of communicative competence.

2. Justification

At the outset of his study, he notes that most current research is geared toward morphology and syntax acquisition, to the virtual exclusion of semantic and pragmatic components of second language

development. In his survey of the literature, he alludes to the work of Hatch (1978) and others who argue that syntactic structures emerge through interaction, that is, that the development of syntax is driven by speech. This contrasted with the prevalent perspective at the time this article was produced, which held that one first learns structures and then 'links' these structures together to generate discourse. Studies on the relative claims of casual interaction versus formal teaching for language development are also examined.

Finally, other research are highlighted, including Schumann (1978), who believes that affective and social variables lay behind and influence the amount and quality of interaction, and that these variables may influence the amount of acquisition. According to Schmidt's review, "there is an assumption that if communicative needs were greater and social distance was less, much greater control of the grammatical structures of the target language could have been acquired without formal instruction."

3. Background

Schmidt sought evidence for the acculturation model in this case study by conducting a three-year case study of a learner with low social and psychological distance from the target culture who was acquiring the language naturalistically, that is, without formal instruction. W, the subject, was a natural Japanese speaker whose positive sentiments toward the target culture were expected to facilitate second language acquisition. Schmidt reached this conclusion by investigating elements such as attitude, culture shock, and empathy, however he notes that such psychological factors are extremely difficult to operationalize or analyze, and that they are all subjective, some extremely so.

All observers agree that W is an exceptionally extroverted and socially outgoing person, with high self-esteem and self-confidence, little anxiety and inhibition,' Schmidt said of personality traits. He is sensitive to the sentiments and thoughts of others, intuitive, impetuous, and not afraid to make mistakes or appear silly in his use of English.' While such very subjective observations call the study's internal validity into question, it's impossible to imagine how they could have been gathered in any other way.

Canale's (1981) four-compartment model of communicative competence serves as the study's theoretical construct. The essential aspects defining a user's overall competence in any given language, according to this paradigm, are grammatical, sociolinguistic,

discourse, and strategic competence. Grammatical competence is defined as the elements and rules of language. Canale's (1981) four-compartment model of communicative competence serves as the study's theoretical construct. The essential aspects defining a user's overall competence in any given language, according to this paradigm, are grammatical, sociolinguistic, discourse, and strategic competence. Grammatical competence is defined as the elements and rules of language.

B. PRACTICE 1

Do the following task to strengthen your knowledge of the content presented above

1. Case study research is still being debated because...
2. Schmidt's assessment of the problem is....
3. In the case study, what did Schmidt notice?
4. Canale's methodology includes language acquisition case studies on....

C. DATA ANALYSIS MODEL

Schmidt, like many other case studies, relies on a variety of data sources, including taped monologues and dialogues, fieldnotes, tables of morphosyntactic elements, and interviews. Grammatical competency was studied by studying the evolution of pronunciation, which is 'better than that of the average Japanese student I have encountered,' yet no proof is supplied to back this claim, so the reader must accept it on faith. In contrast, data are presented to support Schmidt's argument that little progress was made in the acquisition of nine grammatical morphemes.

Schmidt states that no morphemes switched from unacquired to acquired status over the course of the study (nearly a year and a half) using the criterion of 90% accurate suppliance in mandatory contexts. Three morphemes - copula be, progressive -ing, and auxiliary be - appeared to have been acquired at the start of the study, being supplied in the majority of situations when they were necessary. Schmidt n, on the other hand, disputes whether the progressive and auxiliary were truly acquired.

Schmidt probes W's metalinguistic knowledge by asking him what the difference between 'paint' and 'painting' is, to which W responds:

W: Well, if I go to an exhibition, I might see 'paint,' but 'I'm starting painting' means I'm doing it, not finishing it.

R: OK, sort of, but what's the distinction between 'thought' and 'thinking'?

W: 'I'm thinking' means right now, whereas 'I'm thinking' indicates later.

If we accept the validity of introspection, there appears to be pretty obvious evidence here that W hasn't figured out the distinction between the two verb forms, at least not on a metalinguistic level.

A discursive analysis of W's phrases as recorded in Schmidt's fieldnotes was used to assess his sociolinguistic competency. Schmidt focuses on W's use of directives (getting others to perform things at his command) and believes that in the beginning, W was reliant on a small number of formulaic utterances, but that there is evidence of progress over time. He claims that W's progress in the domain of sociolinguistic competency shows his strong desire to interact and acculturate with the target society.

W's sociolinguistic proficiency was evaluated using a discursive analysis of his sentences as recorded in Schmidt's fieldnotes. Schmidt focuses on W's use of directives (commanding others to do things) and feels that, at first, W's was reliant on a small number of formulaic utterances, but that there is evidence of growth with time. He says that W's advancement in the domain of sociolinguistic competency demonstrates his strong desire to interact with and acculturate with the target society.

The kind of joke (kind of humor) that is natural, nice, and sarcastic. This reading or discourse (unfortunately and inevitably less clearly from a transcript or notes than from a recording that provides the tone of a voice) is a feature of W's conversation, as is the ability to listen to what people are saying and take matters into their own hands for further development. W is neither a mute or passive speaker; instead, he frequently discusses topics. Furthermore, the issues he highlights are invariably related to earlier issues.

I've never heard of a conversation coming to a halt because Wes brought up a problem (or highlighted an existing problem in the conversation - commented on a matter already on the floor) that indicated he didn't grasp what the prior speaker was saying. or make unexpected (incomprehensible) linkages to new challenges. To put it simply, he is not like other non-native speakers with equivalent linguistic levels that I have witnessed. This is the Schmidt's Conclusion.

I've never heard of a conversation halting because W brought up a problem (or highlighted an existing problem in the discourse - commented on a matter already on the floor) that indicated he didn't understand what the previous speaker was saying. might establish unanticipated (incomprehensible) connections to new problems. Simply put, he is not like other non-native speakers with comparable language levels that I have observed.

Schmidt believes that personality traits such as confidence, tenacity, and readiness to communicate go a long way toward compensating for grammatical flaws. Short dialogue excerpts are included in the case study, along with interpretive analysis. Schmidt proposes in the following scenario that W pays close attention to indications from native speakers indicating that they have not understood. W repairs the breakdown in this example by describing what he means by 'dream' and 'after your life,' as well as providing a particular example of what he means.

D. CONCLUSION

Schmidt reaches his conclusions after providing handpicked samples from his numerous data sources and commenting on them. He claims that whether one believes W to be a good or bad language learner is determined by one's definitions. He provides anecdotal evidence that "several sociolinguists" believe W is a superior learner, whereas grammar teachers "generally consider him a disaster." Schmidt dismisses the premise that there is a causal relationship between acculturation and grammatical development based on his research.

Assuming that his conclusions are correct (although Schmidt expresses some misgivings), Schmidt's study indicates an important role for the case study: refuting a previously established hypothesis. Having found a single highly acculturated learner whose grammatical development shows little evidence of development over significant period of time, Schmidt is able to call into question the acculturation hypothesis: 'The idea that if affective factors are positive then cognitive processes will function automatically, effortlessly, and unconsciously to put together conclusion about grammar is overly optimistic'. The study has various other consequences, including the realization that the formation of a second language includes more than morphsyntax acquisition and that this should be acknowledged in the academic literature.

E. PRACTICE 2

Do the following task to strengthen your knowledge of the content presented above

1. Schmidt's data collection.....
2. For over a year and a half, kids in Schmidt's observations have mastered morphemes....
3. According to Canale, the communicative component of competence is...
4. Schmidt's findings from the ability case study Wes language are...
5. Do Schmidt's case study research findings support or refute the research hypothesis?

F. SUMMARY

A case study is a hybrid in terms of method, essentially anything that is a separate component that usually employs a number of methods to gather and describe information (collecting and analyzing data) as opposed to limiting the use of one stage (limited to a single procedure).

A. The insight that the development of a second language involves more than the acquisition of morphsyntax and that this should be reflected in the research literature.
B. Grammatical development shows little evidence of development over significant period of time.
C. Affective factors are positive then cognitive processes will function automatically, effortlessly, and unconsciously.
D. A casual relationship between the degree of acculturation and grammatical development.

If you achieve a mastery level of 80% or higher, you can proceed to Learning Activity 4. Good! If it is still less than 80%, you must go over the Learning Activity 3 content again, focusing on the sections that have not been grasped.

CHAPTER V

ACTION RESEARCH

A. ACTION RESEARCH

Action research is a type of research that is gaining popularity. It is defined as independent searches conducted by students or teachers with the goal of solving problems, improving teaching, or expanding knowledge. (This is usually done in a group or collaborative effort.) Current action research on second language teaching discourse (Nunan 1989, 1992) focuses on instructors' own focus on obtaining learning within the constraints of their specific classrooms (Richards and Freeman 1992).

Although action research is viewed as a response to the initial goals, it will undoubtedly lead to changes in the condition of society as a result of group problem solving and cooperation. According to Kemmis and McTaggart (1988), the primary goal of private classroom inquiry is to establish the group's broader goals:

> The approach is only action research when it is collaborative, though it is important to realize that the action research of the group is achieved through the critically examined action of individual group members [emphasis in original].

According to one teacher who has undertaken action research, action research helps shape and structure what teachers refer to as inner touch or intuition. This statement is a form of succinct but precise expression of the essential principles of the natural connection of action research and student expressions and searches that teachers do in their daily activities. As research and formulation of second language learning activities grow more meaningful, it is becoming increasingly clear that teaching is a body of learning that is always eager to improve and change (see Woods 1996; Freeman and Richards 1996; Roberts 1998).

It necessitates the accumulation of complex understandings and activities that are continuous with testing, testing is carried out on a regular basis about students, events, activities, and interrelationships, and planning entails detailed relationships between preparation, moment-to-moment decision making, and sequential planning that occurs.

Joint research allows for the organization of informal personal thoughts in a more orderly or systematic manner, as

well as the collection of problem-solving answers. The addition of instructors or professors who actively or actively construct learning theories or ideas in respect to certain learning interactions enhances the benefits. It can also bring to a wider audience concepts about learning that are normally kept private. So, how does integrated action research manifest itself in real-world activities or practice?

There are few published examples of action research undertaken by teachers in the field of language learning (although see Edge and Richards 1993; Field et al. 1997; Richards 1998; Freeman 1998), and language teachers now have few examples that may be learned. Furthermore, research into general education textbooks is fast expanding, and these resources offer an intriguing and useful resource for second language teachers.

Some teachers have recurring concerns about action research on the learning of English as a second language (ESL) and as a foreign language (EFL). Can be used to structure learning challenges or conversations that involve continuing uncertainty and necessitate teachers being more conscious of observation and problem solving in order to improve new teaching tips or tactics.

Then it becomes a method of storing or gathering work results, a method of declaring or denying the conformity of goals with actions or practices. This search can be discussed on a regular basis with other teachers or instructors who may see this dialogue as a general issue.

Janette Kohn is an Adult ESL instructor from TAFE Yeronga Institute in Queensland who has been teaching ESL for 20 years and has taught students of various abilities from beginning to advanced. A group of research instructors has come together to examine learning methods or strategies for pupils from varied or mixed backgrounds.

This long-standing emphasis on Janette's TESOL (teaching English to speakers of a second language other than English) career or job experience demonstrates how to encourage students to use English outside of the classroom. Janette expresses consistent encouraging attention, so he saw the last group of pupils who were a level above beginners at the start of the session meeting.

Language learners differ in a variety of characteristics that influence their second language acquisition, rate of progress, and, most importantly, eventual level of performance. I was interested

in my students' confidence, willingness, and ability to utilize English outside of the classroom.

Three weeks into a ten-week course, it was clear that those students who had or created opportunities to utilize English were more confident, proficient, and looked to be making faster progress. The class, which had been pretty homogeneous at first, grew quite diverse. (Kohn 1997).

Janette's class is made up of 18 pupils that come from a variety of backgrounds, including Vietnamese, Taiwanese, Bosnian, Iranian, and Thai students. Involving students as co-researchers in an engagement or participation method that he viewed as hands-on and practical (provider and implementer) was a key or compelling feature of his research planning.

He decides on the activities or procedures that will lead to the research topic, in addition to discussing the use of English outside of the classroom: How much English do kids presently speak outside of the classroom? He believes that the data (information) gathered will come from both sides, himself and the pupils' awareness of real-world practice (usage).

Janette employed questionnaires (observations) that involved students in English language mapping outside of class every day for a week to collect information on the levels or steps of this research. Observations are designed (adjusted) based on the first week of use, and students continue with English use for another week. To complete observations, short talks involving verbal feedback are held either traditionally or throughout the class (plenary meeting), and Janette discusses her research with teachers or other instructors at the teaching training center, asking for interpretation and input on her research findings. His observations had unexpected results:

> "According to the survey sheets, many pupils utilized little English outside of the classroom. This class's learners used English the most at their children's schools or kindergartens (52%).... and then (48%), conversing to other students, teachers, or volunteer tutors during coffee breaks during English sessions. This would have been guaranteed by the variety and number of different language groups in this little center... (Kohn 1997)."

Gathering this information enables Janette and her students to identify situations in which English is or is not used. For

example, only 1% of students read newspapers or papers in English, and none use English on the phone. English is spoken more frequently among neighbors (32%), or in Employment and Social Security Offices (28%). Collecting and discussing information is a type of self-disclosure concerning learning possibilities for students:

> "By the second week of the study, learners were beginning to recognize the value of practicing English outside of the classroom. They noticed the range of opportunities to do so by listening to the brief comments of colleague learners' experiences when the survey forms were collected. The research appeared to support the teachings rather than being a disruption to the training. By the second week of the study, students had realized the importance of practicing English outside of the classroom. When the survey forms were collected, they recognized the variety of options to do so by listening to the brief comments of colleague learners' experiences. The research appeared to reinforce the teachings rather than interfere with them. A collaborative class chart showing situations for using English outside of the classroom was created and shown. This made learners aware of the possibilities and prospects for future English language use. It 'belonged to the learners' since they added and discussed their experiences each week. (Kohn 1997)"

The observations revealed that Janette had never previously methodically mapped out her students' English language practice outside of the classroom. While Janette suspected her English usage was limited and often joked about it with other teachers, the observations provided Janette with a more intentional manner to consider the influence strategic interventions could have on class assignments.

He developed graphics incorporating descriptions of the current things in English places used to engage with students. He decided to broaden his activities to establish strong English learning strategies by teaching additional acts that promote more active usage of English outside of the classroom. This proposal creates a new research question: What kinds of projects may be offered to students to guarantee they have opportunities to utilize English outside of the classroom?

Janette, along with the students, completes assignments that encourage students to obtain information about community services or activities that they are interested in, which is then reported back to their classmates in order to provide increased awareness and cooperation that has shown results thus far.

> "These were developed in response to the needs of the students. Some came from suggestions from colleagues and students, while others were created by me. Over the next seven weeks, about two projects per week were assigned and completed. To prepare the learners for the tasks, each activity and its aims were taught, as well as specific language elements, terminology, and possible scenarios, and the learners were provided a task structure. (Kohn 1997)"

Finding exceptional regional or national events, learning how to join a sports club or enroll in further education, or looking for information on holiday activities for children are all examples of chores. Janette instructed students during debriefing sessions to assess their perceived linguistic accomplishment and disclose psychological and emotional responses to the tasks in order to fulfill this assignment.

> "The exercises were completed with varied degrees of success by the students. One of the advantages was that trainees gained confidence by doing them.
>
> 'How did you go?' and 'How was it?' become regular questions among students. The reporting back sessions gave learners with opportunities to discuss the tasks and their success or failure with the class, as well as allowing fellow learners and the teacher to make tips for how to be more successful the next time. There was a lot of sharing, discussion, and learning going on. (Kohn 1997)"

Janette concluded her investigation by increasing her understanding of her students' challenges with using English outside the classroom and nerve-racking. He also examined his role in helping students use English outside the classroom, his thoughts evolving rapidly from assuming limited use to such deficiencies in his students.

Janette believes that the findings of her research have been beneficial. Deeper evidence of a feature of language learning that he has been interested in examining for some time has resulted through research. It has also created a venue

for exciting professional interaction with colleagues at the teaching training center, as well as a collaborative community of researchers who support the research center and are interested in the project's outcomes.

Similarly, the students have been assigned the position of research participants, which has inspired them to practice English in a way that offers them with help and feedback. They are more aware of the need and value of using English outside of the classroom than Janette's other classes, which has given them great strength to remain confident and independent. He also informed pupils that the research-related projects had modeled the behavior and tactics they could continue to apply. Another important thing he learned was to eliminate teacher-centered teaching and involve students in a more in-depth investigation of the learning process and opportunities.

Janette is at the spiral stage of action research, where she continues to address bigger problems and broadens her interests by investigating long-term use of tools and encouragement in English outside of the classroom. He questioned students in other teachers' classrooms and looked for teachers who had moved to round out his findings.

Janette's findings and insights were deployed at the spiral level of action research, where she continued to address broader questions and stretch them out, allowing her to further expand the boundaries of the informal learning strategies that students use that informed her own teaching. his attention in long-term equipment use and encouragement to speak English outside of the classroom.

He questioned students in other teachers' classrooms and looked for teachers who had moved to round out his findings. This enabled Janette to broaden the scope of the informal learning practices used by students, which impacted her own teaching, and to share her discoveries and thoughts.

B. PRACTICE

Do the following task to strengthen your knowledge of the content presented above!

1. Action research is typically conducted by...
2. What exactly is the goal of action research?
3. What did Kemmis and McTaggart say regarding research action?

4. What does action research imply for educators?
5. What is the purpose of action research?
6. What are the advantages of incorporating educators into action research?
7. What is the role of action research in the classroom for language teachers?
8. What did Janett discover during her research?
9. How did Janette's observations or survey turn out?
10. Who took part in Janette's research?
11. What are Janette's teaching strategies in teaching activities?
12. What type of assignment does Janette give?
13. What examples of assignments did Janette give?
14. What did Janette do at the end of her research?
15. What did Janette form?

C. SUMMARY

Action research is characterized as an independent search conducted by students or teachers with the goal of addressing problems, improving instruction, or boosting understanding. Action research on English as a second language (ESL) and as a foreign language (EFL) acquisition highlights concerns for teachers. If you have completed the exercises and read the explanation. Please take the formative test to check that you have mastered Learning Activity 4. You can go to the next module if you are certain that you can properly answer more than 80% of the formative exam questions. Good luck with your meticulous effort!

CHAPTER VI

QUALITATIVE RESEARCH

A. WHAT IS QUALITATIVE RESEARCH

For various reasons, many people (particularly lecturers and teachers) do not conduct research. The main cause is related to research methods, such as determining the topic, problem, and focus, as well as comprehending the process. Others lack methodological factors such as financial support, enthusiasm, or time (work, family or domestic responsibilities, or social activities). During my two years as director of the Research Center at my college, I discovered that almost half of the lecturers never conducted any research. However, the situation at my English Department is improved.

It sounds quite satisfied. From 2013 to 2015, about 90% of the 17 English lecturers there participated in research, either individually or in groups. Of course, understanding methodology and its application in the field is critical for everyone interested in conducting research.

In research technique, there are two basic streams: quantitative and qualitative. Which is the most effective? Though some argue that quantitative research is superior to qualitative research, I believe both have advantages and disadvantages. However, each researcher has his or her unique method of conducting research. Because I used to undertake quantitative research, I did most of my research in qualitative formats. The following text will explore qualitative research, specifically for individuals who want to learn more about this sort of research, share thoughts, refresh their knowledge, or conduct qualitative research in the future.

Specifically, research is an activity that is done purposefully and systematically, as is qualitative research. Qualitative research seeks answers to problems by investigating various social environments and the people that occupy them (Berg, 1995) or events that occur in people's daily lives (Seliger and Shohamy, 1989). Furthermore, on the basis of rich, nuanced, and extensive data, this research strives to develop rounded and contextual understanding (Mason, 2002). It means that its primary purpose is to comprehend and characterize natural social events, human behavior, and actions. In terms of educational domains, the research could be applied to students' learning styles, teachers' English teaching tactics, classroom interaction, or other themes.

Qualitative research is holistic (Mason, 2002; Creswell, 2009), inductive (Earl, 2004, Creswell, 2009), and natural (Seliger and Shohamy, 1989; Creswell, 2009) in comparison to quantitative research. It means that the social realities that become the subject of the research cannot be separated and must be investigated and described as a whole. There is also no conclusion generalization. The theory is built using the induced approach, which involves first observing features of social life and then striving to find them.

Qualitative research is holistic (Mason, 2002; Creswell, 2009), inductive (Earl, 2004, Creswell, 2009), and natural (Seliger and Shohamy, 1989; Creswell, 2009) in comparison to quantitative research. It means that the social realities that become the subject of the research cannot be separated and must be investigated and described as a whole. There is also no conclusion generalization. The theory is built using the inducted approach, which involves first watching parts of social life and then looking for patterns that may hint to generally universal principles in results (Earl, 2004). Furthermore, no treatment is manipulated during the process (Creswell, 2009).

Furthermore, qualitative research focuses on the process rather than the product, the meaning behind the facts, and the natural and realistic features (Tarigan, 1993; Sugiyono, 2006). In other words, it refers to the data collection process in which the researcher serves as a key instrument in the development of theory; and qualitative data, as defined by Neuman (2006), entails documenting real events, recording what people say, observing specific behaviors, studying written documents, or examining visual images. It also refers to the meanings that come from thinking, associating, and understanding traits, facts, symbols, and descriptions of things (Berg, 1995). However, other factors such as definitions, concepts, and theories are also necessary for being scientific inquiry areas.

Thus, qualitative research is a type of research that is purposefully, methodically, and carefully planned on social phenomena, people's behavior, and action in natural settings.

B. QUALITATIVE RESEARCH CHARACTERISTICS

Qualitative research has several characteristics. Creswell (2009) identified several characteristics of qualitative research as follows:

1. When acquiring data, they must communicate with the subject personally, face-to-face, rather than sending out instruments such as questionnaires. They notice how individuals behave or act and

take note of the reality or facts as they are, unaltered or manipulated.

2. Using the researcher as a main instrument, he or she collects data by scrutinizing documents, observing behavior, action, or phenomena, or questioning informants.
3. They collect data from a variety of sources, including observations, interviews, and documents. This is done to round out the data, cross-check it, or avoid biases. The data is then reviewed and organized into categories or themes.
4. They construct their patterns, categories, and themes from the bottom up, arranging the data into increasingly abstract pieces of information, resulting to a full set of themes.
5. Understand the significance of the information he or she has noticed. He/she should never introduce his/her opinion to the field, and expressions written in the literatures, but rather what people say about it or them (objects such as things, persons, behaviors, or activities).
6. They use emergent design to process the research. It indicates that the original research plan cannot be strictly regulated, but they may shift their focus after entering the field and collecting data.
7. Theoretical lens, they often use lens to view their study that might be different from the theoretical review. Sometimes, their study is organized and identified around the social, political, cultural or historical context of the problem under study.
8. Interpretive, they interpret what they see, hear and understand. Their interpretation cannot be separated from their background, prior understanding, and socio-cultural context or even from other perspectives. At the end, it is apparent how multiple views of the problem can emerge.
9. Holistic account, they try to develop a complex picture of the problem or issue under study. This involves reporting many different perspectives

However, as noted by Seliger and Shohamy (1989) and Tarigan (1993), the qualities can be condensed into a few points. They are holistic, heuristic/inductive, and natural (no/low control).

C. QUALITATIVE RESEARCH METHODOLOGIES

There are five types of qualitative research: (1) phenomenology, (2) case studies, (3) grounded research, (4) discourse and content analysis, and (5) ethnography (Sugiyono, 2009). Furthermore, it is

related with a variety of schools, traditions, or disciplines, as shown below:

1. Phenomenology
2. Ethnomethodology
3. Symbolic Interaction
4. Ethnography
5. Discourse and Content Analysis
6. Case Study
7. Oral and Life History
8. Grounded Research (Mason, 2002).

The question is which one(s) is(are) relevant to ELT research. It is tough to respond because each country has its unique scientific tradition. However, in terms of the object, I believe phenomenology is appropriate. Some phenomena, facts, and realities can be noticed in English teaching-learning at schools, courses, and classrooms, as well as beyond the classroom, such as in the park or the lab. The case study is absolutely relevant to design for ELT research based on the subject and the number of them.

If the subject is relatively tiny and specific, such as pupils in an accelerated class, students with disabilities, or students from low socioeconomic backgrounds, no other form is better or more relevant than the case study.

D. QUALITATIVE RESEARCH DESIGN

According to Mason (2002), there are five crucial issues that researchers must answer before designing qualitative research. The following are the questions:

1. What is the nature of the phenomena or social reality I want to explore (from an ontological standpoint)?
2. Knowledge and evidence (from an epistemological standpoint), what would constitute knowledge and evidence of social reality that I seek to investigate?
3. What topic or substantive area is the research concerned with in a broad sense?
4. What do I want to explain and explore with intellectual problems and research questions? What are the research questions I'm interested in?
5. What are the goals and objectives of my research? What exactly am I doing?

They may come to write the research design after answering the questions. Various techniques or steps have been discussed by some researchers (Berg, 2002; Mason, 2002; Creswell, 2009). Berg (1995) offered the following steps, which are depicted in this graphic, as one of them.

Figure 1. Qualitative Research Design

E. QR DATA COLLECTION AND ANALYSIS

The data acquired in qualitative research is not numerical, but rather verbal in the form of words or pictures (Sugiyono, 2009). Researchers employ many methods or approaches to collect data. Data can be gathered through observations, interviews, and documentation, according to Mason (2002) and Creswell (2009). They can be spontaneous, on-the-spot, scheduled, participant observation, structured, unstructured, or in-depth interview, formal or informal record, or a combination of the three. The following are, in my opinion, the most important: (1) Observation of Participants, (2) In-depth Interview, and (3) Documentation

Data analysis occurs concurrently with data collection, interpretation, and draft writing in qualitative research. During an interview, for example, the researcher may be reviewing previously obtained data, creating memoranda that will eventually be completed as a narrative in the final report, and organizing the format of the final report.

Another strategy is for the researcher to collect qualitative data, analyze it for different themes or views, and then report on 4-5 of

them. However, many scholars today go beyond this generic form or fundamental analysis. Furthermore, Creswell (2009) stated that using grounded theory, researchers methodically constructed information categories, chose one of the categories, and then positioned it within a theoretical model. A detailed description of the place or individuals is followed by data analysis for specific themes or issues in case studies and ethnographic research. The examination of significant statements, the generation of meaning units, and the formulation of an essence description are all used in phenomenological research.

So far, Creswell (2009) has suggested the following procedures for data analysis.

1. Gather and organize data for analysis.
2. Go over all of the data. 3. Begin deep analysis with a coding analysis.
3. Using the coding process, create a description of the environment or persons, as well as categories or themes for study.
4. Plan ahead of time how the description and themes will be portrayed in the qualitative narrative.
5. Provide an interpretation or meaning to the data.

Other ways include sorting and arranging data into three major approaches, as proposed by Mason (2002): cross-sectional and categorical indexing, non-cross-sectional data organization, and the use of diagrams and charts. Otherwise, Huberman and Miles (1994) advocated reducing irrelevant data obtained and then categorizing the rest into some groups, showing them, and finally validating to make a conclusion, as seen in the interactive model of the accompanying image.

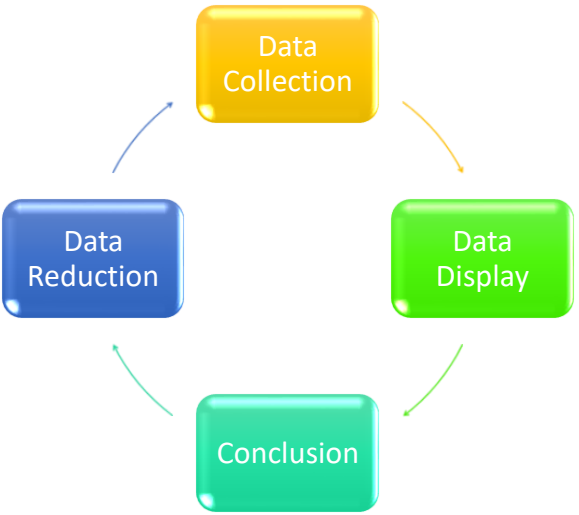

Figure 2. QR DATA COLLECTION AND ANALYSIS

F. QUALITATIVE RESEARCH METHODS IN ELT

Some steps or procedures used in qualitative research may be used in ELT:

1. Grand tour orientation questions
2. Reduction and focus determination
3. Focus selection or analysis to become detailed components
4. repeating field study,
5. analyzing or reconstructing data or information to develop theory, hypotheses, or inventions that may be considered significant theoretically or practically.

G. QUALITATIVE RESEARCH VALIDITY AND RELIABILITY

In qualitative research, validity does not always have the same meanings as it does in quantitative research, and it is not always a companion of dependability (Creswell, 2009). Although some writers have questioned or been perplexed by the terms validity and reliability in qualitative research (see Lewes, 2009), these are components of any research design; in fact, validity is one of the strengths of qualitative research. Qualitative validity means that the researcher validates the accuracy of the findings using specific techniques, whereas qualitative reliability means that the researcher's approach is steady or consistent across multiple researchers, projects, and time periods.

There are two kinds of validity, internal and external. Internal means that there is an accuracy level of research design with the results of research. External usually called generalizability- is the accuracy level of the applying research to new settings, people, or samples. Here are some key strategies for making any research valid:

1. triangulate different information sources 2. use membership to determine the veracity of findings
2. Use detailed descriptions to communicate the findings.
3. Display text information in tabular forms such as matrices, tables, images, and so on.
4. Use the words of participants to create codes or themes.
5. Connect quotations to the author's interpretations.

H. CURRENT ELT RESEARCH ISSUES

Here are several concerns that were largely researched by my buddies (some English Department lecturers).

1. Learning styles and models in EFL
2. Methods of instruction
3. Interactions in the classroom
4. Gender roles in EFL teaching and learning
5. English learning code switch
6. English instruction in vocational and ethnic schools
7. Using Electronic Devices to Learn English ESP (English for Specific Purposes)
8. English teacher abilities Curriculum and materials in English

I. SUMMARY

In various aspects, qualitative research differs from quantitative research, such as the objects, instruments, analyses, and conclusions reached. Qualitative research, as a holistic, inductive, and natural study, is organized into several steps: direction, reduction, selection, collection, analyzing, repetition, and reporting. To some extent, any diverse thoughts or opinions will come from distinct sources and perspectives. However, different points of view might influence how someone thinks. Furthermore, I expect that some people will disagree with my perspective, idea, and explanation in this article; therefore, I would want to accept your contributions as well.

J. PRACTICE

Do the following task to strengthen your knowledge of the content presented above

1. What is Qualitative Research
2. What are characteristif of Qualitative Research. (min. 3)?
3. What are type of Qualitative Research (min. 3)?
4. What are Data Collection and Analysis in QR?
5. What are Design of QR?

CHAPTER VII

CASE STUDY FOR ELT RESEARCH

A. CASE STUDIES DEFINED

A case study, as opposed to a broad statistical survey, is an in-depth examination of a specific scenario. It is a technique for narrowing down a very large range of inquiry into a single readily researched topic. The case study research design is also effective for determining if scientific theories and models operate in practice. For many years, psychologists, anthropologists, and social scientists have viewed it as a valid method of research. Some fields' definitions of case study are as follows:

1. A detailed examination of some social entity (such as a corporation or division within a firm) to understand what variables contributed to its success or failure.
2. A strategy for learning about a complex instance that is based on a thorough comprehension of that instance achieved by lengthy description and analysis of the instance as a whole and in context.
3. An uncontrolled observational study involving a single intervention and outcome (also known as an anecdote, case history, or single case report).
4. A complete written or recorded examination of some specified stress factor(s), with the goal of recognizing success or failure and using it as a benchmark for teaching, research, and/or planning.

According to the descriptions above, the specific scenario under inquiry is not limited to a single person. Case studies, on the other hand, may deal with single tiny units such as a family, class, or school, the majority of which come from efforts to solve problems. It investigates a single item or phenomeon constrained by time and activity and collects detailed information over a long period of time utilizing a range of data gathering approaches.

B. GENERAL CHARACTERISTIC

Case study philosophy, methods, and concern for investigating phenomena in context are similar to ethnography. It is, however, often more limited in scope than ethnography. The research's focus is also different. Ethnography is primarily concerned with the cultural

context and interpretation of the phenomenon under research. However, this is not always the case with case studies.

When should you use the case study method? There are at least three conditions that must be met. First, consider the sort of research question: it is often used to answer queries such as "how" or "why." Second, the level of control over behavioral occurrences: when the investigator has little or no influence over the events. Third, consider the overall circumstances of the event to be studied: a current phenomenon in a real-life situation.

Case studies, as empirical investigations, focus on a contemporary phenomenon within its real-life environment, where the borders between phenomenon and context are not well defined. As a result, it is appropriate for investigating complicated social processes. Many variables of interest; many sources of evidence; theoretical propositions to guide data collection and analysis are among the procedural elements involved in the scenario to be researched.

Case studies might be explanatory, exploratory, or descriptive. Its designs can be single-case studies or multi-case studies. Furthermore, the method employed can be qualitative, quantitative, or both.

C. THE CASE STUDY RESEARCH DESIGN ARGUMENT FOR AND AGAINST

Some argue that a case study is such a narrow field that its results cannot be extrapolated to fit an entire question and that they show only one narrow example. On the other hand, it is argued that a case study provides more realistic responses than a purely statistical survey. It is probably best to try and synergize the two approaches. It is valid to conduct case studies but they should be tied in with more general statistical processes. For example, a statistical survey might show how much time people spend talking on mobile phones, but it is case studies of a narrow group that will determine why this is so.

Another important consideration during case studies is their adaptability. While a pure scientist is attempting to establish or reject a concept, a case study may provide new and unexpected data during its course, leading to new possibilities for inquiry.

Some critique case studies because they lack systematic data handling; consequently, it is proposed that systematic reporting of all evidence on the particular circumstance researched be managed. This study is regarded to have no basis for scientific generalization, despite

the fact that the goal is to generalize to theoretical ideas rather than populations, as in statistical research. The case study process may take too long, resulting in illegible documentation. As a result, it is critical to remember that the time constraints and writing formula are determined by the investigators' preferences.

Case studies, on the other hand, have six major advantages. First and foremost, it is powerful in actuality. Second, one can extrapolate from a specific situation. Third, it represents a variety of perspectives and can lend support to alternate interpretations. Fourth, it gives a database of materials that future researchers might reinterpret. Fifth, the information gained can be immediately applied to a variety of purposes. Finally, its data is typically more accessible than traditional study reports.

D. HOW TO CREATE A CASE STUDY

The case study research design has the advantage of allowing one to focus on specific and intriguing examples. This could be an attempt to test a theory with a typical situation or a special issue of interest. Thorough research and precise and systematic note taking are required. The subject and relevance are the case study's first pillars. As a result, when designing a case study, it is critical to prepare and design by creating a brief list of 4 or 5 bullet points to address during the study.

The research design connects the data to be gathered and the conclusions to be reached to the study's initial questions - it provides a conceptual framework and an action plan for moving from questions to a set of findings. The first step is to choose amongst explanatory, exploratory, and descriptive designs. It is determined by the depth of the theories related to the topic of study. To accomplish this, one must evaluate literature, consult with investigators, pose tough questions, and consider what can be learnt from the study.

The case study design typology should be identified by the researcher. The first form is neo-ethnographic, in which a participant observer conducts an in-depth analysis of a specific instance. The second type is evaluative, which is an investigation conducted to examine policy practice. The third type of study is multisite, which is conducted by multiple researchers on multiple sites. Furthermore, action is defined as an investigation conducted by a classroom practitioner in his or her professional environment.

The next stage is to choose situations that mirror the traits and difficulties outlined in the underlying theoretical propositions or

conceptual framework. There are two types of cases: single cases (if the case appears to be a vital test of existing theory); unusual or unique happenings; and multiple examples (if a "replication logic" is believed to provide theoretical backing).

The unit of analysis, on the other hand, is made up of holistic and embedded designs. If the goal is to research the global nature of the phenomenon, holistic design involves a single unit of analysis. Embedded design incorporates many units of analysis; the research may contain primary and minor units on various levels to seek for consistent patterns of evidence across units, but within a case.

It is important to emphasize in this example that the flexibility of case study design is in picking cases other than those initially specified, not in changing the research's purpose or aims to suit the cases.

E. HOW TO PERFORM A CASE STUDY

The following are some desirable investigative skills:

1. Thorough understanding of the phenomenon
2. Sensitivity to innovative and unanticipated challenges in data collection
3. Ability to ask probing questions
4. Being an excellent "listener"
5. Adaptability and flexibility

A case study procedure should be an integral component of any case study endeavor. It includes not only the research instrument, but also the methods and general regulations that must be followed when utilizing the instrument, as follows:

1. Project overview (objectives, issues, readings, literature, and research)
2. Field procedures (access to field sites, information sources)
3. Case study questions provided to investigators; crucial classifications; possible sources of evidence (not the literal questions to be asked)
4. A manual for writing the case study report

It is also necessary to establish distinct levels of questions when performing the research:

A) At the case-level
   1. Specific interviewees' questions
   2. Inquiries about the specific case

B) On a broader scale

1. Results from various cases
2. Overall study findings (including evaluated literature)
3. Normative issues regarding policy proposals and conclusions

F. THE RELIABILITY AND VALIDITY OF THE CASE STUDY

The reliability and validity of case studies are just as crucial as they are for any other sort of research. The researcher is confronted with four important tests:

1. Construct validity (developing appropriate operational metrics for the concept under consideration).
2. Internal validity (indicating causality).
3. External validity (determining the domain or population to which the findings can - if possible - be generalized).
4. Reliability (the capacity to rerun the study with identical results).

G. HOW TO COLLECT THE INFORMATION

There are six different types of evidence:

1) Letters, agendas, and progress reports
2) Archival records (such as service records, organizational charts, and budgets)
3) Interviews (usually open-ended, but focused, structured, and surveys are also feasible)
4) Direct observations (formal or informal; numerous observers are useful)
5) Participant observation (taking on a role in the situation and gaining an insider's perspective on the occurrences)
6) Actual artifacts

Three data collection principles are covered:

1) Use numerous sources of evidence, often known as triangulation, to search for converging conclusions from various sources. It boosts construct validity.
2) Create a case study database that includes:
   a. Case study notes (clear and ready for subsequent use)
   b. Case study materials
   c. Tabular materials (made and gathered)
   d. Narratives (first open-ended responses to investigator-suggested study questions)

3) Maintain a chain of evidence by taking the following into account:
    a. The link between the original research questions and the case study technique, as well as the circumstances of the evidence to be collected, should be highlighted in the case study protocol.
    b. Putting the data collection into practice on the basis of the protocol.
    c. Actual evidence storage in the database for future checks (specified collection circumstances)
    d. Adequate citation of the case study data base and evidence in the final report and findings

H. HOW TO ANALYZE THE OUTCOMES

One of the least developed and most difficult components of doing case studies is evidence analysis. The most important thing is to establish a general analytic strategy that will assist you choose between different methodologies. In the absence of such tools, preliminary techniques such as matrixes, frequency tabulation, temporal schemes, and so on can be used to get the analysis started.

Theoretical propositions and case description are two general analytic techniques. The first entails theoretical orientation directing the analysis; following theoretical propositions that have shaped the case study's design. It aids in focusing attention on specific data while ignoring other data. The latter is creating a descriptive framework for arranging the case study; analysis arranged around a description of the broad characteristics and relationships of the phenomena under consideration.

Pattern matching, explanation-building, and time series matching are among the analytical tools to be employed as part of the overall strategy. The researcher compares experimentally grounded patterns with projected ones (explanatory or descriptive pattern matching). Pattern types include:

a) Expected outcomes as a pattern: determining whether or not the initially predicted results have been discovered and alternative patterns are missing.
b) Rival explanations as patterns: determining whether or not some of the theoretically salient explaining conditions have been articulated in empirical findings; the presence of one explanation should preclude the presence of others.

c) Simpler patterns: pattern matching using only a few variables is conceivable if the generated patterns are projected to have sufficiently distinct differences.

The researcher should understand that evaluating case study data is done by developing an explanation about the case and discovering a set of causal relationships in explanation-building (which is mostly explanatory). Furthermore, the explanation is the outcome of the following processes:

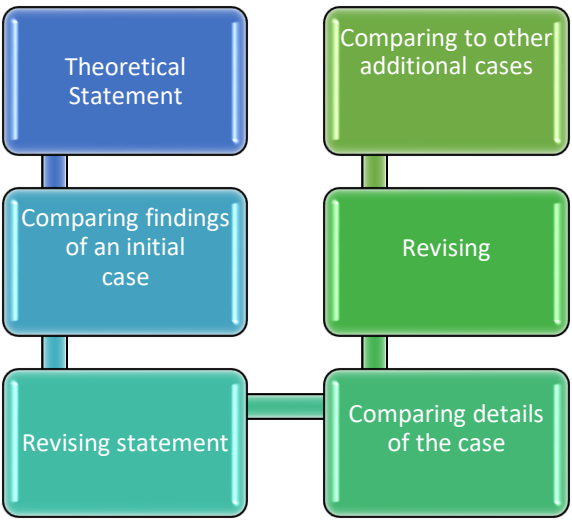

Figure 3. How to analyze the outcomes

Using time-series analysis, the researcher answers "how" and "why" questions about event correlations and changes across time. The identification of theoretically postulated sequences of an event that are expected to result in a specific outcome; and event identification must be completed prior to the start of the inquiry. To rule out alternatives, the researcher compares this trend to the trend of empirical data points or to some rival trend.

A competent case study analysis should demonstrate that it relied on all relevant information; that all major competing interpretations are addressed; that the most important problem of the study is addressed; and that prior expert knowledge is brought to the study.

I. PRACTICE

Do the following task to strengthen your knowledge of the content presented above

1. What is Case Study?
2. How to create a Case Study?
3. How to perform a Case Study?
4. How to Analyze the outcome?

CHAPTER VIII

DOCUMENT AND CONTENT ANALYSIS QUALITATIVE RESEARCH

A. QUALITATIVE CONTENT ANALYSIS

Qualitative content analysis is widely employed in nursing science research, its reliability has not been thoroughly validated. There is a continual need for simple and effective ways for evaluating content analysis investigations. A more focused discussion about the quality of qualitative content analysis findings is also required, especially since several articles have been published on the validity and reliability of quantitative content analysis rather than qualitative content analysis (Neuendorf, 2011; Potter & Levine-Donnerstein, 1999; Rourke & Anderson, 2004). While there are numerous established methodologies for undertaking quantitative content analysis (Baxter, 2009), this is not the case for qualitative content analysis.

Qualitative content analysis is one of the qualitative methods for assessing data and determining its meaning that are now available (Schreier, 2012). It is a systematic and objective approach of describing and characterizing phenomena as a study method (Downe-Wamboldt, 1992; Schreier, 2012).

Data reduction to concepts that describe the research phenomenon is required for successful content analysis (Cavanagh, 1997; Elo & Kyngäs, 2008; Hsieh & Shannon, 2005) by creating categories, concepts, a model, conceptual system, or conceptual map (Elo & Kyngäs, 2008; Morgan, 1993; Weber, 1990).

The study topic describes what will be analyzed and created (Elo & Kyngäs, 2008; Schreier, 2012). The abstraction process is the stage of qualitative content analysis during which concepts are produced. Some components of the process are usually easy to describe, but it also depends on the researcher's insight or intuitive action, which can be difficult to explain to others (Elo & Kyngäs, 2008; Graneheim & Lundman, 2004). It is critical to report how the results were generated from the standpoint of validity. Readers should be able to properly understand the study and conclusions (Schreier, 2012).

Inductive and deductive approaches to qualitative content analysis are both possible. In both inductive and deductive content analysis methods, three major steps are involved: preparation, organization, and reporting of results. The preparation phase entails gathering appropriate data for content analysis, making sense of the

material, and deciding on the unit of analysis. The organizing phase of the inductive technique includes open coding, category creation, and abstraction (Elo & Kyngäs, 2008). The organizing phase of deductive content analysis includes the establishment of a categorization matrix, in which all data is examined for content and coded for correlation to or exemplification of the specified categories (Polit & Beck, 2012).

The categorization matrix is considered acceptable if the categories appropriately describe the concepts and the categorization matrix accurately represents what was intended (Schreier, 2012). Results are described in the reporting phase by the content of the categories characterizing the phenomena using a chosen approach (either deductive or inductive).

There has been substantial discussion regarding which terms (rigor, validity, reliability, and trustworthiness) are most suited for measuring qualitative research validity (Koch & Harrington, 1998). In both quantitative and qualitative investigations, reliability and validity criteria are employed to measure credibility (Emden & Sandelowski, 1999; Koch & Harrington, 1998; Ryan-Nicholls & Will, 2009).

Such phrases are primarily founded in a positivist view of research. There is no obvious dividing line between qualitative and quantitative content analysis, according to Schreier (2012), and identical phrases and standards for reliability and validity are frequently utilized. When examining factors of validity in content analysis, researchers have primarily used qualitative criteria (Kyngäs et al., 2011).

Lincoln and Guba (1985) devised the most generally used criterion for evaluating qualitative content analysis. They used the term dependability. In a qualitative investigation, the goal of trustworthiness is to support the notion that the findings are "worth paying attention to" (Lincoln & Guba, 1985). This is especially true when utilizing inductive content analysis, as categories are generated from raw data without the need of a theory-based categorization matrix. As a result, we opted to employ such standard qualitative research words when defining factors influencing the credibility of data collection, processing, and presentation of content analysis results.

For qualitative investigations, several different trustworthiness rating criteria have been offered (Emden, Hancock, Schubert, & Darbyshire, 2001; Lincoln & Guba, 1985; Neuendorf, 2002; Polit & Beck, 2012; Schreier, 2012).

However, a common element of these criteria is that they aim to encourage trustworthiness by correctly reporting the content analysis process. Lincoln and Guba (1985) presented four choices for measuring qualitative research trustworthiness: credibility, dependability, conformability, and transferability.

The authors established a fifth criterion known as authenticity in 1994. In order to create credibility, researchers must verify that persons participating in research are correctly identified and described. The stability of data over time and under varied settings is referred to as dependability. Conformability refers to objectivity, or the possibility of agreement between two or more independent people about the veracity, relevance, or meaning of data.

The ability to extrapolate is referred to as transferability. It is based on the assumption that results can be generalized or transferable to different situations or groups. The final criterion, authenticity, refers to the extent to which researchers depict a variety of realities honestly and faithfully. Lincoln and Guba (1985); Polit and Beck (2012).

Researchers frequently face issues that call into question the reliability of qualitative research findings (de Casterlé, Gastmans, Bryon, & Denier, 2012). The purpose of the study presented in this article was to define trustworthiness based on the key qualitative content analysis phases and to create a checklist for evaluating the trustworthiness of content analysis studies.

"What is essential for researchers attempting to improve the trustworthiness of a content analysis study in each phase?" was the key research topic. The information offered was derived from a narrative review of previous investigations, our personal experiences, and methodological textbooks. A Medline (Ovid) and CINAHL (EBSCO) combination search was undertaken, with the following key words used: trustworthiness, rigor OR validity, and qualitative content analysis.

Methodological publications focused on qualitative content analysis in the field of health sciences, published in English and with no year constraints, were utilized as inclusion criteria. The database and reference list checks yielded 12 methodological content analysis publications.

When composing the review synthesis, the reference list of selected publications was also verified, and qualitative research methodology textbooks were employed. The discussion in this article serves to clarify how content analysis should be reported in a valid and

understandable manner, which we anticipate will be especially useful to scientific article reviewers.

B. METHOD OF DATA COLLECTION

One factor that supports a researcher's ultimate argument about the trustworthiness of a study is the demonstration of the reliability of data collecting (Rourke & Anderson, 2004). The most appropriate data gathering strategy must be used to ensure the credibility of content analysis (Graneheim & Lundman, 2004). Credibility is concerned with the research's emphasis and refers to one's trust in how well the data addresses the desired topic (Polit & Beck, 2012).

As a result, the researcher should give careful consideration to how to acquire the most appropriate data for content analysis. The strategy for ensuring the credibility of content analysis begins with selecting the optimal data collection method to address the research questions of interest. Most studies that use content analysis collect unstructured data (Elo & Kyngäs, 2008; Neuendorf, 2002; Sandelowski, 1995b), which is gathered by methods such as interviews, observations, diaries, other written documents, or a combination of multiple approaches.

However, depending on the study's goal, the data collected may be open and semi-structured. When doing inductive content analysis, it is critical that the data be as unstructured as possible (Dey, 1993; Neuendorf, 2002).

A critical question from the standpoint of trustworthiness is, "What is the relationship between prefiguration and the data collection method, that is, should the researcher use descriptive or semi-structured questions?" Nowadays, qualitative content analysis is most commonly used to analyze verbal data such as interview transcripts (Schreier, 2012).

When utilizing a descriptive inquiry, for example, "Could you please tell me how you take care of yourself?" The researcher must assess the purpose of data collecting and attempt to extract data to that end. If the researcher chooses a semi-structured data collection strategy, they must be careful not to steer the participants' responses too much in order to gather inductive data. It may be beneficial to construct interview questions in collaboration with a "critical reference group" (Pyett, 2003).

In participatory action research, critical reference groups are used as a general phrase for individuals who will benefit most from the research and assessment (Wadsworth, 1998). Subjecting the

interview questions to this type of group's evaluation may aid in the development of intelligible questions that make better sense of the investigated phenomenon by asking the "right questions in the right way."

The researcher's self-awareness is critical from the standpoint of credibility (Koch, 1994). Pre-interviews may aid in determining whether the interview questions are appropriate for gathering rich data that answers the proposed research questions. Interview tapes, films, and transcribed text should be carefully evaluated in order to evaluate the researcher's own actions critically. For example, questions such as "Did I manipulate or lead the participant?" and "Did I ask too broad or structured questions?" should be posed. To ensure the integrity of content analysis, such evaluation should not only begin at the outset of the study but also be reinforced by constant reflection.

Pre-testing of the analytical procedure is as crucial in qualitative research as it is in quantitative research for data management. When adopting a deductive content analysis approach, the categorization matrix must also be pilot tested (Schreier, 2012). This is especially important when two or more researchers are participating in the coding process. Trial coding involves researchers independently attempting to code the newly generated matrix (Schreier, 2012) and then discussing any apparent difficulties in using the matrix (Kyngäs et al., 2011) and the units of coding they have interpreted differently (Schreier, 2012). If necessary, the categorization matrix is updated based on their conversation.

C. STRATEGY FOR SAMPLING

In terms of sampling strategy, it is critical to pose questions such as the following: What is the most appropriate sampling strategy for my research? Who are the best informants for my study, and what criteria should I utilize to choose participants? Is my sample suitable? Is my data sufficiently saturated? Thoroughness as a validity criterion pertains to data adequacy and is also affected by sound sampling and saturation (Whittemore, Chase, & Mandle, 2001).

In qualitative investigations, it is critical to evaluate the sampling procedure (Creswell, 2013). According to our findings, sampling methods are rarely discussed in qualitative content analysis studies (Kyngäs et al., 2011). The sample technique in qualitative research is typically determined depending on the methodology and topic, rather than the need for generalizability of the findings (Higginbottom, 2004). Convenience, purposive, theoretical, selective,

within-case, and snowball sampling are all types of qualitative sampling (Creswell, 2013; Higginbottom, 2004; Polit & Beck, 2012).

Purposive sampling is the most generally used method in content analysis studies (Kyngäs, Elo, Pölkki, Kääriäinen, & Kanste, 2011): purposive sampling is appropriate for qualitative studies where the researcher is interested in informants who have the most expertise about the research issue. When employing purposeful sampling, decisions must be made about who or what will be sampled, how the sampling will be conducted, and how many people or sites will be sampled (Creswell, 2013).

Purposive sampling has the problem of making it difficult for the reader to determine the trustworthiness of the sampling if comprehensive information are not provided. The researcher must decide which sort of purposeful sampling is preferable to use (Creswell, 2013), and provide a brief description of the sampling strategy.

The stability of data over time and under varied settings is referred to as dependability. As a result, it is critical to specify the principles and criteria used to select participants, as well as detail the primary characteristics of the participants, in order to assess the results' transferability to other contexts (e.g., see Moretti et al., 2011). The major question therefore becomes, "Would the findings of an inquiry be replicated with the same or similar participants in the same context?" (Lincoln & Guba, 1985; Polit & Beck, 2012).

According to Lincoln and Guba's (1985) credibility criterion, researchers must guarantee that persons participating in research are appropriately identified and documented. Different sampling procedures may be necessary in different studies to collect credible data.

The most appropriate sample size must be chosen to ensure the credibility of the content analysis study (Graneheim & Lundman, 2004). When determining whether a sample is appropriate, sample size information is critical. There is no universally approved sample size for qualitative studies because the appropriate sample size is determined by the study's objective, research questions, and data richness.

The homogeneity of research participants or expected variations across groups are assessed in qualitative content analysis (Burmeister, 2012; Sandelowski, 1995a). A study on the well-being and supportive physical environment characteristics of home-dwelling elderly, for example, is likely to generate fairly

heterogeneous data and may require more participants than if restrictions are applied, such as studying only elderly over the age of 85 or those living in rural areas.

D. PRACTICE

Do the following task to strengthen your knowledge of the content presented above

1. What is Qualitative Research Analysis?
2. What is Data Collection Method?
3. What is sampling method according Kyngas?
4. What is Purposive Sampling by Kyngas?

CHAPTER IX

QUANTITATIVE RESEARCH

A. DEFINITION QUANTITATIVE RESEARCH

Quantitative research is the systematic study of phenomena through the collection of measurable data and the application of statistical, mathematical, or computational techniques. According to Aliaga and Gunderson (2002), as described in Muijs (2010), quantitative research is "the process of explaining phenomena by collecting numerical data and analyzing it using mathematically based methods (particularly statistics)." Quantitative research is founded on positivism, which holds that the social world consists of concrete and unchanging reality that can be objectively quantified. Reality and universal 'truths' are externally observable in positivist ontology (Guba & Lincoln, 1994); this means that the "truth is out there and it is the job of the researcher to use objective research methods to uncover that truth" (Muijs, 2010).

Positivism considers the world to be mainly unchanging and attempts to apply scientific principles to new disciplines such as human behavior, social institutions, and history (Hammersley, 2007). Researchers that follow the positivist paradigm are expected to apply scientific procedures to unearth knowledge that is extremely objective and empirically verifiable. Positivists think that new knowledge can be created without bias, and that facts can exist apart from the impact of people or researchers and the world around them. According to (Dawadi, 2017 p.4), quantitative researchers value knowledge that is accurate, objective, verifiable, and replicable; thus, they adopt inquiry tactics such as experiments and surveys.

So we finally learn the truth about how the world works. We can investigate the physical world objectively if we construct trustworthy measuring devices. According to Bryman (1988), quantitative research is often shown by social surveys and experimental investigations. So quantitative research means the accumulation of something. It makes an attempt to study the answers to queries such as how many, how much, and to what extent. According to Bryman (1988), this research tradition is typically portrayed as having many of the features of a natural science method. The epistemology that underpins quantitative research includes a laundry list of prerequisites for what constitutes knowledge, and the mere existence of numbers is unlikely to suffice.

According to Creswell (2004), in quantitative research, researchers define a research problem based on trends in the field or the desire to explain why something occurs. Describing a trend indicates that a study can best solve the research problem by establishing the overall tendency of replies from individuals and noting how this tendency changes among people.

B. QUANTITATIVE RESEARCH IN ENGLISH LANGUAGE EDUCATION

Educational research is a systematic study conducted to get a better understanding of the educational process in order to improve its efficiency. It is the use of the scientific method to the investigation of educational issues. Educational research is aimed at solving an issue in the realm of education. Any properly conducted research in education is significant because it gives knowledge about the education system as a whole, or different areas of the system, or the people participating in the educational process, such as teachers and students.

Quantitative research is research that provides information about 'numbers'/'quantities of something, such as how many students completed the course and how many did not. How many people choose different modules, subjects, and so on? In general, everything number. In other words, quantitative research is used in education to answer a question or discover the relationship between two or more variables. It stresses the formulation of generalizations, principles, or hypotheses that will aid in the prediction of future events.

Another justification for employing quantitative research in education is that it typically extends beyond the specific objects, organizations, or situations studied and infers characteristics of a target population from the sample observed. As a result, quantitative study can assist us learn to what extent a feature may or may not support learning. It indicates the percentage of any group that responded to a specific feature or intervention as compared to groups that did not get the specific feature or intervention.

If we conduct quantitative research properly, with a large enough sample size, a strong control group, and a worthwhile measure, the results will be legitimate and significant. The purpose of this paper is to discuss the applications of quantitative research in social science to education. The purpose of this research is to

investigate the applications and limitations of quantitative in English language teaching.

The quantitative method has been shaped by positivism's stated sets of philosophical notions (Hammersley, 2007). It is a style of thinking about knowledge and inquiry that is based on natural science. According to Muijs (2004), quantitative research is good at giving information in breadth from a big number of units. It entails collecting numerical data and displaying a logical perspective of the relationship between theory and research, a preference for the natural scientific approach, and an objectivist notion of social reality'.

Quantitative research use statistical tools to investigate links between numerically measured variables. Watt (2015, p.91) demonstrates that using a quantitative approach to research teaching English as a Foreign Language (EFL) will accomplish much the same goal as using this methodology in other areas of education. According to Brown (2011), EFL research entails a systematic and principled investigation of a topic of interest. In addition, he described quantitative research as investigations that focus on "counting things and the patterns that emerge from those counts."

If we consider EFL from the perspective of critical pedagogy, an amalgam description could be considered as the development of communicative abilities in English and the ability to apply them to develop a critical awareness of the world, as well as the capacity to act for positive change and equitable outcomes for all (Watt, 2015). This research approach seeks to find answers to queries such as how many, how much, and to what extent (Rasinger, 2013). Quantitative research methods can help generate evidence to support the practicality of this goal or analyze examples of how EFL teaching and learning approaches match with the critical pedagogy concept. We can use quantitative research to various aspects of English Language Education.

Quantitative research is used to investigate the English language competency of different levels of students based on their gender, institution type, medium of instruction, and stream. To collect data, we can utilize quantitative methods such as surveys or experiments. Johnson (2011) demonstrates how the acquired data is analyzed using the non-parametric tests mean, Mann-Whitney U-test, and H-test. The study's research questions As shown below:

What is the ELP level of pupils in higher secondary school? What is the gender disparity in ELP levels among learners? What is the difference between the learners' ELP levels in terms of the institution's

nature? What is the difference between the ELP levels of the learners in terms of medium of instruction? What is the difference between the ELP levels of the learners in terms of faculty? Are addressed utilizing these ways.

C. THE EFFECTIVENESS OF VARIOUS APPROACHES, METHODS, AND TECHNIQUES OF QUANTITATIVE RESEARCH

Quantitative research is also utilized to determine the effects of various approaches, methods, and strategies employed in English language learning and teaching. According to Celik and Aydn (2018), it also studies the factors influencing the choice of English language teaching methods in the EFL environment. This research method is also used to compare various approaches, methods, and procedures. By doing a pretest and posttest approach, researchers can employ experimental research to test any unique methodologies.

The research topics concerned the students' attitudes toward specific language approaches and techniques, their suitability for their English language demands, suitability for their degree of English language proficiency, and ability to cater to their different interests. This sort of study takes a quantitative approach in the form of a questionnaire, which may be developed to discover students' impressions of the benefits and challenges of using specific approach methods and techniques.

To determine the impact of examination on classroom teaching and learning, quantitative research is performed. For example, if the researcher is interested in determining the impact of any examination on classroom teaching and learning, he may need to conduct a survey among a large number of students and teachers learning or teaching English at any level and generalize the results.

The survey will most likely provide us with an overall view of the test's impact on their classroom practices. This means that the survey provides us with preliminary information about our key issue. According to Dawadi (2018), the quantitative approach to data collecting can broaden the study by assisting the researcher in gathering data on many elements of a phenomenon from various individuals.

For language testing and assessment, the quantitative research approach is applied (Rahman, 2016). Language testing researchers all over the world use quantitative research approaches in their studies. The use of quantitative research in language testing and evaluation is

beneficial in that it provides a comprehensive and measurable expression to qualitative thoughts, which are then grasped using qualitative approaches based on the quantitative approach's statistical analysis.

Quantitative research is critical in language testing and assessment because it addresses the essential notion of testing and assessment, test validity. As a result, several ideas are seen to be involved in language testing and evaluation, making it a promising topic of quantitative research in English language education. If a researcher wishes to conduct a language proficiency assessment research, he must demonstrate the various variables such as EFL students and non-EFL students, and tests in four language skills; listening, speaking, reading, and writing, as well as variables on different aspects of language such as vocabulary, grammar, pronunciation, and class variables such as beginning, intermediate, and advanced.

D. CHARACTERISTIC OF QUANTITATIVE RESEARCH

Quantitative research is concerned with numbers, reasoning, and an objective viewpoint. Quantitative research focuses on numerical and unchangeable facts, as well as thorough, convergent thinking rather than divergent reasoning [i.e., the spontaneous, free-flowing creation of a variety of ideas concerning a study subject]. Its primary traits are as follows:

1. Typically, formal research tools are used to collect data.
2. The findings are based on larger, population-representative sample sizes.
3. Given its high reliability, the research study may typically be replicated or redone.
4. The researcher has a specific research question for which objective answers are sought.
5. Before collecting data, all components of the study are meticulously planned.
6. Data are numbers and statistics that are commonly presented in tables, charts, figures, or other non-textual formats.
7. The project can be used to broaden concepts, forecast future outcomes, or study causal linkages.
8. A researcher collects numerical data using methods such as questionnaires or computer software.

A quantitative research study's overarching goal is to classify traits, count them, and build statistical models in an attempt to explain

what is observed. Consider the following when reporting the findings of a quantitative study:

1. Explain the data gathered and its statistical treatment, as well as any pertinent results in regard to the study subject under consideration. In this area, interpretation of results is not suitable.
2. Unexpected events that occurred during data gathering should be reported. Explain the differences between the actual and planned analyses. Explain how you dealt with missing data and why any missing data did not jeopardize the validity of your analysis.
3. Describe the methods you employed to "clean" your data set.
4. Choose a statistical procedure that is least sufficient; provide an explanation for its use as well as a reference for it. Describe any computer programs that were used.
5. Describe each procedure's assumptions and the procedures you took to guarantee they were not broken.
6. Provide descriptive statistics, confidence intervals, and sample sizes for each variable, as well as the value of the test statistic, its direction, degrees of freedom, and significance level [present the real p value] when employing inferential statistics.
7. Avoid inferring causality, especially in nonrandomized designs or in the absence of further experiments.
8. Use tables to provide precise data; figures to depict overall effects. Keep figures small in size, and if possible, give graphic representations of confidence intervals.
9. Always explain what to look for in tables and figures to the reader.

E. QUANTITATIVE RESEARCH DESIGN FUNDAMENTALS

Before creating a quantitative research project, you must decide whether it will be descriptive or experimental, as this will affect how you collect, analyze, and interpret the data. The following rules govern a descriptive study: The objective is to simply establish relationships between variables; therefore the study may comprise a sample population of hundreds or thousands of participants to ensure that a valid estimate of a generalized link between variables has been produced. An experimental design involves people who are measured before and after a specific treatment, the sample population may be

limited and carefully chosen, and the goal is to establish causation between variables.

1. Introduction
   A quantitative study's opening is typically written in the present tense and in the third person. It includes the following details:
   a. Identifies the research problem -- As with any academic study, you must state the research problem being researched clearly and simply.
   b. Review the literature on the topic, synthesizing major themes and, if required, highlighting studies that used similar methods of investigation and analysis. Take note of where major gaps exist and how your research contributes to filling these gaps or clarifying existing understanding.
   c. Describes the theoretical framework – provide an outline of the theory or hypothesis that underpins your research. If necessary, describe new or complex terms, concepts, or ideas and provide relevant background information to situate the research problem in correct context [e.g., historical, cultural, economic, and so on].
2. Methodology
   A quantitative study's methods section should outline how each of your study's objectives will be reached. Provide enough detail for the reader to make an informed assessment of the procedures utilized to obtain results related to the research problem. The section on approaches should be written in the past tense.
   a. Examine the population and sample.
      Where the data came from, how robust it is, and whether gaps exist or what was excluded. Take note of the techniques utilized to choose them;
   b. Data collection
      The instruments and methods used to collect information and identify the variables being measured; describe the methods used to obtain the data; and indicate if the data was pre-existing [i.e., government data] or gathered by you. If you collected it yourself, explain what kind of equipment you used and why. Note that no data set is flawless; mention any shortcomings in data collection methods.

c. Data analysis
   Explain the techniques for data processing and analysis. Describe the specific analytical tools utilized to explore each research objective, including mathematical methodologies and the type of computer software used to manipulate the data, if applicable.

3. Result
   Your study's findings should be written objectively, succinctly, and precisely. Graphs, tables, charts, and other non-textual elements are commonly used in quantitative research to help the reader understand the data. Non-textual features should not be used in isolation from the text, but rather to enrich the overall explanation of the results and to help explain crucial themes. More information on utilizing charts and graphs to properly portray data may be found here.
   How did you assess the data statistically? What were the most important data findings? The findings should be presented logically and sequentially. Describe, but do not interpret, these tendencies or poor outcomes; leave that to the discussion section. The outcomes must be conveyed in the past tense.

4. Discussion
   Discussions should be analytic, rational, and thorough. The commentary should connect your findings to those indicated in the literature review and place them within the context of the theoretical framework that underpins the investigation. The conversation should be written in the present tense.
   a. Results interpretation
      Entails repeating the research problem under investigation and comparing and contrasting the findings with the research questions underpinning the study. Did the data confirm or disprove the projected outcomes?
   b. Trend description, group comparison, or variable relationships
      Characterize any trends that arose from your analysis and explain any unexpected or statistically insignificant findings.
   c. Discussion of implications

What do your findings mean? Highlight noteworthy findings from the overall data and make a note of findings that you believe are significant. How have the findings contributed to a better understanding of the research problem?

d. Limitations

Identify any limitations or unavoidable bias in your investigation, and explain why these limitations did not prevent effective interpretation of the data.

5. Conclusion

Finish your study by summarizing the topic and providing a final comment and evaluation of the study.

a. Synthesize the answers to your research questions in a summary of findings.

Do not include any statistical data in this section; instead, provide a narrative review of the important findings and highlight what you did not know before doing the study.

b. Suggestions

If relevant to the assignment's goal, link important findings to policy suggestions or measures to be done in practice.

c. Future research

Make a note of the need for additional research in relation to the limits of your study or any remaining gaps in the literature that were not addressed in your study.

F. THE BENEFITS OF USING QUANTITATIVE METHODS

Quantitative researchers attempt to recognize and isolate specific variables contained within the study framework, to seek correlation, relationships, and causality, and to control the environment in which the data is collected in order to avoid the risk of variables other than the one being studied accounting for the relationships identified. Among the special advantages of employing quantitative methodologies to investigate social science research challenges are:

1. Allows for a larger study with a bigger number of people, increasing the generalizability of the results;
2. Increases the objectivity and accuracy of results. In general, quantitative approaches are intended to give data

summaries that support generalizations about the topic under investigation. To do this, quantitative research often involves a small number of variables and a large number of cases, as well as prescribed processes to verify validity and reliability.

3. By using well-established criteria, the research may be reproduced, examined, and compared with similar studies.
4. You may summarize large amounts of information and compare them across categories and across time.
5. Personal bias can be avoided by keeping a 'distance' from the persons who are being studied and by employing approved computational methodologies.

G. PRACTICE

Do the following task to strengthen your knowledge of the content presented above!

1. What is Quantitative Research?
2. What are Characteristic of Quantitative Research (min. 3)
3. What is the meaning of introduction from Quantitative Research fundamental?
4. What are the advantage of Quantitative Methods?
5. What is the meaning of Methodology from Quantitative Research fundamental?

CHAPTER X

EXPERIMENTAL RESEARCH

A. EXPERIMENTAL RESEARCH IN EDUCATION

Researchers employ experimental research to manipulate one variable while controlling the other factors. In this form of research, the process, therapy, and program are also introduced, and the conclusion is noticed.

Experimental research is a collection of research designs that utilize modification and controlled testing to explore casual processes. It is commonly used in fields such as sociology, psychology, physics, chemistry, biology, and medicine. One or more variables must be modified to ascertain the influence on a dependent variable.

The experiment A methodical and scientific technique to research in which the researcher manipulates one or more factors while controlling and measuring any change in other variables. The goal of experimental research is to predict phenomena. In most circumstances, an experiment is designed to explain some form of causation. Experimental research benefits society by improving daily life.

Experimental research explains the procedure by which a researcher controls certain variables and manipulates others to see if the findings of the experiment show that the manipulations directly produced the particular outcome.

Experimental research is applied in the following situations:

1. A causal relationship's time priority.
2. A causal relationship's consistency.
3. The size of the association is enormous.

B. CHARACTERISTIC & FEATURES OF EXPERIMENTAL RESEARCH

Several crucial characteristics aid in the comprehension and interpretation of experimental research:

1. Researchers allocate people to groups or other units at random.
2. They give control over extraneous variables in order to isolate the independent variable's effects on the outcomes.
3. They physically manipulate one or more groups' treatment conditions.

4. They next assess the groups' results to see if the experimental treatment had a different effect than the non-experimental therapy.
5. This is performed by comparing the groups statistically.
6. Overall, they plan an experiment to mitigate challenges to internal and external validity.

The best — indeed, the only totally convincing — approach of showing causation is to undertake a carefully planned experiment in which the effects of any lurking variables are controlled. "Experimenting" means "actively changing x and observing the response in y."

"The experimental method is the only one that can truly evaluate theories about cause-and-effect relationships. It represents the most valid approach to the practical and theoretical solution of educational problems, as well as the growth of education as a science.

1. The performance of subjects (dependent variable) in both groups is compared after treatment.
2. Experiment-based empirical observations give the most compelling evidence for cause-and-effect relationships.
3. Extraneous variables are managed by steps 3 and 4, as well as other procedures as needed.
4. Theory builds operational definitions variables hypotheses from the problem statement.
5. Subjects are randomly assigned to treatment and control (comparison) groups, ensuring group equivalence (i.e., unknown variables that may impact result are similarly distributed between groups).
6. Random selection of participants from the population (ensures that the sample is representative of the population).
7. The investigator directly manipulates a variable (the independent variable).
8. The research question (hypothesis) is frequently expressed as an alternative hypothesis to the null hypothesis, which is used to evaluate discrepancies in empirical evidence.

C. KEY EXPERIMENTAL RESEARCH DESIGN ELEMENTS

The researcher manipulates the component that is hypothesized to affect the outcome of interest in an experiment. The altered element is sometimes referred to as the therapy or intervention. The

researcher has the ability to control whether or not research volunteers receive treatment.

1. Assignment at Random.
   a. Participants in the study are randomized to different treatment groups at random.
   b. Everyone has the same possibility of being in a given condition.

   Because random assignment neutralizes factors other than the independent and dependent variables, cause and effect can be inferred directly.
2. Sampling at random

   Traditionally, experimental researchers have chosen study subjects using convenience sampling. However, as research methodologies have become more rigorous and the difficulties of generalizing from a convenience sample to a wider population have become more obvious, experimental researchers are increasingly resorting to random sampling. Participants in experimental policy research projects are frequently drawn at random from program administrative databases and allocated to control or treatment groups at random.
3. Results Validity

   Internal and external validity are the two types of experiment validity. In social science research experiments, it is frequently challenging to achieve both.
4. Internal Reliability
   a. When an experiment is internally valid, we know that the independent variable (for example, child care subsidies) produced the study's outcome (for example, mother employment).
   b. We can presume that the independent variable produced the observed outcomes when individuals are randomly assigned to treatment or control groups because the two groups should not have differed from one another before the start of the trial.
   c. Because research volunteers were randomized to treatment and control groups at random, the two groups should not have differed at the start of the study.

      One potential threat to experiment internal validity occurs when volunteers drop out or refuse to engage in the study. Differential attrition occurs when certain

sorts of people drop out or refuse to participate more frequently than other types of people.

5. External Relevance
   a. External validity is also an important consideration in social science experiments.
   b. It can be difficult to extrapolate experimental results to groups not included in the study.
   c. External validity is more likely in studies that randomly pick volunteers from the most diverse and representative communities.
   d. The use of random sampling procedures facilitates the generalization of study results to other populations.

D. ETHICAL CONSIDERATIONS & VADLIDITY THREAT IN EXPERIMENTAL RESEARCH

Ethical concerns in conducting trials include withholding experimental therapy from certain individuals who would benefit from it, as well as the disadvantages that may result from arbitrarily assigning individuals to groups. This assignment ignores the possibility that some people may require good therapy. When to complete an experiment, whether the experiment will provide the best answers to a problem, and thoughts about the stakes involved in performing the experiment all raise ethical concerns. Following ethical principles is especially crucial in experimental research.

The fundamental ethical principles:

1. Respect for humans necessitates that research participants not be pressured into participating in a study and that research subjects with impaired autonomy be protected.
2. Beneficence implies that trials do not injure study subjects and that researchers avoid risks while increasing benefits.

Threats to Experimental Research Validity simply mean that a factor has the potential to influence outcomes.Campbell and Stanley described various types of such risks in 1963. In many cases, validity threats are unavoidable. The presence of a validity threat does not imply that experimental results are incorrect or misleading. Knowing about validity threats provides the experimenter with a framework for evaluating the specific scenario and determining its severity. Such knowledge may also allow actions to be made to reduce the effects of the validity threat under consideration. There are a threats for research such as:

1. Instrumentation.

Inconsistent use of testing instruments or testing settings is made, or the difficulty of the pre-test and post-test is uneven, implying a false gain or loss in performance.

2. Testing.
   A pre-test or intervening assessment effects post-test performance.
3. History.
   This validity risk exists when factors other than treatments that occur during the trial period have the potential to influence results.
4. Maturation.
   Physical or psychological changes occur inside the subjects during the trial period.
5. Selection.
   There is a systematic difference in the abilities or features of the patients compared between the treatment groups.
6. Treatments are spreading.
   The execution of a specific therapy has an impact on individuals in the comparison treatment.
7. Experimental Death.
   The withdrawal of individuals from one or more treatments during the research period may skew the results.

E. DIFFERENT TYPES OF EXPERIMENTAL RESEARCH DESIGNS

Experimental research designs are classified into three kinds. The degree to which the researcher assigns participants to conditions and groups differentiates the experimental design type:

1. True Experimental Designs
   True experimental designs are distinguished by the random selection of participants and the random assignment of individuals to research groups. Furthermore, the researcher has perfect control over the extraneous factors. As a result, the influence on the dependent variable can be confidently confirmed to be directly related to the change of the independent variable. True experimental designs are frequently regarded as the best sort of study design for these reasons.

The most accurate experimental research design is believed to be a true experiment. A real experiment is a sort of experimental design that is widely regarded as the most accurate type of experimental investigation. This is because a true experiment uses statistical analysis to support or deny a hypothesis. True experiments are also regarded to be the only experimental designs capable of establishing cause and effect relationships.

True experimental designs are classified into the following types:

a. One-shot case study design
   A single group is studied at a single moment in time following a treatment that is thought to have induced change. The thoroughly examined single occurrence is compared to general predictions of what the case would have looked like if the treatment had not occurred, as well as other events noticed casually. There is no control or comparative group.
b. Static-group comparison
   A group that has received treatment is contrasted to a group that has not. The observed differences between the two groups are attributed to the treatment.
c. Post-test Only Design
   This design has two groups that are assigned at random: an experimental group and a control group. Before the treatment is implemented, neither group is pretested. The experimental group is given the treatment, and both groups are given a post-test to evaluate the effect of the treatment or manipulation. When it is not possible to pretest the subjects, this design is used.
d. Pretest-Post-test Only Design
   The subjects are again randomized at random to either the experimental or control groups. The independent variable is pretested on both groups. The experimental group is given the therapy, and both groups are examined afterward to see how changing the independent variable affects the dependent variable.
e. One-group pretest-posttest design
   A single instance is studied at two points in time, one before and one after treatment. Changes in a desired

outcome are assumed to be the effect of the intervention or treatment. There is no control or comparative group.

f. Solomon Four Group Design
The subjects are divided into four groups at random. Two experimental groups and two control groups are used. Only two groups have been pre-tested. The treatment is administered to one pretested and one unprotested group. The post-test will be administered to all four groups. The initial observed effects of the dependent variable are then compared to the effects of the independent variable on the dependent variable as seen in the post-test results. This strategy is a hybrid of the previous two and is used to reduce potential sources of inaccuracy.

g. Factorial Design
The researcher manipulates two or more independent variables (factors) at the same time to see how they affect the dependent variable. This design enables the testing of two or more hypotheses in the same project.

h. Randomized Block Design
When there are intrinsic variations between participants as well as possible differences in experimental settings, this approach is used. If there are several experimental groups, the randomized block design can be utilized to make each group more homogeneous.

i. Crossover Design
Subjects in this design are exposed to many treatments and are randomized to different treatment orders at random. The comparison groups have an equal distribution of traits, and there is a high level of similarity among patients subjected to various situations. Although crossover designs are effective research tools, there is some risk that participants' responses to the second treatment or condition would be impacted by their experience with the first. The subjects act as their own control groups in this type of design.

F. CRITERIA OF TRUE EXPERIMENTAL RESEARCH

True experimental designs include a control group as well as a method for measuring the change that occurs in both groups. In this sense, we try to control for all confounding variables, or at least examine their impact, while determining if the treatment is the true reason of the change. The true experiment is frequently regarded as the sole research approach capable of accurately measuring the cause and effect relationship. In order for an experiment to be valid, three requirements must be met:

1. Control group and experimental group
   True experiments must include a control group, which consists of research volunteers who are similar to the experimental group but do not receive the experimental treatment. The control group provides a valid baseline against which the experimental results can be compared.
   The experimental group consists of research volunteers who are given the experimental treatment. True experiments must have at least one control group and one experimental group, while more than one experimental group is permitted.
2. Researcher-manipulated variable
   True experiments require the researcher to change or control the variable that is hypothesized to affect the outcome variable under investigation. The variable over which the researcher has control is referred to as the independent variable. Because it is thought to be the cause of the variations in the outcome variable, the independent variable is also known as the predictor variable.
   The dependent variable is the outcome or effect that the investigation is looking into. The dependent variable is also known as the outcome variable because it is the outcome of the investigation. The dependent variable is not manipulated by the researcher.
3. Random assignment
   The sample groups must be given at random to research participants. In other words, each participant in the study must have an equal probability of being assigned to one of the sample groups. The use of random assignment ensures that the variations between groups are due to chance. Participants in the study must be randomly assigned to either the control or experimental groups.

G. THE EXPERIMENTAL RESEARCH ELEMENTS

Once the design is finalized, four elements of actual experimental research must be considered:

1. Manipulation
   The researcher will adjust or manipulate the independent variable, which is the treatment or condition that will be applied to the experimental groups, on purpose. To improve consistency and ensure that the modification itself affects the dependent variable, precise procedural rules for therapy application must be established.
2. Control
   Control is used to avoid outside factors (extraneous variables) from influencing the study's outcome. This assures that the outcome is the result of manipulating the independent variable. As a result, keeping all other potential variables constant is a fundamental component of experimental design.
3. Assignment at Random
   The random assignment of subjects into groups is an essential aspect of real experimental design. In the experiment, participants should have an equal probability of being assigned to either of the groups. This assures that the study's outcome is due to the manipulation of the independent variable and is unaffected by the composition of the test groups. Subjects can be allocated at random in a variety of ways, some of which are quite simple, such as flipping a coin, drawing names, using a random table, or using computer assisted random sequencing.
4. Selection at random
   In addition to randomly assigning test subjects to groups, it is also vital to pick test subjects at random from a larger target audience. This guarantees that the sample population accurately represents the greater population, which includes people from various socioeconomic origins, races, intelligence levels, and so on.

H. PRE EXPERIMENTAL RESEARCH

Pre-experimental design is a study format in which certain basic experimental characteristics are used but others are not. This aspect prevents an experiment from being truly experimental. This strategy is widely utilized as a low-cost method of doing exploratory research.

Pre-experimental designs get their name from the fact that they follow fundamental experimental stages but do not contain a control group. In other words, a single group is frequently researched, but no comparison to a comparable non-treatment group is undertaken. Pre-experiments are the most basic type of study design. In a pre-experiment, either a single or several groups are monitored after some agent or treatment that is thought to cause change.

There are many of types of Pre Experimental Research:

1. One-shot case study design

   A single group is studied at a single moment in time following a treatment that is thought to have induced change. The thoroughly examined single occurrence is compared to general predictions of what the case would have looked like if the treatment had not occurred, as well as other events noticed casually. There is no control or comparative group.

   We expose a group to a treatment X and measure the consequence Y in a one-shot case study. There is no pre-test Y and no control group. It lacks a foundation for comparing groups, as well as pre- and post-tests.

   Used to assess the effectiveness of an intervention after it has been implemented; frequently used to assess the utilization of a new program or service.

2. One-group pretest-posttest design

   A single instance is studied at two points in time, one before and one after treatment. Changes in a desired outcome are assumed to be the effect of the intervention or treatment. There is no control or comparative group.

   The measurement of Y before and after treatment X is included in the one-group pre-test/post-test design. There is no control group, hence no group comparisons are possible:

   a. Measures the difference in a result before and after an intervention is applied.
   b. The intervention is only given to one group.
   c. Data collected at many time points
   d. Design flaw: demonstrates that change occurred but does not account for an event, maturation, or altered survey methodology that could occur between Static group comparisons.

e. Used to assess the effectiveness of an intervention after it has been implemented.

3. Static-group comparison
   We have an experimental and control group in static-group comparison, but no pre-test. It allows for group comparisons but no pre- and post-tests.
   A group that has received treatment is contrasted to a group that has not. The observed differences between the two groups are attributed to the treatment.
   Two groups were assigned at random, one that received the intervention and one that did not (control).

One significant disadvantage of pre-experimental designs is that they are vulnerable to multiple threats to their validity. As a result, it is frequently difficult or impossible to discard competing ideas or explanations.

One reason that studies with a pre-experimental design are typically difficult to analyze is that they frequently lack a control or comparison group. It is impossible to determine the importance of an observed change in the case without anything to compare it against.

Even when pre-experimental designs establish a comparison group, it is difficult to rule out competing hypotheses for the observed change. This is because there is no official means to determine whether the two groups would have been the same if the treatment had not been used. If the treatment and comparison groups differ after treatment, this could be due to variances in group recruitment or differential mortality in the trial.

There are an advantage and disadvantage of Pre Experimental Research such as follows:

1. Advantages in Pre-experimental research
   a. Only use in instances where manipulating more than one criterion is impossible.
   b. Are valuable in the applied sector, and emerge as a reaction to the difficulties of experimentation in education.
   c. Pre-experiments, as exploratory procedures, can be a cost-effective way to determine whether a plausible explanation warrants further exploration.
   d. Because they do not control internal validity, they are not very effective in scientific creation.
   e. Meet the experiment's minimum requirement.

   The outcomes are always contested.

2. Disadvantages in Pre-experimental Research

   Pre-experiments provide limited benefits because it is frequently difficult or impossible to rule out other hypotheses. The practically insurmountable risks to their validity are without a doubt the greatest serious disadvantage of pre-experimental research approaches.

   Because of the precise settings and control, the experimenter can repeat the experiment and 'verify' their results. Replication is critical since similar results provide greater confidence in the results.

   a. Extraneous variable control is typically greater than in other research methodologies.
   b. The independent variable is manipulated in order to examine the influence on the dependent variable. This allows us to establish a cause and effect relationship.
   c. Quantitative observational designs enable the investigation of factors that would be unethical, impractical, or prohibitively expensive in an experimental design.
   d. There is a greater probability of other variables influencing the outcomes, therefore such a strong cause and effect relationship cannot be inferred. This is due to the lack of random group assignment.
   e. The findings cannot be replicated because the same situation will not occur spontaneously again.
   f. The experimental circumstance may not be applicable in the actual world. Some behaviors can only be observed in a naturalistic environment.
   g. It may be unethical or impossible to assign people to groups at random.
   h. The results may be influenced by observer bias.
   i. Findings from quantitative observational research cannot be generalized to the wider population.
   j. Extraneous variables cannot always be eliminated.

I. ADVANTAGE & LIMITATIONS OF EXPERIMENTAL RESEARCH

There are some advantage of experimental research will help the researchers such as follows:

1. Variables Are Managed

The people doing the research have a great amount of control over their variables in experimental research groups. They have a significant edge in finding correct findings by isolating and establishing what they are looking for; this produces more legitimate and accurate outcomes. This study aids in the control of independent variables for experiments aimed at removing unnecessary and undesired variables. Control over irrelevant variables is greater than in other study kinds or procedures.

2. Establish Cause and Effect
   This sort of research's experimental design includes changing independent variables to quickly discover the cause and effect relationship.This is really useful for any form of study.
3. Simple to duplicate
   Multiple research are often required to obtain fully accurate results and establish valid conclusions. Experimental study designs may be easily repeated, and because you have complete control over the variables, you can make it practically identical to the ones before it. This form of research encompasses a wide range of topics. Depending on what is being researched, each can bring distinct benefits. The investigator can adjust the experiment to their own specific situation while maintaining the validity of the experimental study methodology.
4. Best Outcomes
   With complete control over the experiment and the ability to give in-depth analysis of the hypothesis and data obtained, experimental research is one of the best possibilities. The conclusions that are fulfilled are termed very valid, and the experiment can be repeated indefinitely to show validity. Better findings can be obtained due to the control set up by the experimenter and the stringent conditions. Better outcomes can also offer researchers more confidence in their findings.
5. Can Be Used In Almost Any Field Of Research
   Another significant advantage of this research approach is that it may be applied to a wide range of scenarios. Teachers who want to try out a novel teaching method can use it in the same way that pharmaceutical corporations can. It is a simple but effective type of study.

6. Conclusions that are unequivocal
   The results are far more meaningful than in other types of study since there is such a high level of control and only one unique variable is investigated at a time. When evaluating the data acquired, you can plainly identify the success or failure of impacts.
7. Improved transfer ability
   Acquiring insights to instruction approaches, doing experiments and combining methods for rigidity, determining the best for the population and offering more transferability.

Besides the advantage, there are many limitations of Experimental Research such as follows:

1. Inability to Experiment
   One downside of experimental research is that you cannot always conduct experiments because you cannot modify independent variables for ethical or practical reasons. You cannot conduct the experiment if you are excited about the influence of an individual's culture or the proclivity to aid strangers. This is simply because you are incapable of manipulating an individual's culture.
2. External Relevance
   The estimated impact of both experiments and well-identified quasi-experiments would be identical if the program were reproduced in another place, at a different time, or with a different group of students, which is a limitation of both experiments and well-identified quasi-experiments. Researchers frequently do little or nothing to address this issue and should probably do more.
   Experiments also have the disadvantage of being better at detecting partial equilibrium effects. When parents, teachers, and students have the opportunity to maximize their behavior in light of the program, the results can be quite different.
3. The Hawthorne Effect
   Another disadvantage of studies is that the experience of being seen may affect one's behavior—this is known as the Hawthorne effect. Participants, for example, may put greater effort if they know their outcomes will be measured. As a result, it is possible that the extra effort, rather than the

underlying program being investigated, influences student outcomes.

4. Cost
   Experiment assessments can be costly to implement well. A wide range of mediating and outcome variables must be collected by researchers. Following the control group, which may become geographically separated over time or may be less likely to cooperate in the research process, might be costly at times. The costs of experts' time and participant incentives also threaten to build up quickly. When working with a limited budget, running a modest experimental study may be the best option.
5. Experimental Assumption Violations
   Another disadvantage of experiments is that data mining may be overly simple. If one slices and dices the data in enough ways, some erroneous results are likely to emerge. This is a strong temptation for researchers, especially if they are under pressure from funders who have a vested interest in the outcome. There are solutions to this problem as well.
6. Subject to human error
   Researchers, like everyone else, make mistakes. However, whether the error was committed by machine or by man, one thing is certain: it will have an impact on the study's conclusions.
   Personal biases, unreliable samples, conclusions that may only be used in one context, and the difficulties in assessing the human experience were also mentioned as negatives.
   Experiment designs are typically manufactured circumstances that may not always reflect what happens in the actual world. The extent to which results can be generalized across settings and real-world applications is restricted.
7. Can create Artificial situations
   Controlling irrelevant factors on specific occasions is also part of experimental research. As a result, this produces an artificial situation.Because the researcher has such complete control over the factors being examined, it is extremely feasible that the data will be skewed or manipulated to match whatever outcome the researcher requires. This is especially true if it is for a company or market research investigation.

8. It may take a significant amount of time.
   Individual experiments must be performed with experimental testing in order to completely investigate each variable. This can cause the testing to take a very long time and consume a lot of resources and money. These costs could be passed on to the corporation, raising consumer prices.
9. The surroundings might have an impact on participants.
   Those who take part in trials may be impacted by their surroundings. As a result, people may give answers based on what they believe the researcher wants to hear rather than how they genuinely feel. Rather of considering how they feel and think about a subject, a volunteer may just agree with what they perceive the researcher is attempting to accomplish.
10. Variable manipulation is not regarded as entirely objective.
    Experimental research primarily involves the modification of variables, which is not seen as objective. As previously said, researchers are actively attempting to affect variables in order to study the results.
11. Restricted Behaviors
    When people participate in an experiment, even one where factors are properly controlled, the volunteers may not give the most accurate reactions. Because of the experiment context, their regular behaviors are restricted.
12. It's impossible to keep track of everything.
    While the researchers can control the bulk of the variables in an experimental research design, it is impossible to control every single one. Things like mood, events from the subject's previous day, and a variety of other factors can all have an impact on the experiment's outcome and results.

    In summary, when a researcher settles on a topic of interest, they attempt to identify the research problem, which greatly aids in narrowing the research area and allowing them to explore it more thoroughly. After defining the research problem, a researcher develops a research hypothesis, which is then tested against the null hypothesis.

    Experimental research is directed by educated guesses about the experiment's outcome. An experiment is carried out to provide proof for this experimental hypothesis. Although time and resources are limited, experimental

research frequently yields the most reliable data regarding postulated cause-effect relationships.

J. PRACTICE

Do the following task to strengthen your knowledge of the content presented above!

1. What is Experimental Research?
2. What is Pre Experimental Research?
3. Please Name the Types of Experimental Research?
4. Please Name the Types of Pre Experimental Research?
5. Please describe Advantage & Limitations of Experimental Research?

CHAPTER XI

QUASI EXPERIMENTAL RESEARCH

A. DEFINITION QUASI EXPERIMENTAL RESEARCH

Researchers can use quasi-experimental designs to test for causal linkages in a number of scenarios where the traditional methodology is problematic or inappropriate. They are referred to as quasi because they are modifications on the traditional experimental design. The researcher has less control over the independent variable in general than in the classical approach. Like experimental designs, quasi-experimental research designs investigate causal hypotheses.

B. TYPES OF QUASI EXPERIMENTAL RESEARCH

1. Two-Group Posttest-Only Design
   The only difference between this and the static group comparison is that the groups are assigned at random. Except for a pretest, it contains all of the components of a traditional design. The random assignment decreases the possibility that the groups differed prior to treatment, but without a pretest, a researcher cannot be as positive that the groups started on the same dependent variable.
2. Time Series Interrupted
   In an interrupted time series design, a researcher utilizes a single group and performs repeated pretest measurements before and after treatment.
3. Time Series with Equivalents
   Another one-group design that spans time is an analogous time series. Instead of just one treatment, there is a pretest, followed by a treatment and posttest, followed by another treatment and posttest, and so on.

C. OTHER QUASI EXPERIMENTAL RESEARCH

There are numerous varieties of quasi-experimental designs, each with a unique set of uses in certain circumstances.

1. The Proxy Pretest Design
   The proxy pretest design resembles a typical pre-post design. But there is a significant distinction. In this design,

the pretest is collected after the program has been delivered. The remembrance proxy pretest would be a reasonable method of determining participants' perceived gain or change.

2. The Separate Pre-Post Samples Design
   The primary principle behind this design (and its modifications) is that the people who take the pretest are not the same people who take the posttest.
3. The Double Pretest Design
   In terms of internal validity, the Double Pretest is a highly robust quasi-experimental design. Prior to the program, the double pretest design comprises two measures. As a result, its design clearly addresses selection-maturation threats. Because the double pretests simulate what would happen in the null scenario, the design is sometimes known as a "dry run" quasi-experimental design.
4. The Switching Replications Design
   Internal validity is likewise quite robust in the Switching Replications quasi-experimental approach. The design has two groups and three measuring waves. Both groups are pretests in the initial step of the design, one is given the software, and both are posttested. The program is supplied to the original comparison group in the second phase of the design, while the original program group serves as the "control" group.
5. The Nonequivalent Dependent Variables (NEDV) Design
   The NEDV (Nonequivalent Dependent Variables) Design is deceiving. In its most basic form, it is an incredibly weak design in terms of internal validity. However, in its pattern matching variations, it opens the door to a completely different and extremely powerful approach to causal assessment.
   The concept behind this design is that you have a program that is intended to change a specific outcome.
6. The Pattern Matching NEDV Design
   Although the two-variable NEDV design is rather poor, we may significantly strengthen it by including many outcome variables. In this variation, we require several outcome variables and a theory that informs us how the program will effect each variable (from most to least).

Depending on the circumstances, the Pattern Matching NEDV design can have high internal validity. In general, a larger set of variables and finding that your expectation pattern aligns well with the observed outcomes strengthens the design.

7. The Regression Point Displacement (RPD) Design
   The RPD design seeks to improve the single program unit scenario by comparing its performance to that of a large collection of comparison units. In community research, we would compare the intervention community's pre-post results to those of a wide number of other communities.

D. ADVANTAGE & DISADVANTAGE QUASI EXPERIMENTAL RESEARCH

There are advantage & Disadvantage Quasi Experimental Research. For advantage this research such as follows:

1. Because quasi-experimental designs are employed when randomization is impracticable or immoral, they are often easier to set up than real experimental designs, which need subjects to be assigned at random.
2. Furthermore, using quasi-experimental designs reduces challenges to ecological validity because natural habitats do not suffer from the same artificiality issues as a well-controlled laboratory setting.
3. Because quasi-trials are natural experiments, findings from one can be extended to multiple participants and contexts, allowing for certain population generalizations.
4. This experimentation strategy is effective in longitudinal research including extended time periods that can be tracked in multiple locations.
5. The concept of allowing the researcher to perform any manipulations he or she want. In natural experiments, researchers must let modifications happen on their own and have no influence over them.
6. Using self-selected groups in quasi experiments reduces the possibility of ethical, conditional, and other problems while performing the study.
7. Pre-experiments, as exploratory procedures, can be a cost-effective way to determine whether a plausible explanation warrants further exploration.

For the disadvantage of Quasi Experimental Research such as follows:

1. Confounding variables can contaminate quasi-experimental estimates of impact.
2. The lack of random assignment in the quasi-experimental design method may make investigations more viable, but it also creates significant internal validity issues for the investigator. This lack of randomization makes it more difficult to rule out confounding variables and creates new risks to internal validity.
3. Because randomization is missing, some knowledge about the data can be approximated, but causal linkages are difficult to discern due to a number of extraneous and confounding variables in a social environment.
4. Furthermore, even if these internal validity risks are addressed, causality cannot be entirely demonstrated because the researcher does not have complete control over extraneous variables.
5. Because of the lack of randomness, the study groups may produce poorer evidence. Because it broadens results and thus provides a better representation of the population as a whole, randomness adds a lot of relevant information to a study.
6. The use of unequal groups can potentially jeopardize internal validity.
7. If the groups are not equal, as is sometimes the case in quasi experiments, the experimenter may be unsure about the causes of the results.

E. PRACTICE

Do the following task to strengthen your knowledge of the content presented above!

1. What is Quasi Experimental Research?
2. Name the types of Quasi Experimental Research?
3. Describe the advantage of this research?
4. Describe the disadvantage of Quasi Experimental Research?
5. Describe the other of Quasi Experimental Research? (min. 3)

CHAPTER XII

CORRELATIONAL RESEARCH

A. DEFINITION OF CORRELATIONAL RESEARCH

We conduct correlational research on a daily basis; consider how you develop a link between the doorbell ringing at a specific time and the arrival of the milkman. As a result, it is beneficial to grasp the various forms of correlational research that are available, as well as how to conduct them.

Correlational research is a form of research method in which two variables are observed in order to establish a statistically significant relationship between them. The goal of correlational research is to uncover variables that are related in such a way that a change in one causes a change in the other.

Unlike experimental research, which is totally based on scientific methods and hypothesis, this form of research is descriptive. Correlational study, for example, may demonstrate a statistical association between high-income earners and relocation; that is, the more people make, the more likely they are or are not to relocate.

B. TYPES OF CORRELATIONAL RESEARCH

Positive correlational research, negative correlational research, and no correlational research are the three forms of correlational study. Each of these categories is distinguished by distinct traits. The types of this research:

1. Positive Correlational Research
   Positive correlational research is a research strategy that involves two statistically correlated variables, where a rise or decrease in one variable causes a similar change in the other. For example, an increase in worker pay leads to an increase in the price of goods and services, and vice versa.
2. Negative Correlational Research
   Negative correlational research is a study strategy that involves two statistically opposite variables, where a rise in one variable causes an alternate effect or reduction in the other variable. A negative correlation occurs when the increase in goods and services produces a drop in demand and vice versa.

3. Zero Correlational Research

   A sort of correlational study in which two variables are not necessarily statistically related is known as zero correlational research. A change in one of the variables may not result in a corresponding or alternate change in the other variable in this scenario.

   Zero correlational research takes into account variables having ambiguous statistical correlations. Wealth and patience, for example, can be variables in zero correlational study because they are statistically independent.

   Sporadic change patterns in variables with zero correlational are frequently due to chance rather than corresponding or alternate mutual inclusiveness.

Data gathering methods can also be used to categorize correlational research. Correlational research is classified into three forms based on these criteria: naturalistic observation research, survey research, and archive research.

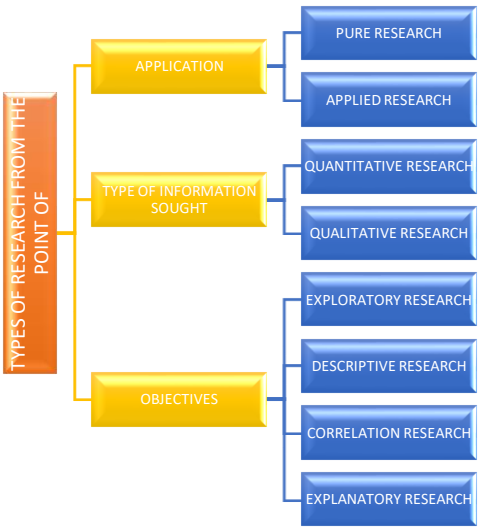

Figure 4. Correlational Research

C. WHAT DATA COLLECTION METHODS ARE USED IN CORRELATIONAL RESEARCH?

Data collecting methods in correlational research refer to the study strategies used by correlational researchers to determine the linear statistical relationship between two variables. In correlational research, several data gathering methods are utilized to gain information.

Naturalistic observation, archive data, and the survey method are the three data gathering methods used in correlational research. All of this would be detailed in detail in the following paragraphs:

1. Naturalistic Observation

   Naturalistic observation is a correlational research methodology that entails studying people's activities as they occur in their natural environment across time. It is a form of research-field method in which the researcher pays close attention to the subjects' natural behavior patterns.

   This method is particularly demanding since the researcher must take extra precautions to guarantee that the subjects are unaware that they are being monitored, or else they will depart from their regular behavior patterns. To avoid a breach of privacy, it is desirable for all subjects under observation to remain anonymous.

   The naturalistic observation method has the significant advantage of allowing the researcher to thoroughly see the subjects (variables) in their natural condition. However, it is a costly and time-consuming process, and the subjects may become aware of this act at any time and act counter to it.

2. Archival Data

   Archival data is a type of correlational research method that makes use of previously collected information about the variables in correlational research. Because this method makes use of previously collected and evaluated data, it is usually brief.

   This kind of correlational research makes use of previous studies completed by other researchers or historical records of the variables being studied. This strategy enables a researcher to follow previously identified statistical patterns of variables or subjects.

   This strategy is less expensive, saves time, and gives the researcher more data to work with. However, it has the issue of data accuracy because key information from earlier study may be absent because the researcher has no control over the data collection process.

3. Survey Method
   The survey method is the most often used method of correlational research, particularly in subjects such as psychology. It entails random selection of variables or subjects in the research, with participants filling out a questionnaire based on the topics of interest.
   This strategy is particularly adaptable since researchers may collect vast amounts of data in a short period of time. It is, however, susceptible to survey response bias and can be influenced by biased survey questions or under-representation of survey respondents or participants.
   In correlational research, these would be fully discussed under data gathering methods.

D. THE CHARACTERISTIC OF CORRECTIONAL RESEARCH

There are many characteristic of Correctional Research, such as follows:

1. Correlational Research is non-experimental
   Correlational research is non-experimental in the sense that it does not entail manipulating variables in order to agree or disagree with a hypothesis. The researcher just observes and assesses the natural association between two variables in correlational research, without subjecting either variable to extrinsic conditioning.
2. Correlational research is retroactive.
   Correlational research does not examine the future because it merely observes and measures the recent historical relationship between two variables. In this sense, the statistical pattern produced from correlational study is retroactive and can cease to exist at any time in the future.
3. Correlational Research is Dynamic
   Correlational study produces ever-changing statistical patterns between two variables. Because the correlation between two variables changes on a daily basis, it cannot be used as a stable data point for future research.

E. WHAT IS THE COEFFICIENT OF CORRELATION?

In correlational research, a correlation coefficient reveals whether the relationship between two variables is positive, negative,

or non-existent. It is commonly denoted by the sign [r] and falls within a range of possible correlation coefficients ranging from -1.0 to +1.0.

Pearson's Correlation Coefficient (or Pearson's r) is a statistic used to calculate the strength of a correlation between two quantitative variables. A value of 1.0 indicates a positive correlation, a value of -1.0 indicates a perfect negative connection, and a value of 0.0 indicates no correlation.

A correlation coefficient only represents the linear link between two variables; it can not capture non-linear interactions and cannot distinguish between dependent and independent variables. The correlation coefficient aids in determining the degree of statistical association between variables.

F. THE ADVANTAGE & DISADVANTAGE OF CORRECTIONAL RESEARCH

There are the advantage of correctional research such as follows:

1. Correlational research can be done to identify the link between two variables when conducting experimental research is unethical. When examining humans, for example, doing an experiment may be deemed risky or unethical; thus, correlational research would be the best alternative.
2. Correlational research makes it simple to identify the statistical relationship between two variables.
3. Correlational research takes less time and is less expensive than experimental research. When working with a small number of researchers and funds, or when restricting the number of variables in a study to a minimal, this becomes a significant advantage.
4. Correlational research allows the researcher to collect shallow data utilizing various approaches such as a short survey. A short survey does not require the researcher to deliver it directly, allowing the researcher to work with a small group of people.

There are the disadvantage of correctional research such as follows:

1. Correlational research is limited in scope because it can only examine the statistical link between two variables. It can't establish a link between more than two variables.

2. It does not account for cause and effect between two variables since it does not identify which of the two variables is responsible for the observed statistical pattern. Finding that education correlates favorably with vegetarianism, for example, does not explain whether being educated leads to vegetarianism or vegetarianism leads to further education.
3. Reasons for either can be postulated, but causation cannot be determined until more research is conducted. A third, unknown component could also be causing both. Living in Detroit, for example, can lead to both education and vegetarianism.
4. To discover the relationship between variables, correlational research relies on prior statistical patterns. As a result, the data cannot be relied on completely for future research.
5. The researcher has no influence over the variables in correlational study. Correlational study, as opposed to experimental research, just permits the researcher to monitor variables for connecting statistical patterns without introducing a catalyst.
6. Correlational study provides limited information. Correlational study merely demonstrates the association between variables and does not imply causality.

G. DIFFERENCES BETWEEN CORRECTIONAL & EXPERIMENTAL RESEARCH

There are several differences between Correctional Research and Experimental Research which consist of:

1. Methodology
   The primary distinction between correlational and experimental research is approach. In correlational research, the researcher seeks a statistical pattern that connects two naturally existing variables, whereas in experimental research, the researcher introduces a catalyst and observes its impact on the variables.
2. Observation
   In correlational research, the researcher watches the events passively and measures any relationship that develops between them. In experimental research, on the other hand, the researcher actively observes occurrences after causing a change in the behavior of the variables.

3. Causality
   In experimental research, a catalyst is introduced and its effects on the variables are monitored, i.e., cause and effect. The researcher is not concerned in cause and effect as it pertains in correlational research; rather, he or she identifies recurring statistical patterns connecting the variables in investigation.
4. Number of Variables
   study can accommodate an infinite number of variables. Correlational research, on the other hand, is limited to two variables.
5. Correlational research is relational, whereas experimental research is causative.
6. Correlational research is always preliminary and always comes before experimental research.
7. Experimental research, as opposed to correlational research, allows the researcher to alter the variables.

H. PRACTICE

Do the following task to strengthen your knowledge of the content presented above!

1. What is Correctional Research?
2. Describe the characteristic of Correctional Research
3. Describe the Advantage of Correctional Research? (min. 3)
4. Describe the Disadvantage of Correctional Research? (min. 3)
5. What the differences between Correctional & Experimental Research?

CHAPTER XIII

MIXED METHOD RESEARCH

A. DEFINITION OF MIXED METHOD RESEARCH

Mixed methods research contains components of both quantitative and qualitative research. Quantitative data is gathered through the use of surveys and experiments, which include numerical metrics like ages, scores, and percentages.

Non-numerical measures such as beliefs, motivations, attitudes, and experiences are commonly collected through interviews and focus group research to acquire a better understanding of a research subject or phenomenon.

Because it allows for the collecting of numerical and non-numerical data, mixed methods research is frequently utilized in the behavioral, health, and social sciences.

When quantitative or qualitative data alone are insufficient to address a research topic, mixed methods research is an excellent choice. You can reach more relevant findings by gathering and evaluating both quantitative and qualitative data in the same study. Mixed methods research can be advantageous for a variety of reasons, including generalizability, contextualization, and credibility.

Assume you're conducting a poll about consumer preferences for a specific product. You could only collect quantitative data, such as the number of people who like each product and their demographics. Alternatively, you may combine quantitative and qualitative data, like as interviews and focus groups, to gain a deeper understanding of why individuals favor one product over another.

It is critical to understand that mixed methods research entails more than just gathering both types of data. Rather, it necessitates careful consideration of the link between the two as well as technique flexibility.

When you combine quantitative and qualitative data, you may get different or even contradictory results. To develop meaningful conclusions, the researcher must thoroughly assess the results and consider them in the context of the study question.

It is critical to examine your research technique, research questions, and available data while designing a mixed methods study. Consider how you can utilize several strategies to combine the data in order to produce an answer to your research topic.

A mixed methods research strategy collects and analyzes both qualitative and quantitative data in a single study. Mixed methods designs provide for technique flexibility and might yield disparate, even contradictory outcomes. Convergent parallel, explanatory sequential, and exploratory sequential are examples of mixed methods study strategies.

Researchers might acquire significant insights into their research issue by combining data from both quantitative and qualitative sources. A research on the impact of technology on learning, for example, could use surveys to collect quantitative data on students' use of technology in the classroom. Simultaneously, interviews or focus groups might provide qualitative information on students' experiences and opinions.

B. TYPES OF MIXED METHOD DESIGN

Researchers frequently struggle to implement mixed methods research since it is difficult and can lead to research bias. While mixed methods research might disclose disparities or contradictory results between studies, it can also provide approach flexibility. There are four types of mixed methods studies: convergent parallel, embedded, explanatory sequential, and exploratory sequential.

1. Convergent parallel
   The convergent parallel design occurs when both quantitative and qualitative data are collected and processed simultaneously and separately. The goal of this design is to generate mutually exclusive collections of data that inform one another. For example, you could interview residents of a specific neighborhood while concurrently conducting a poll of the same residents to gauge their satisfaction with the region.
2. Integrated design
   When quantitative and qualitative data are collected concurrently, but the qualitative data is integrated within the quantitative data, the embedded design is used. This design is best employed when you want to focus on the quantitative data while also understanding how the qualitative data explains it further. For example, you could survey students about their perceptions of an online learning platform and then conduct individual interviews to acquire a better understanding of their comments.

3. Sequential explanatory design
   An explanatory sequential design collects quantitative data first, followed by qualitative data. When you wish to explain a set of quantitative statistics with additional qualitative information, utilize this design.
   As an example, suppose you surveyed employees at a company about their job satisfaction and then conducted interviews to learn more about why they replied the way they did.
4. Exploratory sequential design
   The exploratory sequential design first collects qualitative data, then quantitative data. When the purpose is to investigate a topic before collecting quantitative data, this form of mixed methods study is used.
   An example would be researching how parents connect with their children through interviews and then utilizing a survey to further investigate and measure these interactions.
   Integrating data in mixed methods studies might be difficult, but it is doable with careful design.
   Understanding and following these concepts will help you make relevant conclusions from your research, regardless of the sort of design you choose.

C. MIXED METHODS RESEARCH'S ADVANTAGES

Mixed methods research strategies integrate qualitative and quantitative data strengths, expanding and complementing qualitative conclusions with quantitative data and verifying quantitative findings with qualitative data. This method allows for greater flexibility in research design by integrating theory creation and hypothesis testing, as well as being less bound by disciplines and established research paradigms.

Consider a study that looked into the effect of exercise on mental health. Mixed methods study would allow for a full examination of the subject from various perspectives. Researchers could start by gathering quantitative data from individuals via surveys to acquire a general picture of their levels of physical activity and mental health. Following this, qualitative interviews would be conducted to delve deeper into the underlying dynamics of participants' experiences with exercise, physical activity, and mental health.

Researchers might more easily compare and contrast their findings using a mixed methods approach, allowing them to gain a greater understanding of the phenomenon as a whole. Furthermore, mixed methods research is important when several studies produce contradictory or divergent results. Mixed methods research can provide insights into why those discrepancies arise by mixing quantitative and qualitative data.

For example, if a quantitative survey produces one result and a qualitative interview produces another, mixed methods research can assist uncover what factors impact these disparities by combining data from both sources.

Overall, mixed methods research designs provide a number of advantages when it comes to examining complicated phenomena. They can provide insight into distinct aspects of a phenomenon in ways that neither qualitative nor quantitative data alone can. Furthermore, they enable researchers to combine data from many sources in order to acquire a better understanding of the phenomenon in issue.

D. PROCEDURE & TECHNIQUE IN MIXED METHOD RESEARCH

Time order of data collection and paradigmatic focus and dominance are two criteria for MMR designs. MMR layouts can be sequential or concurrent. In sequentially organized MMR studies, either quantitative or qualitative data are collected first, with the other sort of data collected later in the second stage, with the two considered mutually dependent. Collecting interview data from a group of TESOL teachers about their attitudes toward how to assess students' oral proficiency in English language programs, for example, followed by the administration of a Likert-scale survey questionnaire based on the interview data, to address a larger sample of teachers.

Participants might, for example, take a reading comprehension test (with scores to form quantitative data), with the same cohort (or a subgroup) participating in individual face-to-face or focus group interviews (qualitative data) independently from the test to investigate the reading comprehension strategies they use when reading and comprehending a text. To distinguish between sequential and concurrent techniques, consider if the quantitative or qualitative part of the research informs or drives the other.

In the first example, interview data would be collected to enable the construction of the survey questionnaire for the second phase,

whereas in the second example, data from reading test performance would not be used to define the interview-based data collection in the second phase, though this may be possible in some situations.

The emphasis in MMR may be placed on one of the two strands of research (quantitative or qualitative), on both equally, or on the data collecting and analysis phases in either the sequential or concurrent method. This component of MMR design is typically labeled using upper and lower case letters. MMR's several combinations by combining the two aspects of temporal sequence and focus. As a result, while developing MMR studies, language teaching and learning researchers must examine these characteristics, as well as problems of research objective and researcher motivation.

MMR designs with varying methodological emphases, both sequential and concurrent, can be utilized for both exploratory and explanatory purposes. In a sequential explanatory design, for example, researchers may collect qualitative interview data from a subset of survey respondents to provide additional explanation for some of the answer patterns shown by the survey data and analysis.

Data integration is a critical stage in mixed methods research designs. It enables researchers to obtain a deeper grasp of their findings and lends legitimacy to the integration process. The three basic methodologies for integrating data in mixed methods investigations which consist of:

1. Triangulation protocol
   This integration method integrates multiple methodologies with disparate or contradictory results to provide a cohesive response.
   For example, if a researcher wants to find out what kind of music teens like to listen to, they could conduct a survey of 1,000 teenagers as well as five focus group interviews. The answers may differ; the poll may reveal that rap is the most popular genre, yet focus groups may reveal that rock music is more extensively consumed.
   The researcher can then apply the triangulation process to arrive at a unified answer, such as the fact that rap and rock music are both popular genres among adolescent listeners.
2. Following a trail
   Another type of integration in which the researcher pursues the same theme or idea from one data collection method to the next.

A research strategy that follows a thread begins by gathering quantitative data on a specific subject, then gathers qualitative data to explain the findings. This allows whoever is performing the investigation to discover any contradicting information and investigate it further to determine what is really going on.

A researcher using this research method, for example, would collect quantitative data regarding how satisfied people are with their jobs at a certain company, followed by qualitative interviews to investigate why job satisfaction levels are low. They might then utilize the results to investigate any discrepancies or differences, gaining a better knowledge of job satisfaction within the organization.

Following a thread allows the researcher to delve into other study subjects linked to the original issue and obtain a more comprehensive understanding of it.

3. Mixed methods matrix

   This strategy depicts the various sorts of mixed methods research designs and the order in which they should be implemented. It enables researchers to swiftly examine and alter their research strategy.

   The matrix is divided into four boxes, each representing a different form of mixed methods research design: convergent parallel, explanatory sequential, exploratory sequential, and method flexibility.

   Consider a researcher who wants to learn why people don't exercise on a regular basis. They might utilize a convergent parallel design to collect both quantitative (e.g., survey responses) and qualitative (e.g., interviews) data at the same time to answer this question.

If the researcher discovers contradictory results, they can use an explanatory sequential design to collect quantitative data first, then qualitative data if necessary. This allows the researcher to make adjustments based on their results and more efficiently integrate their data.

Mixed methods research is an effective way for comprehending difficult study issues. Using qualitative and quantitative data in the same study allows academics to have a better understanding of their subject.

Mixed methods research approaches like convergent parallel, explanatory sequential, and exploratory sequential allow researchers

to acquire both types of data while avoiding the constraints of one strategy alone.

However, keep in mind that mixed methods research can give varying or even contradictory results, so be aware of the potential dangers and take steps to ensure that data is effectively integrated. Mixed methods research, when done correctly, can provide important insight into issues that would otherwise go largely unexplored.

E. CHALLENGE & ADVANTAGES OF MIXED METHOD RESEARCH

Mixed methods research is time-consuming and frequently necessitates the collaboration of interdisciplinary teams of researchers. It may also be more expensive than performing a standalone qualitative or quantitative study.

Interpreting Mixed Methods Results Research can be difficult since it can produce contradictory or divergent results. To eliminate bias, researchers must devise strategies for systematically comparing results from various sources and approaches.

Consider the following scenario: a group of researchers has used an explanatory sequential design for their mixed methods study. The team discovers that the two types of data produce different outcomes after gathering data from both the quantitative and qualitative stages. This could be difficult for the team because they now have to decide how to properly integrate the two forms of data in order to achieve relevant conclusions. To draw meaningful inferences from the contradictory outcomes, the team would need to recognize approach flexibility and be smart when combining data.

Mixed methods research provides significant tools for studying complicated processes and systems, such as those in health and healthcare.

Aside from the three fundamental mixed method designs—exploratory sequential, explanatory sequential, and convergent parallel—you can extend mixed methods research designs by using one of the four advanced frameworks. Multistage, intervention, case study, and participatory are among examples:

1. Multistage

   This methodology employs a staged approach to collecting qualitative and quantitative data in order to gain a more nuanced understanding of the research subject. An example of this is a study that begins with an online survey to collect

preliminary data and then moves on to in-depth interviews to gain more insights.

2. Intervention
   This approach entails gathering quantitative data and then acting, typically in the form of an intervention or intervention program. A study team collecting data from a group of participants, evaluating it, and then implementing an intervention program based on their results is an example of this.
3. A case study
   To evaluate a particular case, this employs both qualitative and quantitative research methodologies. The researcher will thoroughly analyze the specific situation in order to comprehend the factors impacting it. An example of this would be a study of a specific company organization to better understand its organizational dynamics and culture.
4. Participatory
   This style of study emphasizes participant involvement in the research process. It entails people actively participating in the formulation and development of research questions, data gathering, and analysis.
   A study that involves organizing focus groups with participants who actively formulate the research questions and then provide comments during the data gathering and analysis stages is an example of this.

Because mixed methods research designs are flexible, researchers can use any combination of the four frameworks indicated above, as well as other methodologies such as convergent parallel, explanatory sequential, and exploratory sequential, to meet their specific objectives.

Researchers can get numerous viewpoints and reveal differing or even contradictory results when integrating data thanks to the method's versatility. When it comes to method integration, there are four approaches:

1. Connecting entails gathering both qualitative and quantitative data at various stages of the investigation.
2. Building entails gathering both quantitative and qualitative data in a single process.
3. Merging entails collecting both qualitative and quantitative data at the same time.

4. Embedding is the process of incorporating qualitative data into a quantitative study or vice versa.

F. PRACTICE

Do the following task to strengthen your knowledge of the content presented above!

1. What is Mixed Method Research?
2. Describe the advantage of Mixed Method Research
3. Describe the technique of Mixed Method Research
4. Name the type of Mixed Method Research.

CHAPTER XIV

CURRENT ISSUES IN ELT RESEARCH

A. CURRENT ISSUES IN ELT

Since its formal establishment as a separate profession of education, English language instruction has seen many changes and problems. Our current era is no different, and as a result of the pandemic, many challenges confront English language institutions, schools, and teachers.

Those who are new to English language education may believe that the only concerns are those concerning methods of instruction. Which activities are most effective? What approaches should we take? What qualities distinguish a good curriculum (textbook or not) or teacher?

However, the field is vast and diverse, encompassing far more than just classroom instruction. There are several problems currently being debated about which instructors must establish beliefs - beliefs that will shape their teaching practices and educational philosophy. Being knowledgeable, aware, and reflecting on the key issues and difficulties facing the profession as a whole is a crucial component of all teacher education and growth.

The purpose of this study is to examine the current difficulties confronting the English language teaching profession. It takes a critical stance on many of these issues, arguing that this is the best way to analyze the sort of change taking place. There will be more questions than answers, but that is just part of judging the future, which we can never know with certainty.

B. PRECARITY AMONG TEACHERS

Precarity is a socioeconomic condition in which a teacher's ability to earn a living is unpredictable, replete with potential hazards and problems, both monetary and otherwise. One lives day to day, job to job, never knowing what the future holds. There are no savings, no plans for a secure retirement, and little opportunities to rise up the teaching food chain.

Precarity among teachers is linked to both an economic worldview and globalization. Globalization as it applies to English language education is, at its core, the implications of English's global

growth and dominance as a medium of communication (Crystal, 2003). The high demand for English language teachers, tutors, and technology creates a context in which precarity might thrive. Companies and institutions strive for ever-increasing profits and returns; education is less important than the financial bottom line.

English language instruction is heavily influenced by private sector institutions and schools. Teachers are interchangeable employees, good for a semester here and a course there. There are no long-term human capital investments. The disruption of online learning and "fast language" has made matters worse.

Learners consume English in short bites, much like fast food, via applications and instructors. This "uberization" of the English language teaching sector has already occurred, and language teaching as a career is becoming less valuable. Teachers are sought at the lowest possible cost, and are frequently Filipinos who can sound "native" while being paid a pittance. Online teachers are now considered "contracted" employees. "Free" in Orwellian terms of neoliberalism, but without health care, pension, benefits, or long-term employment stability. Curriculum designers are hired and compensated on a "per piece" basis, with no long-term commitment to the materials they generate.

C. THE RESEARCH GAP

Evidence-based teaching is a popular buzzword in English language education right now. Teachers are expected to be aware of and keep up to date with current research findings in SLA and education, and also follow the research and incorporate it into their teaching practices. This is still a problem on multiple levels.

Currently, research suffers from over-jargonized and frequently opaque language. It is extremely difficult for teachers to filter through papers, understand findings, and inform their classroom instruction. Furthermore, the abundance of published studies makes the process even more difficult. There is a disconnect between genuine research findings and actionable classroom delivery.

Another issue is the replication crisis. Much research, particularly in the hard and social sciences, is just unreplicable. So, can the findings be trusted? Whose truth and proof should be trusted? Academics are just under too much pressure to publicize their findings. There are far too many journals that publish "findings" that inform schooling. Many research are frequently overstated, and

teachers rely their instruction on what appears in the popular media. A recent example would be the "students learn better if they wear cozy socks" pieces. Teachers actually bought into it, and schools implemented policies requiring all children to wear only socks in class.

There has recently been a lot of interest in cognitive sciences and how these discoveries might apply to English language instruction. Despite the fact that most cognitive scientists advise caution in implementing any of their preliminary findings at this time, many teachers interpret the research and persuade teachers that the secret to the brain's inner workings has been uncovered. This is not the case, as buzzwords like "brain-based learning" and "neurolinguistics" are still in their infancy. Cognitive science is still in its infancy, and we should be cautious before drawing any conclusions about how neural networks learn and retain a language.

D. METHODS & TEACHING PRACTICE

There is little question that the majority of English instruction in the world and what happens in classrooms, whether remote or brick and mortar, is done through a set curriculum, mostly a coursebook. Despite its strength as an approach, CLT (communicative language instruction) has never been widely embraced in its strongest form.

Coursebooks adhere to a synthetic syllabus based on verb tenses or vocabulary frequency, as well as a predetermined belief in an order of acquisition. Controlled language is dolloped out in bits and pieces. But does studies on SLA - Second Language Acquisition - back this up? Many people would say no. Why not task-based learning and a more student-centered approach (such as Dogme or ELA - Emergent Language Approach)?

Today, many teaching techniques are being scrutinized and challenged. This is extremely beneficial to the profession and one of the bright lights in ELT. Translanguaging is promoted, and the L1 is increasingly employed in the classroom.

Homework is being graded again. Many people believe it is counterproductive to student development and autonomy. Lesson plans are currently being revised. Are they required? Furthermore, the concept of defining class objectives is being questioned.

Grading and the competitive nature of schools are of renewed concern, and we are reconsidering our approaches of comparing all pupils to one another. Correction of errors. It is being used less and less frequently, and only under tight conditions.

E. TECHNOLOGY OF EDUCATION

Technology has always been hyped, promoted, and described in a positive, game-changing light. Optimism abounds, and technology is hailed as the panacea that will cure all of education's woes. History teaches us that this is not the case. Audrey Watters (2019) writes eloquently about all of ed-tech's terrible failures (see MOOC failures) and its underlying flawed mentality.

Schools and organizations are scrambling to implement online solutions, but if the recent pandemic is any indication, teachers are dissatisfied and student outcomes are dismal. There is widespread agreement that emergency online education was a colossal failure in the majority of cases and places of the world (if it occurred at all).

The question of how to best employ educational technology persists, and blended learning, a "hydrid" approach combining online and face-to-face classes, appears to be gaining traction. However, instructors face the dilemma of technology undermining their value and even authority. How involved should technology be in the learning/teaching process? The investment in surveillance technology is tremendous, and the future of technology in education may include knowing everything a kid does. Is that really what we want? This may be really useful in many circumstances, but it will also allow institutions and professors to manipulate pupils, and learning will become all about giving the tech what it wants and defeating the algorithm - not true learning.

F. PRACTICE

Do the following task to strengthen your knowledge of the content presented above!

1. What is Current Issues in ELT?
2. Describe Technology of Education?
3. What is The Research Gap?

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Textbooks

CRITICAL REVIEW ON ELT RESEARCH

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As a potential English teacher, you must be able to interpret as well as collect research reports linked to teaching English. The research report provided information. In reality, it is really beneficial for boosting the quality of your learning. Johnson (1992) emphasized that reading research reports is not only useful for increasing the reader's knowledge, but it should also be able to make the reader critical in responding to other people's research, in asking questions (research questions) asked in the research, the methods used, the findings obtained, and the conclusions given.

PT Inovasi Pratama Internasional