

HİLAL SARIKAYA ARSLANTAŞ

2025

PRE-SERVICE AND PRACTICING EFL TEACHERS' CONCEPTIONS OF AND
ENGAGEMENT IN RESEARCH

HİLAL SARIKAYA ARSLANTAŞ

A THESIS SUBMITTED
FOR
THE DEGREE OF MASTER OF ARTS
IN
TEACHING ENGLISH AS A FOREIGN LANGUAGE

İHSAN DOĞRAMACI BILKENT UNIVERSITY

ANKARA

AUGUST 2025

To Yasin and Erdem, with love



Pre-service and Practicing EFL Teachers' Conceptions of and Engagement in
Research

The Graduate School of Education
of
İhsan Doğramacı Bilkent University

by

Hilal Sarıkaya Arslantaş

In Partial Fulfilment of the Requirements for the Degree of
Master of Arts
in

Teaching English as a Foreign Language

The Department of English Language Teaching

Ankara

August 2025

İHSAN DOĞRAMACI BILKENT UNIVERSITY
GRADUATE SCHOOL OF EDUCATION

Pre-service and Practicing EFL Teachers' Conceptions of and Engagement in
Research

Hilal Sarıkaya Arslantaş
July 2025

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Teaching English as a Foreign Language.

Asst. Prof. Dr. Tijen Akşit (Advisor)

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Teaching English as a Foreign Language.

Asst. Prof. Dr. Necmi Akşit (Examining Committee Member)

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Teaching English as a Foreign Language.

Prof. Dr. Kenan Dikilitaş, University of Bergen (Examining Committee Member)

Approval of the Graduate School of Education

Prof. Dr. Alipaşa Ayas (Director)

ABSTRACT

Pre-service and Practicing EFL Teachers' Conceptions of and Engagement in
Research

Hilal Sarıkaya Arslantaş

MA in Teaching English as a Foreign Language

Advisor: Asst. Prof. Dr. Tijen Akşit

August 2025

This study explores how 122 pre-service and 79 practicing EFL teachers at a state university in Türkiye conceptualize and engage in research. Grounded in Borg's (2009) framework, the study combines data from an adapted questionnaire and follow-up interviews with 32 participants (7 pre-service and 25 practicing teachers) to better understand how teachers define research and what prevents them from engaging in it. Findings show that both groups tend to view research as a formal, systematic, and objective process, and they place importance on its practical value in the classroom. Many participants also associated research with informal, everyday problem-solving activities. Despite generally positive views, both groups reported limited engagement in academic research. Key barriers included coursework demands, lack of time, and insufficient training. Overall, the study highlights the need for more accessible, practice-oriented research education in both initial teacher education and ongoing professional development. Supporting teachers in building a more confident and relevant relationship with research can play a key role in bridging the gap between theory and classroom practice.

Keywords: EFL teacher research, research engagement

ÖZET

İngilizce Öğretmeni ve Öğretmen Adaylarının Araştırma Anlayış ve Faaliyetleri

Hilal Sarıkaya Arslantaş

Yabancı Dil Olarak İngilizce Öğretimi Yüksek Lisans Programı

Tez Danışmanı: Dr. Öğr. Üyesi Tijen Akşit

Ağustos 2025

Bu çalışma, Türkiye’deki bir devlet üniversitesinde öğrenim gören 122 İngilizce öğretmeni adayı ve aynı üniversitede görevli 79 İngilizce öğretmenin araştırma kavrayışlarını ve araştırma yapma deneyimlerini incelemektedir. Borg’un (2009) çerçevesinden yola çıkılarak yürütülen çalışmada, katılımcıların araştırmayı nasıl tanımladıkları ve araştırma sürecine ne ölçüde dahil olduklarını anlamak amacıyla uyarlanmış bir anketin yanı sıra 32 katılımcı ile (7 öğretmen adayı, 25 öğretmen) görüşmeler gerçekleştirilmiştir. Elde edilen bulgular, her iki grubun da araştırmayı sistematik, biçimsel ve nesnel bir süreç olarak gördüklerini ortaya koymaktadır.

Ayrıca, birçok katılımcının araştırmanın sınıf içi uygulanabilirliğini önemli buldukları ve gündelik yaşamda yapılan problem çözme etkinliklerini de araştırma olarak değerlendirdikleri görülmektedir. Ancak her iki grup da araştırma faaliyetlerine sınırlı düzeyde katılmakta; ders yükü, zaman kısıtlaması ve yeterli eğitimin eksikliği belirtilen en önemli engeller arasında yer almaktadır. Bu çalışma, öğretmen eğitiminde ve mesleki gelişim süreçlerinde, öğretmenlerin ihtiyaçlarına uygun ve daha uygulanabilir araştırma eğitimlerinin gerekliliğine dikkat çekmektedir.

Anahtar kelimeler: öğretmen araştırması, araştırma uygulamaları

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my supervisor, Asst. Prof. Dr. Tijen Akşit, for her invaluable guidance, support, and encouragement throughout the preparation of this thesis. Her expertise and patience have made the successful completion of this study possible.

I am also grateful to Asst. Prof. Dr. Necmi Akşit for his inspiring teaching and support, and to Prof. Dr. Kenan Dikilitaş for his insightful feedback as a member of my thesis committee.

I am profoundly thankful to my parents, Şafak Sarıkaya and Necdettin Sarıkaya, for their love and belief in me. I am grateful to my sister, Ayşe Nil, whose colorful spirit has brightened the most stressful moments. I must thank my brother, Hasan Çağrı, who generously opened his home to me during my visits to Ankara.

To my husband, Yasin Arslantaş—thank you for your endless understanding and support. Your calm strength in every challenge has been a constant source of inspiration to me, not only in this study but also in the journey of life.

I would also like to commemorate my late father-in-law, İhsan Arslantaş, with love and respect. He would have been proud to witness this day.

I am deeply thankful to my dearest friends Başak Erol, Büşra Yener, Doğukan Hazar Özçubuk, Gökhan Gök, Gözem Çeçen, Seçil Çalışkan, and Nicole Kassas Elmas, whose companionship made this journey more meaningful and enjoyable.

This thesis is dedicated to my beloved husband, Yasin, and my precious son, Erdem. Your love and presence have given me joy and strength. With heartfelt love and gratitude, this accomplishment is for you. Thank you!

TABLE OF CONTENTS

ABSTRACT.....	iii
ÖZET.....	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES	x
LIST OF FIGURES.....	xiv
CHAPTER 1: INTRODUCTION	1
Introduction.....	1
Background	1
Problem	6
Purpose.....	8
Research Questions	8
Significance.....	10
Definition of Key Terms	11
CHAPTER 2: REVIEW OF RELATED LITERATURE.....	12
Introduction.....	12
The Concept of Research	12
Conceptual Framework	18
Research and Teachers.....	21
Teacher Research: Benefits and Constraints.....	24
Research for Pre-service EFL Teachers.....	25
Research for Practicing EFL Teachers.....	29
CHAPTER 3: METHOD	35

Introduction	35
Research Design.....	36
Context	37
Participants.....	40
Instrumentation	44
Questionnaires	44
Interviews	51
Method of Data Collection.....	53
Methods of Data Analysis.....	55
Quantitative Data Analysis.....	57
Tests of Normality	58
Qualitative Data Analysis.....	60
CHAPTER 4: RESULTS	67
Introduction	67
EFL Teachers' Conception of Research	67
Research Conceptions of Pre-service Teachers.....	68
Findings from the Quantitative Analysis.....	68
Findings from the Qualitative Analysis.....	70
Research Conceptions of Practicing Teachers	73
Findings from the Quantitative Analysis.....	73
Findings from the Qualitative Analysis.....	75
The Differences between the Research Conceptions of Pre-service and Practicing Teachers.....	83
Quantitative Analysis.....	83

Qualitative Analysis.....	86
Pre-service EFL Teachers' Research Conceptions among Subgroups.....	88
Descriptive Statistics.....	88
Inferential Statistics	96
Practicing EFL Teachers' Research Conceptions among Subgroups	99
Descriptive Statistics.....	99
Inferential Statistics	108
EFL Teachers' Research Engagement	111
Reading Research	112
Pre-service Teachers.....	112
Practicing Teachers.....	114
Reported Influence of Reading Research on Teaching	116
Doing Research	118
Pre-service Teachers.....	118
Practicing Teachers.....	119
Reasons for Research Engagement	120
Pre-service Teachers.....	121
Practicing Teachers.....	125
CHAPTER 5: DISCUSSION.....	135
Introduction.....	135
Overview of the Study	135
Discussion of Major Findings	137
Conceptions of Research	137
Pre-service Teachers.....	137

Practicing Teachers	140
The Difference Between Research Conceptions of Pre-service and Practicing Teachers	142
Research Engagement	143
Pre-service Teachers	143
Practicing Teachers	145
Implications for Practice	150
Implications for Further Research.....	152
Limitations	153
REFERENCES.....	155
Appendix A	166
Appendix B	171
Appendix C	176
Appendix D	177
Appendix E.....	178

LIST OF TABLES

Table		Page
1	Information About the Pre-service Teachers Participated in the Questionnaire.....	41
2	Information About the Pre-service Teachers Participated in the Interview.....	42
3	Information About the Practicing Teachers Participated in the Questionnaire.....	42
4	Information About the Practicing Teachers Participated in the Interview.....	44
5	Cronbach's Alpha Values for the Questionnaire.....	46
6	Description of the Scenarios in the Questionnaire.....	49
7	Interview Durations and the Number of Words Analyzed...	52-53
8	Overview of the Data Analysis Procedure.....	55-56
9	The Shapiro-Wilk Results and Normality Assumptions for Subgroups.....	58-59
10	List of Pre-determined Codes and Categories.....	61
11	A Sample Excel Sheet of the Coding Organization.....	63
12	Themes for the Second Round of Coding.....	64
13	M and SD Values for Pre-service Teachers' Research Conceptions.....	68
14	M and SD Values for Pre-service Teachers' Conceptions of Good Research.....	69

15	Other Characteristics of Good Research for the Pre-service Teachers.....	71
16	M and SD Values for Practicing Teachers' Research Conceptions.....	73
17	M and SD Values for Practicing Teachers' Conceptions of Good Research.....	74
18	Other Characteristics of Good Research for the Practicing Teachers.....	75
19	M and SD Values for Research Conceptions.....	84
20	M and SD Values for the Characteristics of Good Research...	85
21	M and SD Values of Research Conception by Pre-service Teachers' Year of Study.....	88-89
22	M and SD Values of Research Conception by Pre-service Teachers' Teaching Experience.....	90
23	M and SD Values of Research Conception by Pre-service Teachers' Conditions of Taking the Research Methods Class	91
24	M and SD Values of the Characteristics of Good Research by Pre-service Teachers' Year of Study.....	93
25	M and SD Values of the Characteristics of Good Research by Pre-service Teachers' Teaching Experience.....	94
26	M and SD Values of the Characteristics of Good Research by Pre-service Teachers' Conditions of Taking the Research Methods Class.....	95-96

27	Independent Samples T-test results for pre-service teachers' conceptions of research.....	97
28	Mann-Whitney U Test Results for Pre-Service Teachers' Research Conceptions.....	98
29	Independent Samples T-test Results for Pre-service teachers' Reported Characteristics of Good research.....	98
30	M and SD Values of Research Conception by Practicing Teachers' Years of Experience.....	100
31	M and SD Values of Research Conception by Practicing Teachers' Holding Professional Certificates.....	101
32	M and SD Values of Research Conception by Practicing Teachers' Holding Postgraduate Degrees.....	102-3
33	M and SD Values of the Characteristics of Good Research by Practicing Teachers' Years of Experience.....	104
34	M and SD Values of the Characteristics of Good Research by Practicing Teachers' Holding Professional Certificates.....	106
35	M and SD Values of the Characteristics of Good Research by Practicing Teachers' Holding Postgraduate Degrees.....	107
36	Independent Samples T-test Results for Practicing Teachers' Research Conceptions.....	109
37	Mann-Whitney U Test Results for Practicing Teachers' Reported Characteristics of Good Research.....	110
38	Pre-service Teachers' Frequency of Reading Research.....	112

39	Pre-service Teachers' Sources of Reading Research.....	113
40	Practicing Teachers' Frequency of Reading Research.....	114
41	Practicing Teachers' Sources of Reading Research.....	115
42	Questionnaire Results for the Effect on Teaching.....	117
43	Pre-service Teachers' Frequency of Doing Research.....	118
44	Practicing Teachers' Frequency of Doing Research.....	119
45	Pre-service Teachers' Reported Reasons for Not Reading Research.....	121
46	Pre-service Teachers' Reported Reasons for Doing Research	123
47	Pre-service Teachers' Reported Reasons for Not Doing Research.....	124
48	Practicing Teachers' Reported Reasons for Not Reading Research.....	126
49	Practicing Teachers' Reported Reasons for Doing Research	130
50	Practicing Teachers' Reported Reasons for Not Doing Research.....	133
51	Summary of Studies Using Borg's (2009) Tool.....	148

LIST OF FIGURES

Figure		Page
1	Teacher Research Cycle.....	14
2	Sample Coding of the Interview Data	66



CHAPTER 1: INTRODUCTION

Introduction

This chapter introduces the present study and the concept of research within the scope of English as a Foreign Language (EFL) teachers' experiences and beliefs. The background section clarifies the terminology of research through related literature. It also summarizes teachers' conceptions of and engagement in research in different contexts. The final part of the chapter highlights the purposes, significance, and clearly states research questions, followed by key terms used in the study.

Background

This section briefly explains the terms academic research, educational research, practitioner research, teacher research, exploratory practice, action research, and reflective practice, along with their relevant literature and historical background. The context of the present study involves pre-service and practicing EFL teachers at a state university in Türkiye. Therefore, further details about these two groups are provided in this section. Finally, teachers' conceptions of and engagement in research will be clarified through local and international studies.

Fraenkel et al. (2011) explain the value of scientific research by highlighting the ways of knowing, which are sensing, agreeing with others, asking for expert opinion, and using logic for reasoning. What makes the information gathered from science valuable is the reliability that it provides. Academic research is a type of research "conducted through a scientific method involving any careful and systematic investigation in a field of knowledge" (Fraenkel et al., 2011, p. 4). The characteristics and the stages of research are crucial for the current study because it

intends to explore what EFL teachers understand from the concept of research. Even though it will be explained in detail in the following chapters, the three main phases of research are worth mentioning here: (1) posing a question, (2) collecting data to seek answers, and (3) presenting the answer to the question (Creswell, 2012).

Academic research can be related to any field of knowledge. Research in education or educational research is an area of research specifically aiming to contribute to existing knowledge and improve teaching and learning practices (Creswell, 2012, p. 7). According to Akkari and Wentzel (2014, p. 385), educational research has three dimensions: attitude, activity, and result. The attitude refers to the researchers' particular strategy to solve a problem; activity is the series of actions to conduct the research, and the result is the findings and outcomes of the study.

Practitioner research is another important term to consider for the present study. It is an umbrella term explained by Lytle and Cochran-Smith (1994), emphasizing the insiders' perspective in research. For instance, in the field of education, teachers who carry out action research and reflective practice engage in forms of practitioner research, as all are meant to contribute to the understanding of the teaching and learning context of teaching and learning they directly experience (Berry & Taylor, 2017). In recent years, there has been growing recognition that research in language education should not be limited to traditional academic roles. It is enriched by multiple identities, such as practitioner researchers, academic supervisors, and the collaborative research communities of teachers (Consoli & Dikilitaş, 2021). In the present study, practitioner research and teacher research are used interchangeably to refer to all research activities conducted by EFL teachers related to foreign language learning. Freeman (1998, p. 5) presents five propositions

about teacher research to explain what teacher research is and how it impacts teachers' practices. It logically outlines ideas compatible with the research questions and tools utilized in this study. The first proposition analyzes the concepts of teacher and research, emphasizing that a teacher is a person while research is a process. The scopes of teaching and conducting research are linked to their purposes. Primarily, research aims to generate knowledge by asking questions, inquiring into the phenomena, and reporting the results. Teachers are viewed as individuals who apply educational theories in the classroom, yet there is growing interest and professional autonomy in teacher research. The present study explores how candidate and practicing teachers conceptualize research and their roles in the school. The second proposition focuses on the critical elements of research: orientation, inquiry, and discipline. Disciplined inquiry involves the systematic collection and analysis of data. Examining the qualities of research from the perspectives of pre-service and in-service teachers is also one of the study's purposes. The third proposition by Freeman (1998, p. 5) articulates that "teachers do not think of themselves as producing knowledge; they think of themselves as using it." The institutional culture and teachers' level of technical knowledge are central to this proposition. According to Freeman (1998, p. 6), inquiry is the crucial element in teacher research (proposition 4), and teacher researchers must discover new ways to share their findings with others (proposition 5).

Action research is also accepted as a form of practitioner research. It is a "systematic research approach aiming to solve a problem and obtain new knowledge with the involvement of the researcher and clients" (Coghlan, 2003, p. 451). In an educational context, we can think of the researchers as the teachers, and the clients

would possibly be the learners in class. According to Dikilitaş (2015, p. 49), exploratory practice forms the first step in teachers' reflection on their practices and conducting action research. Exploratory practice facilitates teachers' understanding of their context and provides them with the data to work on further and more systematic inquiry, such as action research.

The origin of action research dates back to 1946 when the German psychologist Kurt Lewin used it as a methodology to study understanding and developing social issues, and today, it is widely employed by researchers in education, health, and social care (Matheson & Matheson, 2014, pp. 397-412). Action research is usually a small-scale and cyclical research process where the basic steps are observing, analyzing, acting, and reviewing (Richards & Farrel, 2005, p. 171). Once teachers specify a problem, they rely on research to find a solution. This is the reviewing phase where researchers' reflective skills are crucial. In educational contexts, the systematic inquiry of an individual teacher who aims to improve practices in their own classroom can be action research; it can also take the form of collaborative action research if involving a group of colleagues or teachers from different schools (Burns et al., 2022, p. 6). Finally, reflective practice is another form of teacher research and a professional development activity. In addition to being systematic like other kinds of research activities, Farrel (2022, p. 8) states that reflective practice is a cognitive and emotional process in which teachers collect data about their practices, reflect on them, and interact with colleagues to make decisions.

Having briefly clarified the terminology related to research, the characteristics of the two teacher groups participating in this study require further explanation. Regarding the context of the present study, pre-service teachers are

undergraduate students studying English Language Teaching at the Faculty of Education. In Türkiye, the Council of Higher Education (CoHE) administers all teacher education programs in those faculties. The candidate teachers are supposed to take two nationwide exams to register for English language teaching departments. The CoHE provides guidelines for the design of the curriculum to be covered over eight academic semesters in four years. There are three groups of courses in the curriculum of the English language teaching undergraduate program: subject matter, pedagogical formation, and general culture. The coursework is a total of 155 hours, with 141 hours of theoretical and 14 hours of practical classes. The pre-service teachers take the compulsory “Research Methods in Education” course in their 4th semester (YÖK, 2024). The term “practicing teacher” refers to teachers who currently teach English as a foreign language to learners with various levels of English. They teach general and academic English at the tertiary level, and conducting research is not officially a part of their job requirement. Their professional background differs in terms of their years of teaching experience and their academic and professional qualifications.

There is a considerable amount of empirical research conducted in both Turkish and international contexts that examines the perceptions and activities of teachers. Some studies focus specifically on pre-service teachers’ engagement with research (Akyel, 2015; Atak Damar & Salı, 2022; Elmas & Aydın, 2017; Yan, 2017; Tanış, 2019; Van Katwijk et al., 2023). It is a common finding that even though pre-service teachers value research in their profession, their knowledge and experience might not be enough for research engagement in their future teaching. Studies with practicing teachers (Akşit, 2010; Akşit, 2013; Allison & Carey, 2007; Atay, 2008;

Banegas, 2018; Borg, 2009; Çelik, 2017; Karakaya, 2015; Kılınç, 2022) add to those results with the barriers to conducting research in different teaching contexts.

Practicing teachers also believe that research is beneficial for improving their practices and their professional development; however, they feel hindered by their busy teaching schedules and limited resources.

The aforementioned aspects of pre-service and practicing EFL teachers' research conceptions and engagement constitute the background of this study; they are explained in further detail in the following sections.

Problem

The problem addressed this study fall into three areas about English language teachers' conceptions of and engagement in research with reference to the relevant literature: (1) how do pre-service and practicing EFL teachers conceptualize research (2) what motivates or discourages them from engaging in research (3) how do their experience and educational background effect their research conceptions?

Exploring the pre-service and practicing teachers' views of research as a part of their teaching practice is a significant aspect of this study. According to Borg (2010), teachers consider large-scale and statistical studies research, and therefore, they do not find research feasible and relevant to their profession. EFL teachers, on the other hand, tend to think of searching for classroom materials as research (Kılınç, 2022). These findings reveal the need for a better understanding of the related terminology. Teacher research, in particular, is seen as a professional development activity with high transformative potential, even though the studies on how teachers learn about research are limited (Borg, 2015). Numerous studies on teacher research and action research focus on in-service teachers' needs, experiences, and perceptions

of research in general and action research in particular (Borg, 2013; Akşit, 2013; Allison & Carey, 2007; Atay, 2008; Borg, 2009; Karakaya, 2015; Çelik, 2017; Banegas, 2018; Kılınç, 2022). According to Dikilitaş and Bostancıoğlu (2019, p. 4), pre-service teacher research differs from academic research in terms of the goals and methodology. Opportunities for them to learn about and conduct research are usually bound to the undergraduate courses. Empirical studies investigating the perspective of pre-service teachers are limited in number (Tanış, 2019). Pre-service EFL teachers' views of research were specifically covered in this study for better comprehension of the context and to be able to compare their conceptions of and experiences with research with those of practicing teachers.

The second dimension of the problem is teachers' research engagement. The benefits of teacher research and the challenges faced by teachers in conducting it are widely covered in the literature (Freeman, 1998; Wallace, 1998; Burns, 1999; Borg, 2013; Borg, 2015). The present study intends to explore the current situation of the pre-service teachers as well as the tertiary-level EFL teachers because, without focusing on the factors motivating and discouraging them, it would not be possible to make connections to the previous research in various contexts and promote engagement in research.

Finally, the third problem area is the need for understanding the factors that influence pre-service and practicing teachers' conceptions of research. As Borg (2009, p. 377) argues, teachers' previous experiences and existing knowledge can shape their understanding of research, and this is seen as an important aspect in the current study to contribute to the existing literature and improve the implications for teacher education and teacher training. Teachers' educational and professional

background shaping their research conception and engagement were evaluated in the current study, besides the institutional and environmental factors encouraging or limiting teachers' research engagement.

Purpose

The purpose of this study is to explore and understand pre-service and practicing EFL teachers' conceptions and practices regarding research at a state university in Türkiye. Exploring these conceptions also involves investigating whether some characteristics of these teachers can play a role in affecting their perceptions. The study specifically looks at pre-service teachers' year of study, their previous teaching experiences, and whether they have taken the research methods class or not, while the years of teaching experience, and whether or not they hold professional certificates and postgraduate degrees, are the factors explored with the practicing teachers. The study further aims to investigate the extent to which pre-service and in-service EFL teachers read and conduct research, and the reasons behind this. Analyzing how much teachers benefit from research in their teaching practices and examining the limitations and challenges they face in order to conduct or during the research process are among the other purposes of this study. Finally, it also seeks to compare the research conceptions of pre-service and practicing EFL teachers within the English language teaching department at a faculty of education and a school of foreign languages at the same university via quantitative and qualitative data collection and analysis.

Research Questions

The present research is designed to seek answers to the following six questions;

- 1a. *What are the conceptions of research* held by
 - i. pre-service EFL teachers
 - ii. practicing EFL teachers
- 1b. *How do these conceptions compare?*
2. Do *pre-service EFL teachers' conceptions of research* differ according to their
 - a. year of study
 - b. teaching experience
 - c. having taken the "Research Methods in Education" class or not
3. Do *practicing EFL teachers' conceptions of research* differ according to their
 - a. teaching experience
 - b. holding a professional certificate or not
 - c. holding a post-graduate degree or not
4. To what extent do EFL teachers *engage with* research during their
 - a. pre-service education?
 - b. practice in the profession?
5. To what extent do EFL teachers *engage in* research during their
 - a. pre-service education?
 - b. practice in the profession?
6. Why do EFL teachers *engage in* research during their
 - a. pre-service education?
 - b. practice in the profession?

Significance

The significance of this study lies in its potential to inform both practical and theoretical understanding of teacher conception and engagement in research in the field of English language teaching. The significance can be explained in two aspects: (1) its contribution to filling a gap in the literature by including the perspectives of both pre-service and practicing EFL teachers, and (2) the contextual benefits of understanding how teachers conceptualize and get involved in research in their profession.

Based on Burns' (2010, p. 21) definition of teacher research as “the strategy that can lead to improvements in teachers’ classroom practices”, the present study examines the practical benefits of understanding teachers’ views about research by focusing on two different groups: pre-service and practicing teachers. Teachers’ views on research are crucial not only because they are the practitioners who apply the pedagogical knowledge, but also because they are increasingly seen as the contributors to that knowledge. Therefore, identifying the extent to which pre-service and practicing teachers read, value, and conduct research can help design more effective curricula for teacher education and professional development activities.

Additionally, by exploring the research conceptions of both pre-service and practicing teachers, the present study contributes to the field through the multiple perspectives it brings forward. While pre-service teachers are the “future professionals and researchers,” much less attention has been paid to their awareness and skills in research (Atak Damar & Salı, 2022; Dikilitaş & Bostancıoğlu, 2019). By including both groups, this study not only provides a comparative perspective to the existing research but also informs teacher educators and program designers.

Definition of Key Terms

Action research: “A teacher-driven research method aiming to develop classroom practice and empower teachers. Teachers identify a problem in their teaching practice and conduct systematic research to solve it. The process can be performed individually or collaboratively. The research cycle involves stages of planning, acting, observing, and reflecting” (Thornbury, 2006, p. 3).

Pre-service teachers: Undergraduate-level students studying at English Language Teaching Departments of Education Faculties.

Research: “The formal, systematic application of scholarship, disciplined inquiry, and most often the scientific method to the study of problems” (Fraenkel et al., 2011, p. g-7).

Teacher research: “Teachers’ inquiry about what happens in their classrooms through systematic reflection using a range of data collection tools.” (Wallace, 1998, p. 12).

CHAPTER 2: REVIEW OF RELATED LITERATURE

Introduction

The purpose of this chapter is to introduce the concepts related to research and teachers' views and practices. First of all, terminology related to research, definitions, procedures, and the historical background of different research types within the scope of this study will be explained. Second, the conceptual framework of the current study will be introduced through the definitions given and the relevant literature. Third, the role of research in the context of pre-service teachers will be discussed. Finally, the conceptions and activities of research for practicing EFL teachers and their research activities will be covered.

The Concept of Research

Research is the formal and complex process of gathering information in everyday life. Its philosophical foundations derive from ontology, aiming to understand how the world exists, and epistemology, which emphasizes the ways knowledge is created (Bartlett & Burton, 2016, p. 4). The scientific research starts with a problem, and it has systematic stages to obtain reliable information. Stenhouse (1975, p. 133) defines research as the “systematic inquiry made public.” The steps of “scientific inquiry” are (1) determining a problem regarding the aim of the research, (2) anticipating whether the research questions can solve the problem, (3) collecting relevant data, and (4) analyzing and describing the data within the scope of research (Creswell, 2012, p. 7). Similarly, according to Nunan (1992, p. 3), the research process involves three units: a problem, data, and the analysis.

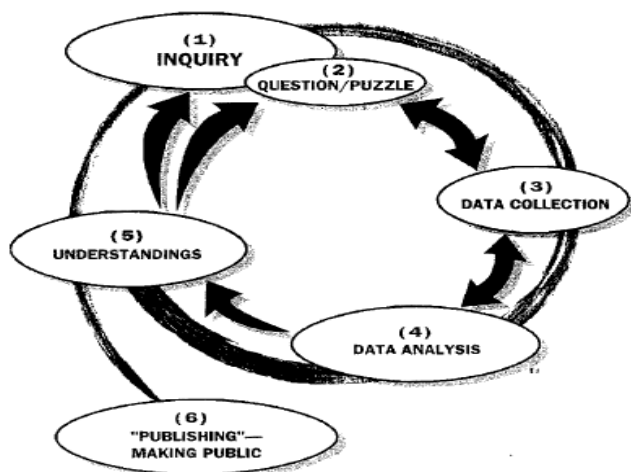
Educational research or research on education adopts the same research procedure, but focuses on the issues of learning and teaching. Bartlett and Burton (2016, p. 35) explain the educational research process in six steps; first of all, the researcher selects a research issue. The second phase is developing detailed research questions, and then the research design is determined. The third and fourth stages of research involve collecting and analyzing the data, and finally, the research process ends with the presentation of findings.

Lytle and Cochran-Smith (1994, pp. 22-51) define teacher research as the “systematic and intentional inquiry carried out by teachers in their own schools and classrooms” and emphasize the potential benefits of it to the academic communities through the perspective it provides from the teachers. Research carried out by the person who is actually involved in the profession is called practitioner research. This person is frequently the teacher in the educational context. Practitioner research in education has basically three aims: (1) to improve the practice, (2) to have a better understanding of the practice with specific and general aspects, and (3) to affect its social conditions (Zeichner & Noffke, 2001, p. 306). The researchers in the field of education make decisions to alternate each step according to individual values and beliefs regarding education and research. Those steps are similar to Freeman’s (1998, p. 38) teacher research cycle. The six elements from the cycle are “inquiry, question/puzzle, data collection, data analysis, understanding, and publishing”. Freeman specifies the process as a cycle because teachers revisit their approaches and understanding with the new information obtained through reflection and inquiry. The arrows between stages refer to this cyclical nature. Teachers use what they learned at the understanding stage and turn back to the inquiry phase with new

questions. Data collection and analysis help understanding; however, the last step, publishing, is more independent than the others. If teachers don't share their findings, teachers' research remains private to them without having an effect on policymaking and the literature (Freeman, 1998, p. 38). Throughout this teacher research process, the key element is criticality, as teachers reconsider their actions with outcomes and make necessary changes (Dikilitaş, 2015).

Figure 1

Teacher- Research Cycle



Note. From *Doing Teacher Research: From Inquiry to Understanding* (p. 38), by D. Freeman, 1998, Heinle & Heinle. © 1998 by Heinle & Heinle.

Practitioner research or teacher research allows teachers to make informed decisions by increasing their knowledge on a specific issue. Stenhouse (1975, pp. 142-165) and Berthoff (1987, pp. 28-39) highlight the significance of classroom inquiry against traditional positivist research, where quantitative data are analyzed in large-scale studies. They both argue that research should derive from teachers' concerns and questions. There are some important differences between the views of

Stenhouse (1975) and Berthoff (1987). According to Stenhouse (1975), teacher research is a systematic process consisting of case studies with the data collected from the classrooms. To ensure validity, teacher researchers should have multiple resources and methods of data collection, and the findings need to contribute to curriculum development. On the other hand, Berthoff (1987) emphasizes reflective thinking and interpretation along with data collection in teacher research.

The argument that teachers who know more teach better focuses on teacher learning and the concepts of *knowledge for practice*, *knowledge in practice*, and *knowledge of practice*. Teachers play a central role in educational change, and policymakers need to be aware of what teachers do and should know to improve the quality of education. The knowledge-for-practice approach involves the teachers' benefit from existing theories of education; thus, they rather use the knowledge than generate it (Lytle & Cochran-Smith, 1990, p. 257). The key feature of the new image of teacher learning is not the amount of knowledge that teachers possess; it is about the variety of sources and how the teachers organize that knowledge. In this regard, the knowledge-in-practice approach emphasizes the importance of the teacher's in-class experience and problem-solving abilities. At the same time, knowledge of practice refers to the combination of theory and practice (Lytle & Cochran-Smith, 1990, p. 257). Lankshear and Knobel (2004, p. 4) have a critical approach to the definitions of teacher research, which highlight the research conducted in teachers' own classrooms. They argue that meaningful teacher research is beyond the immediate classroom; it involves focusing on broader studies of educational and sociological research.

Action research is an “important ancestor” (Hollingsworth & Sockett, 1994, p. 3) and a form of teacher research, as well as an “innovative form of social inquiry” (Kincheloe, 2003, p. 18). It was first utilized by social psychologist Kurt Lewin in the 1940s as a research design within the social sciences. Later, in the post-World War II era, researchers at Columbia University implemented it in several teacher-led research projects in education. One of these researchers, Corey (1954, pp. 375-380), defines action research as a method where practitioners systematically investigate their practices to enhance them. Action research was especially viewed as part of the curriculum because, unlike traditional research methods that aim for generalizable findings, it is directly applied to the challenges of real-world educational contexts (Corey, 1954, pp. 375-380). According to Hollingsworth and Sockett (1994, p. 9), the following five criteria explain why practitioner research in education is closely related to the improvement and educational reform: (1) Teacher research enables the collaboration between the schools and the academic environments, (2) Starting point of research is the practical, real life situations, (3) Practitioners’ knowledge and experience on real life situations is a crucial source of information, (4) Research provides personal and social change as well as the changes in curriculum and instruction, and (5) There are multiple ways and perspectives of knowing. On the other hand, the application of action research in education has faced some criticisms; in traditional research, which typically follows a top-down approach, experts produce knowledge that teachers apply in the classroom. Teachers conducting action research are not regarded as experts, leading some to question its value (Kincheloe, 2003, p. 22). The importance of teachers’ involvement in educational reform and improvement was first mentioned by Lawrence Stenhouse and John Elliot, and soon

was connected to the Classroom Action Research Network by Elliot in the UK (Hollingsworth & Sockett, 1994, p. 3). In the 1970s, various action research projects in education focused on teachers solving problems in their classrooms and studying their teaching practices (Creswell, 2012, p. 597). It was after the 1980s that the terms action research and teacher professional development began to be used together (Kincheloe, 2003, p. 36).

Recent debates emphasized the role of action research as bridging theory and practice teaching (Consoli & Dikilitaş, 2021, p. 355), and Burns et al. (2022, p. 7) emphasize the transformative aspect of action research as it can help the stakeholders make changes in the classroom, school, and finally the society.

The typical action research cycle consists of observing, analyzing, acting, and reviewing. This small-scale research primarily aims to solve problems in the school or classroom (Richards & Farrel, 2005, p. 171). Teachers studying their own classroom or school can have both positive and negative effects, according to Matheson and Matheson (2014, pp. 397-412). For instance, researchers may not need to invest significant time and effort because they are already familiar with the context. However, the characteristics of the setting that are obvious to the researcher may need more explanation from the outsider's perspective. Action research should be considered beyond a procedure for professional development because the teachers conducting it need to collect and analyze the data systematically. The professional development activities, such as workshops and training sessions, are beneficial for the teachers, but action research can be designed for teachers' and learners' specific needs (Burns et al., 2022, p. 9). In collaborative action research, teachers work as research groups, exchange ideas, and triangulate their data to increase the validity

and reliability. They present the findings of action research in conferences and workshops (Burns, 1999, p. 35).

Conceptual Framework

The conceptual framework of investigating teachers' views of research is based on the themes covered by the literature on conceptions of research and the teachers' engagement in it. Borg (2009) designed the themes and items in the questionnaire "English Language Teachers' Views of Research" by using the relevant literature (1) possible benefits of teacher research (Kincheloe, 2003; Lyle, 2003; Lankshear & Knobel, 2004; Kirkwood & Christie, 2006), (2) teachers' views of research (Shkedi, 1998; Everton et al., 2000; Everton et al., 2002; McNamara, 2002; Ratcliffe et al., 2004) and (3) English language teachers' engagement in research.

The content of the questionnaire was determined with the help of the following resources. First, the possible benefits of teacher research are aimed at being covered to set the conceptual framework. Kincheloe (2003) explains the term "teacher-researcher" in terms of teachers' empowerment against the power of centralized education, constraints at the workplace, curriculum requirements, and the teaching materials prepared in advance. According to Kincheloe (2003), teacher engagement with and in research is crucial because if they actively participate in the research process, they will produce knowledge and adopt a critical perspective toward educational institutions as well as their own practices as teachers. Promoting teachers' role as researchers can have significant effects on their professional development and their future reflection. Teachers' professional identity is supposed to develop via research engagement (Lankshear & Knobel, 2004) because they make

informed judgments about their actions, gain more respect, and have higher autonomy. Moreover, given the chance to have discussions and exchange ideas in a collaborative school environment, teachers conducting research can be the agents of change in schools (Lyle, 2003). As for the benefits of teacher research on teaching and learning, Lankshear and Knobel (2004) argue teachers' engagement in research provides higher quality in two ways: (1) teachers become aware of a problem in the classroom and conduct research to fix it, and (2) they discover some useful research, apply them in the classroom and report the results. In a very similar vein, the study of Kirkwood and Christie (2006) reveals some benefits of teacher research. Teachers became more reflective in their pedagogical decisions, increased their critical reading ability, renewed their enthusiasm for teaching, and improved teaching practices after participating in a research project.

The second theme of the conceptual framework is teachers' views of research. The relationship between practicing teachers from various disciplines and academic research is studied by Shkedi (1998). Focusing on teachers' attitudes towards reading research literature, the findings reveal the gap between teachers' and researchers' work and priorities. The main reading resources for teachers are case literature, practical educational literature, subject matter literature, didactic literature, general pedagogic application literature, general educational literature, and research literature. Rather than the research-oriented and theoretical literature, teachers prefer reading the resources that have an impact on their classroom practices. As for the challenges in reading research, the complex language of academic texts, teachers' lack of time, finding the research irrelevant to their needs, and not trusting the research results are the most commonly stated responses. Teachers mainly read

research to solve an educational problem or as a part of a course requirement. Shkedi (1998) indicates that teachers' exposure to research during their pre-service years and promoting collaboration and dialogue between teachers and researchers are significant in improving positive attitudes and making teachers more research-engaged.

There are several valuable key findings regarding teachers' perceptions of educational research in the study by Everton et al. (2002). While most participants acknowledge the significance of research, the number of teachers actively engaged in it is not high. Teachers prioritize reading about and conducting research on topics applicable in the classroom: teaching methods, learner motivation, and teacher-student interactions. According to Everton et al. (2002), increased opportunities for professional development enhance teachers' research engagement, and future educational research focusing on practical classroom applications can involve more teachers in the research process. McNamara (2002) highlights the connection between teachers' research engagement and their professional development, along with the quality of education and learners' achievement. Aiming to collect both descriptive and explanatory data, McNamara (2002) organizes the questionnaire sections to see teachers' attitudes towards research, both in doing and using research. The item with the richest data is "What image does educational research hold for you?" which mostly reveals negative themes such as "academic," "statistical," and "done by the people in the university." The perception section is followed by items about teachers' *engagement in* and *engagement with research*. According to Everton et al. (2002), teachers' engagement with research benefits from the existing literature and reading research in order to improve their practices, whereas engagement in

research refers to the active participation in research projects. These conceptions also formed the framework of the present study. Even though it has been conducted with science education practitioners, the research by Ratcliffe et al. (2004) is a valuable source for exploring EFL teachers' views on research. The study involves various stakeholders, such as in-service and pre-service teachers, policymakers, textbook writers, and teacher trainers. Four categories help researchers investigate the problem comprehensively: (1) the impact of research on teachers' classroom practices, (2) teachers' and stakeholders' perceptions of research, (3) teachers' resources of knowledge, and (4) the development of professional practice. When teachers are asked to define "research," they mostly emphasize the features of having a clear purpose and a systematic approach. The existing research literature and teacher training programs are the main sources of knowledge for teachers (Ratcliffe et al., 2004).

The final element in the conceptual framework of this study is teachers' engagement in research. There are many valuable guidebooks for language teachers to conduct research. On the other hand, empirical studies on teachers' conceptions and engagement are limited in the field of ELT (Borg, 2009). Background knowledge from the research guidebooks by Freeman (1998), Wallace (1998), and Burns (1999) explains the concepts and principles of teacher research and action research for language teachers.

Research and Teachers

Teachers rely on their personal experiences and previous studies or research findings to improve their practices. Their engagement in research has been a controversial issue; some scholars, like Allwright (1997, pp. 368-370), argued that

teachers may not be qualified enough to conduct scientific/ academic research. On the other hand, according to Kincheloe (2003, p. 18), knowledge for educational sciences needs to be created by the teachers because they are a part of the learning and teaching environment as practitioners. Teacher research enables their professional development and the achievement of the learning outcomes (Kincheloe, 2003, p. 45).

Integrating research into professional decision-making is known as *evidence-based practice* and might help bridge the gap between theory and practice in education (McNamara, 2002, p. 21). Through evidence-based practice, teachers' engagement with research is supposed to affect teaching and learning positively because it provides teachers with sound and research-informed decisions (Davies, 1999, pp. 108-121). To encourage teachers to be engaged in this kind of beneficial activity, it is crucial to investigate teachers' views and experiences of research and evidence-based practice. Hancock (1997, p. 85) asks, "Although there has been the teacher as researcher movement in the last 20 years and the institutions such as the Teacher Training Agency (TTA) in the UK promote it, why is the number of teachers who are engaged in research still low?" The reasons for classroom teachers' reluctance to research are summarized in four main aspects: (1) Teachers are not generally expected to do research due to their professional status acknowledged by society and the policymakers, (2) Especially the classroom teachers have intensive working conditions with additional responsibilities for the needs of pupils, so they have little time and energy left for research, (3) The current policies on education undervalue teachers' research activities, which causes a lack of confidence in them, and (4) Existing research methodology usually doesn't align with the classroom

practices, and teachers find this challenging (Hancock, 1997, p. 89). According to Borg (2013, p. 82), reading research has benefits for teachers because it helps them find theoretical foundations for their practices. However, their reported frequency of engagement with published research is low in some studies (Çelik, 2017; Fareh & Saeed, 2011). To promote more frequent reading of research, it should be comprehensible and relevant to teachers' needs (Borg, 2013, p. 99). In their study investigating the effect of a more personal and informal reading process of research on teachers' autonomy, Dikilitaş & Mumford (2018) highlight the development of teachers in terms of agency, motivation, and awareness. When participants had the freedom to choose the topics and the resources of their needs and interests, the analysis showed that they adopted a more critical and reflective approach to the research they read, their own practices, and the professional development activities (Dikilitaş & Mumford, 2018, p. 263).

A study by Lyle (2003) aims to investigate the effect of a continuing professional development (CPD) program on the development of teachers as researchers. In-service teachers from various disciplines were introduced to different research methods; they conducted classroom research, and their feedback formed the findings of Lyle's (2003) research.

The group discussions primarily focused on practice, with teachers noting that this research experience transformed their practices and teaching approaches. Indicating that teachers were enthusiastic and maintained positive attitudes toward research throughout the program, Lyle (2003, p. 295) argues that teachers' proficiency and engagement in research significantly contribute to improving classroom practices.

Teacher Research: Benefits and Constraints

There are various forms of research in education, and the benefits of teachers' interest and engagement in research are widely discussed in the literature. Teachers' research improves the reflection and the ability to make professional judgments (Stenhouse, 1975; Lankshear & Knobel, 2004; Dikilitaş, 2015). It is associated with improvement in classroom practices and teachers' professional development. Being actively engaged in research helps teachers make informed decisions in their classroom practice (Borg, 2009; Dikilitaş, 2015). Furthermore, research bridges the gap between theory and practice in education, and teachers can make abstract theories more useful and applicable by engaging with the research literature critically (Lankshear & Knobel, 2004, p. 10). It contributes to teacher empowerment, enabling educators to deepen their understanding of theoretical frameworks (Johnson, 2012) because teachers engage directly with the realities that shape the educational theories with first-hand and comprehensible insights from the classroom (Dikilitaş, 2015; Coşkun, 2023). Furthermore, when conducted collaboratively, teacher research encourages the exchange of ideas and contributes to the research literature with a higher chance of affecting policies (Lankshear & Knobel, 2004, p. 26). In the same vein as the benefits mentioned above, Stenhouse (1975, p. 144) even argues that if the majority of teachers were enthusiastic about research and actively involved in it, "teachers' self-image" and "conditions of work" would change.

The main concern regarding a high number of teachers' interest in and engagement with research is whether it is truly realistic. This brings us to the constraints that pre-service and practicing teachers face. Only a few of the participants in the action research project conducted by Christenson et al. (2002)

continued doing action research as a part of their practice. The ones who didn't pursue what they learned in the action research course stated the following reasons as constraints: "lack of time, difficulty in arranging the schedule, criticism by the administration, and being unable to find partners for collaboration."

According to Kirkwood and Christie (2006, p. 435), lack of time and heavy workload are the most common challenges to sustaining teacher research. Moreover, some teachers state they lack formal research methodology, and they find the research culture in their institutions not supportive enough (Akşit, 2010; Borg, 2006; Burns, 1999; Woore et al., 2020; Sakarkaya & Bümen, 2022). As the limited time was seen as a common reason for not conducting research for teachers, Burns et al. (2022, p. 27) suggest that institutions should dedicate time and resources to teachers' reflection and discussion of their practices and to shape the research culture at schools.

Research for Pre-service EFL Teachers

Pre-service teachers are those who have not yet started their careers in the teaching profession but are still in training or completing their education to become teachers. They are also called "teacher candidates" or "prospective teachers". As future practitioners, pre-service teachers' views and practices of research are critical for shaping their teacher and researcher identities (Dikilitaş & Bostancıoğlu, 2019).

The role of research in teacher education began to be discussed after the 1950s. To promote the new generation of teachers who integrate research into their practices, education programs need to be reformed. As a result, teacher education programs in the UK added courses on academic research into their curriculum (OECD, 2003). Today, there is growing attention to pre-service teacher research in

teacher education based on the assumption that learning about and conducting teacher research would prepare candidate teachers for their future careers (Van Katwijk et al., 2023). The undergraduate level is mostly where the pre-service teachers take courses related to research methods, and they learn about topics such as surveys and statistical analysis. However, since very few of the pre-service teachers can recognize the connection between research and their role as teachers, their future engagement in research is assumed to be low (Kincheloe, 2003, p. 37). Therefore, it is important to take the differences between academic research and pre-service teacher research into consideration while designing the undergraduate-level research courses. Academic research is rather theory-oriented and usually aims to add to the existing knowledge with formal tools and procedures. On the other hand, pre-service teachers' purpose in conducting research is mostly to improve their practice in the areas they are interested in and through self-reflection (Dikilitaş & Bostancıoğlu, 2019).

In Türkiye, the “Research Methods in Education” course is compulsory in the 4th semester of the undergraduate program of English language teaching. The content of this course is specified by the Higher Education Council. Teacher candidates taking the course are expected to learn about basic concepts and principles related to research methods, data collection and analysis, research models, qualitative and quantitative research designs, access to databases, preparing research reports, reviewing, evaluating, and presenting articles and theses. The course content is comprehensive, even though the extent of theoretical and practical activities is not specified. According to Dikilitaş and Bostancıoğlu (2019, p. 10), the compulsory teaching practicum for pre-service teachers is also an important opportunity for

observing the real classroom/ school context and discovering their strengths and weak areas of teaching, which might be the first step for their practitioner research. Tanış's (2019) study highlights that the English language teaching program at a state university in Türkiye enriches the research skills and knowledge of the pre-service teachers. On the other hand, participants expressed that their conceptions of research are bound to academic studies at universities, so they need to have a more comprehensive understanding of research and teaching practices. Elmas and Aydın's (2017) qualitative research reveals similar findings in a similar context to Tanış (2019). After attending the weekly instruction and feedback sessions about research methods and principles, participants expressed their opinions via diaries, reflective journals, and interviews. The results show that their research skills, content knowledge, and self-confidence were improved by research engagement. On the other hand, pre-service teachers found the statistical procedure, some academic writing, and using the research software challenging, which resonates with the findings of Karakaya (2015) and Banegas (2018).

Understanding pre-service teachers' research conceptions is significant for practical implications to help them develop their identity as teacher-researchers and promote their engagement in different types of practitioner research. Pre-service teachers can find it difficult to make clear connections between the teacher and researcher identities because they perceive research mostly as an academic inquiry and associate it with postgraduate studies (Trent, 2012; İnal & Büyükyavuz, 2013). According to the research by Ölçü Dinçer and Seferoğlu (2018), their knowledge and experience in professional development activities, such as reflective practice and action research, are limited to participating in them. Studies on pre-service teachers'

views and experiences on action research programs (Akyel, 2015; Talandis & Stout, 2015; Schulte & Klipfel, 2006; Yan, 2017) are also noteworthy in explaining the current situation in teacher education. EFL students at a private university in Japan define action research as “the series of interrelated experiences” because their process in the action research project involves steps such as exploring, planning, collecting and analyzing data, observing, reporting, and presenting. The participants claim that sharing the results of their research was highly motivating, but they sometimes find the workload challenging (Talandis & Stout, 2015).

The focus of Yan’s (2017) study is the role of action research in pre-service teacher education in China. The participants are a group of pre-service EFL teachers in a Master of Education (MEd) program and the teacher educators in a national teacher education university. The pre-service teachers face challenges regarding insufficient knowledge and experience in research, especially in the literature review, data collection, and analysis stages. Yan (2017) argues that many programs for teacher education do not cover research methodology issues as needed. Therefore, the teacher education system is required to transform in a way that employs collaborative action research on candidate teachers. Schulte and Klipfel (2016) focus on the effects of external factors on pre-service teachers’ engagement in action research. Participants’ responses about the Rural Teacher Residency (RTR) action research program at California State University revealed that action research has a positive impact on pre-service teachers’ critical and reflective thinking skills. External factors such as the institutional structures, the interaction with mentor teachers, and the expectations from the candidates should be taken into consideration to improve the quality of action research programs (Schulte & Klipfel, 2016, p. 465).

Within the context of Turkish pre-service teachers, Akyel (2015) conducted a study by integrating pre-service teachers' school practicum with a teacher research course. The study resulted in positive changes in pre-service teachers' attitudes toward teacher research and their willingness to collaborate for future research. Pre-service teachers in Türkiye take the research methods in education course in their 4th semester at the faculty of education. A study by Savaşçı and Rets (2021, p. 132) investigated the impact of taking this class on their attitudes towards research engagement. In line with Akyel's (2015) study, participants reported higher confidence and interest in research for their future practices.

Another recent study demonstrates the transformative effect of reading other teachers' action research experiences on pre-service teachers' reflective and critical thinking skills. Reading and commenting on the examples of action research, pre-service teachers gain awareness of teaching and research practices, and this helps them build future identities as teacher-researchers (Dikilitaş & Çomoğlu, 2020).

A study from the Netherlands (Van Katwijk et al., 2023) uses a combination of methods to explore pre-service primary education teachers' perceptions of teacher research and the correlation between the quality of their teacher inquiry projects and their teaching quality. The results show that pre-service teachers generally have a positive view of practitioner research, and the quality of their research is positively linked to their teaching quality.

Research for Practicing EFL Teachers

The roles of language teachers are listed by Brown (2001) as the controller, director, facilitator, and resource. These roles imply the interactive aspect of the teaching and learning process. The teacher provides the information to students,

plans the lessons, and helps learners overcome difficulties they face. When teachers were asked about their different roles, communicators, classroom managers, and team members were the most prominent responses. The researcher is among the answers, despite the conflict regarding the nature of the research. University academics are of the view that broad research is crucial and necessary, while teacher research is limited to the teaching profession and focuses on practical issues (Morgan & Neil, 2003).

Teachers' role as researchers has gained attention despite the conflicts mentioned by Morgan and Neil (2003). It is crucial to understand what teachers think of research, what they read as research, and what kind of research activities they do to bridge that gap between university-based educational researchers and teachers practicing educational theories in the classroom (Shkedi, 1998). To this end, Borg (2009) focused on teachers' research perception and engagement, their understanding of good research, and their level of reading and doing research, with the reasons behind it. A total of 505 EFL teachers from 13 different countries participated in the questionnaire, and 12 of them were interviewed. The survey indicated that teachers commonly identified statistics, objectivity, hypothesis testing, having large sample sizes, and variable control as key characteristics of high-quality research. Most of the teachers claimed they find teacher research beneficial and important, but their engagement in research does not seem to parallel those results. Reasons for reading and doing research are more personal; however, teachers state a lack of time and having institutional constraints as the reasons for not being engaged in research.

More research replicated and built on Borg's (2009) research in various contexts (Gao et al., 2010; Çelik, 2017; Banegas, 2018; Mermer & Soyer, 2021;

Kılınç, 2022). Mermer and Soyer (2021) provided a broader perspective to Borg's (2009) research by involving the study of EFL teachers from contexts ranging from preschool settings to the tertiary level. The findings revealed that while the general tendency was on the scientific/ academic aspects of research, participants rated scenario 3 (reviewing the literature for an MA course requirement) not as research, unlike other studies conducted with EFL instructors at the tertiary level. Gao et al. (2010) conducted the survey and focus group interviews in a primary school EFL teacher's context in China. According to the findings, participants are motivated to do research, especially to solve the problems they face while teaching. They engage in research more than expected, even though a single regional example cannot explain all Chinese contexts. Teachers expressed that the lack of technical support and institutional encouragement hinders their research engagement. On the other hand, EFL teachers in Argentina think that a lack of time and research knowledge were common obstacles to conducting research (Banegas, 2018). The teachers who participated in the study (Banegas, 2018) view research as an academic, systematic, and objective activity. They state that research is usually conducted by academics rather than teachers; it involves data collection and analysis. So, they felt they were consumers, not producers, of research.

Mehrani (2015) emphasizes the gap between research and practice in the field of ELT and explores the extent of Iranian teachers' research engagement and the motivational factors. The study was conducted with teachers from public and private schools, and findings revealed that despite positive attitudes, Iranian English teachers have low research engagement.

The findings of Çelik (2017) and Kılınç (2022) significantly show that most

of the participants believe that good research improves classroom practice.

Participants have positive attitudes towards research, but their engagement level is not parallel to their motivation. Even if they see research as an effective tool for their problem-solving skills and professional development, practicing EFL teachers do not have adequate research experience due to the lack of technical knowledge and support (Karakaya, 2015). According to Sakarkaya and Bümen (2022, p. 336), the major barriers for EFL teachers in Türkiye to conduct research are limited institutional support, financial concerns, low awareness, and particularly the lack of time. A similar study by Akşit (2010) involves the different stakeholders in a school of language at a state university in Türkiye to explore the attitudes and behaviors of research. EFL teachers reflect positive attitudes for affective and cognitive components, while the behavioral attitudes are mostly neutral.

As the literature emphasizes the benefits of teacher research and the positive attitudes toward it, it is crucial to know about the characteristics of teachers and schools with high research engagement. The study by Hahs-Vaughn and Yanowitz (2009) involves teachers from different fields and years of experience working both part-time and full-time in private and public schools. Teachers are more likely to do research if they work in a private school, live in bigger cities, participate in professional development activities, and receive institutional support. On the other hand, the heavy workload affects teachers' research engagement negatively. Novice teachers indicate they spend most of their time on class preparation; thus, they are less likely to do research. Interestingly, having a graduate degree does not guarantee that teachers will actively be involved in research in their profession (Hahs-Vaughn & Yanowitz, 2009). A similar and more recent study by Woore et al. (2020, p. 95)

focused on the research experiences of three language teachers in a case study. Research engagement had a positive influence on teachers' self-efficacy and confidence, and the biggest challenge reported is time constraints.

As for the studies related to practicing teachers' views of action research, EFL teachers in Türkiye mostly have positive attitudes toward action research. However, instead of conducting action research, they prefer and are expected to attend pre-designed and top-down activities such as workshops and seminars for professional development (Tanış & Dikilitaş, 2018). Atay's study (2008) supports these findings. EFL instructors at the tertiary level in Türkiye are aware of their needs. They are increasingly interested in action research despite constraints such as a lack of time, expertise, and encouragement from the school management. Another research by Akşit (2013) is valuable in demonstrating reflections of the teachers of EAP on an action research program for professional development purposes in Türkiye. The participants reported some benefits and problems regarding their experience of action research, and the findings show that action research promotes a critical approach to teachers' own practices, even though time management can be problematic in some teaching contexts (Akşit, 2013).

Fareh and Saeed (2011) investigated the significant roles of EFL teachers in the United Arab Emirates, Yemen, and Saudi Arabia. Intending to understand the effect of action research activities on teachers' roles as problem solvers and agents for change. They found out that teachers are not rewarded for their time and effort in action research, but they are conscious of its personal and professional benefits.

Wyatt (2011) conducted a small-scale study to explore how practicing teachers benefited from an in-service teacher education course with action research

practice. With regard to the participants who successfully conducted their action research throughout the study, the results show the development of research skills, increased self-awareness, and motivation. This study is crucial in demonstrating the feasibility of the teacher education or professional development activities integrated with teacher research practices.

Finally, a more recent study by Dikilitaş and Göktürk-Sağlam (2023) investigated the influence of an online research community and the training program on research engagement and the professional development of teacher researchers. Thematic analysis of interviews showed that the improvement in participants' teaching practices was observed during and after the classroom research. The practical implications of the study involve the significance of keeping teaching and researching as complementary processes and the communities of practice to encourage teachers to engage in research (Dikilitaş & Göktürk-Sağlam, 2023).

CHAPTER 3: METHOD

Introduction

The purpose of this study is to investigate pre-service and practicing EFL teachers' conceptions of and engagement in research. It is designed to seek answers to the following six questions;

- 1a. *What are the conceptions of research held by*
 - i. pre-service EFL teachers
 - ii. practicing EFL teachers
- 1b. *How do these conceptions compare?*
2. Do *pre-service EFL teachers' conceptions of research* differ according to their
 - a. year of study
 - b. teaching experience
 - c. having taken the "Research Methods in Education" class or not
3. Do *practicing EFL teachers' conceptions of research* differ according to their
 - a. teaching experience
 - b. holding a professional certificate or not
 - c. holding a post-graduate degree or not
4. To what extent do EFL teachers *engage with* research during their
 - a. pre-service education?
 - b. practice in the profession?

5. To what extent do EFL teachers *engage in* research during their
 - a. pre-service education?
 - b. practice in the profession?
6. Why do EFL teachers *engage in* research during their
 - a. pre-service education?
 - b. practice in the profession?

The following methodology chapter gives a detailed explanation of the research method of the study under the headings of research design, context, participants, instrumentation, and methods of data collection and analysis.

Research Design

The present study combines quantitative and qualitative methods in a specific sequence, aiming to obtain deeper insights into the subject. Creswell (2012, p. 125) terms this type of research design “explanatory sequential mixed method research,” where the collection and analysis of qualitative data follow the collection and analysis of quantitative data, with the aim of elaborating on the quantitative data through qualitative data collection and analysis.

Multiple sources were used for triangulating the data. Quantitative and qualitative data were collected separately for all participants. The first stage of data collection was survey research, which is suitable to understand large groups of people’s views on a specific issue (Gay et al., 2009, p. 176). The second stage of data collection consisted of one-to-one semi-structured interviews with participants. These interviews aimed to provide more detailed information and elaborate and extend the results about pre-service and practicing EFL teachers’ conceptions of and engagement in research.

Context

The research site consists of two separate units within one of the largest and oldest state universities of Türkiye, located in the Central Anatolia Region. The university shares features with language teaching and teacher education institutions across the country; it represents a diverse demographic background among the pre-service and practicing teachers, and was also preferred for feasibility and accessibility reasons.

The two research contexts were the English language teaching (ELT) Department at the faculty of education and the English preparatory program at the school of foreign languages (SFL). They were expected to provide different perspectives, comparability, and richer data needed to answer the research questions of this study. The perspectives of pre-service teachers came from undergraduate students enrolled in the ELT department, while the perspectives of practicing teachers were obtained from the EFL instructors at SFL.

The first research context is the ELT department, which was founded in 1982 with graduate and undergraduate programs. According to the data from the official website of the Council of Higher Education, the current number of registered students in the ELT undergraduate program is 768. The group profile has a significant variety in terms of the areas of Türkiye from which students come and the high schools they attended. The academic staff comprises four professors, four associate professors, four assistant professors, lecturers, and research assistants. The ELT program applies the same admission requirements as all the state universities in Türkiye. Candidate students are required to take the Higher Education Institutions Exam (YKS) and the Foreign Language Exam (YDT). Even though a one-year

English preparatory program is compulsory for all undergraduate students, they are able to directly start their education in the faculty if they have at least 60 points on the English proficiency exam of the school of foreign languages and the equivalent exams such as TOEFL IBT (minimum score is 72) and Pearson Test of English (minimum score is 55).

Pre-service EFL teachers in the ELT department take required and elective courses over eight academic semesters. These courses are designed according to the European Credit Accumulation Transfer (ECTS) system, and the medium of instruction is English. Students graduate as English language teachers after successfully completing the four-year program. Pre-service EFL teachers are expected to take the following courses listed on the department's official website. The required courses are "reading skills, writing skills, listening, pronunciation and note-taking, speaking skills, introduction to educational science, Atatürk's principles and history of the Turkish revolution, academic reading, academic writing, oral communication, the structure of English, approaches and methods in ELT, introduction to English literature, teaching principles and methods, inclusive education and individuals with special needs, Turkish language, research methods in education, introduction to linguistics, methodology in ELT, instructional technologies and material design, language acquisition, education management, measurement and evaluation in education, reflective teaching, practice teaching, ELT material development and technology use, and individualized education programs". The elective courses for undergraduate ELT students are "lexicology and vocabulary teaching, intercultural communication, language awareness, creative drama in teaching English, critical reading in ELT, comparative literature, short story analysis,

digital age and literature, romantic period poetry, contrastive phonology, contrastive morphology, English syntax, social justice in English language teaching, online language teaching, literature and discourse analysis, translation practices, language change and mindfulness practices in English language teaching”. For the scope of this study, “Research Methods in Education” class is the most significant of all the courses mentioned above. It is stated in the program schedule that pre-service teachers take a mandatory class called “Research Methods in Education” in their 4th year, which contributed to the data collected to answer the research questions.

The other research context, the English preparatory program at the School of Foreign Languages (SFL), was established in 1999. The unit comprises basic and modern foreign language departments where 120 English as a Foreign Language (EFL) instructors teach approximately 900 students each academic semester. Instruction and assessment activities occur at five main levels of English, designed in accordance with the global scale of English (GSE). Teachers’ weekly teaching hours range from 8 to 16, depending on their additional responsibilities within academic units at the school. These academic units include curriculum development, educational technologies, material development, professional development (PD), the quality commission, and testing and assessment. The activities of the PD units are related to the focus of this research. After conducting a needs analysis, unit members organize PD events each semester; they prepare monthly PD bulletins to inform teachers about recent news, published research, and academic and professional conferences in ELT, organize talks and workshops, and arrange the peer observation schedule, even though the institution does not currently have an action research or teacher research program. The research site offers a significant variety regarding the

educational and professional backgrounds and years of experience of the teachers. Teachers are graduates of English language teaching departments from various universities in Türkiye. There are also teachers with BA degrees in linguistics, English language and literature, American culture and literature, and translation and interpreting programs. Regarding teaching certificates, the Certificate in Teaching English to Speakers of Other Languages (CELTA), Diploma in Teaching English to Speakers of Other Languages (DELTA), Cambridge Teaching Knowledge Test (TKT), In-Service Certificate in English Language Teaching (ICELT), and various forms of Teaching English to Speakers of Other Languages (TESOL) are among the professional qualifications held by the participants of this study. Teachers with graduate degrees typically come from fields such as educational sciences, communication, distance learning, and English Language Teaching. Their years of experience in the profession range from 10 to 32 years, either at the SFL or in other private and public institutions.

Participants

As for the number of participants, in the 2024-2025 academic year fall semester, 768 undergraduate students were registered in the ELT program at the faculty of education, and the total number of EFL teachers working at the English preparatory school is 117. The sampling of this study was on a voluntary basis, and all 3rd and 4th year undergraduate students and EFL teachers in the research sites were reached. 122 pre-service and 79 practicing EFL teachers responded to the questionnaire. The total number of participants for interviews is 32, with seven pre-service and 25 practicing EFL teachers.

Detailed demographic information about the pre-service EFL teachers who participated in the questionnaire is presented in Table 1.

Table 1

Information about the Pre-service Teachers Participated in the Questionnaire
(*N=122*)

Variable	Category	<i>n</i>	%
Year of study	3 rd year	70	57.37
	4 th year	48	39.34
	Not stated	4	3.27
Teaching experience	Yes	77	63.1
	No	45	36.9
Taking the “Research Methods in Education” class	Yes	96	78.7
	No	26	21.3

The main variables for the pre-service teachers were their year of study, previous teaching experiences, and the conditions of completing the research methods in education class. The participants were 3rd and 4th-year students in the EFL program, with the majority (55%) of 3rd-year students, and 77 of 122 participants stated they had taught English previously. Even though it is stated in the curriculum that research methods in education is a compulsory class in the 4th semester of the program, there were participants who had not taken the class. While 78.7% of the participants have taken the research methods in education class, the number of pre-service teachers who have not completed it is 26 (21%), which might be caused by taking the classes irregularly due to various reasons.

Seven pre-service teachers volunteered for the interviews. Table 2 shows detailed demographic information about the pre-service teachers who participated in

the interviews in terms of their year of study, teaching experience, and the conditions of having taken the research methods in education class.

Table 2

Information About the Pre-service Teachers Participated in the Interview (N=7)

Variable	Category	<i>n</i>	%
Year of study	3 rd year	4	57
	4 th year	3	43
Teaching experience	Yes	4	57
	No	3	43
Taking the “Research Methods in Education” class	Yes	4	57
	No	3	43

The distribution of all the characteristics for the pre-service teachers is relatively balanced: four participants indicate they study in 4th grade, and the other three are in 3rd grade. Likewise, four participants have teaching experience, and four of them have taken the research methods in education class.

79 practicing teachers responded to the questionnaire, and they have various characteristics regarding years of experience, teaching qualifications, and educational backgrounds. Table 3 gives detailed information about the practicing teachers who took part in the quantitative part of the study.

Table 3

Information About the Practicing Teachers who Participated in the Questionnaire (N=79)

Variable	Category	<i>n</i>	%
Years of experience	Between 10-19 years	33	41.8
	More than 20 years	46	58.2

Variable	Category	<i>n</i>	%
Department of graduation	ELT (English Language Teaching)	64	81.0
	American /English Language and Literature	7	8.86
	Linguistics	2	2.53
	Translation	6	7.59
Highest degree earned	B.A.	26	32.9
	M.A.	40	50.63
	Ph.D.	13	16.45
Qualifications held	None	30	38.0
	CELTA/DELTA/TESOL/Others	49	62.0

The participants were experienced teachers; 33 of them had been teaching English for more than 20 years, and the other 46 teachers had at least 10 years of experience. 49 of the practicing teachers held professional certificates such as CELTA, DELTA, and TESOL. 53 of them had postgraduate degrees, and their academic backgrounds varied, including disciplines such as education, literature, and translation.

The heterogeneity of these characteristics provided a representative sample for the whole group of EFL teachers in a research context. Additionally, practicing teachers' many years of experience in the field and various research activities yielded invaluable in-depth data, especially in the qualitative stage of the present research.

For the interviews, 25 practicing teachers volunteered. Their demographic information regarding the years of experience, department of graduation, postgraduate degrees, and professional certificates is presented with the number of participants in Table 4.

Table 4*Information About the Practicing Teachers Participated in the Interviews**(N=25)*

Variable	Category	<i>n</i>	%
Years of experience	Between 10-19 years	16	65
	More than 20 years	9	36
Department of graduation	ELT (English Language Teaching)	19	76
	American /English Language and Literature	4	16
	Linguistics	1	4
	Translation	1	4
Highest degree earned	B.A	7	28
	M.A	15	60
	PhD	3	12
Qualifications hold	None	7	28
	CELTA/DELTA/TESOL/Others	18	72

The majority of participants had 10-19 years of experience (65%), while 36% had more than 20 years in the field. Most graduated from ELT (76%), followed by American/ English Language and Literature (16%), with a small percentage from linguistics (4%) and translation (4%). As for academic and professional qualifications, 60 % held an M.A., 28% had a B.A., and 12% possessed a PhD. Additionally, the majority of the practicing teachers who participated in the interviews held various certificates of teaching (72%).

Instrumentation

Questionnaires

Borg's (2009) "English Language Teachers' Views of Research" (Appendix

A, Appendix B) serves as the original version of the questionnaires for this study. Its relevance to the study's purposes and the research context, and the variety of question types are the reasons for selecting this tool. Some adaptations have been made to Borg's (2009) questionnaire to enhance its relevance to the context and aims of this study. According to Dörnyei, questionnaires facilitate the collection of large amounts of data in a standardized and efficient manner (2007, p. 101). Through these written tools for data collection, respondents can address *factual*, *behavioral*, and *attitudinal* questions (Dörnyei, 2002, p. 5).

In the current study, participants were asked about their teaching experiences, level of education, fields of study, and years of study for practicing teachers (fact-based questions). Subsequently, pre-service and practicing teachers answered behavioral questions regarding their current and past experiences. Attitudinal questions aimed to explore respondents' perspectives on research in general and the characteristics of good research. It is common to request demographic information from participants via questionnaires. Researchers should be careful to determine and justify which personal characteristics to gather; it would be unethical to ask for personal data if it does not pertain to the goals of the research (Gall et al., 2014, p. 191). Gender information was not included in the questionnaire because it was not considered a relevant factor in pre-service and practicing EFL teachers' conceptions of research and their engagement. Additionally, the population at the research site is predominantly female, which may not provide a statistically significant representation of male participants in the study.

According to Gay et al. (2009, p. 178), items in a questionnaire should align with the research objectives and be simple and straightforward. For this study, two

distinct questionnaires were adapted for pre-service and practicing teachers, as each research question addresses different aspects relevant to the two participant groups. Borg (2009) developed the themes questionnaire based on literature regarding teachers' perceptions of research (Shkedi, 1998; Everton et al., 2000; Everton et al., 2002; McNamara, 2002; Ratcliffe et al., 2004) and previous studies on teacher research (McDonough & McDonough, 1990; Allison & Carey, 2007). The questionnaire was employed in various contexts by Banegas (2018), Çelik (2017), Tanış (2019), Mermer Sayer (2021), and Kılınç (2022). It was piloted with approximately 650 EFL teachers in two separate studies: one conducted at a language center in a Turkish university (Borg, 2007) and the other involving teachers from 14 different countries (Borg, 2009).

The original questionnaire used in Borg's (2009) research was adapted after the pilot study. Borg (2007) indicates the Cronbach's alpha score of the section with ten scenarios in the questionnaire for practicing EFL teachers as 0.82. For the present study, the calculations were made for the entire tool for each participant group, and the section was checked for its credibility. Table 5 presents the Cronbach's alpha values for each section and the entire questionnaire of pre-service and practicing teachers.

Table 5

Cronbach's Alpha Values for the Questionnaire

Questionnaire Section	Cronbach's α
Pre-service teachers- Entire tool	.66
Research conceptions	.54
Characteristics of good research	.69
Practicing teachers- Entire tool	.76

Questionnaire Section	Cronbach's α
Research conceptions	.84
Characteristics of good research	.80

To ensure the reliability of a questionnaire, values between .45 and .98 are considered acceptable based on Taber's (2017, p. 1273) study that examines different interpretations of Alpha values. As shown in the table, the values for practicing teachers for the entire questionnaire ($\alpha = .76$), research conceptions ($\alpha = .84$), and characteristics of good research ($\alpha = .80$) are all above .70. The values for pre-service teachers are $\alpha = .66$, $\alpha = .54$, and $\alpha = .69$, respectively. While these are also within the acceptable range, they are lower than those of the other group, possibly due to pre-service teachers' unfamiliarity with the research concept and their lack of experience in teaching and research.

The questionnaires used for this study are in the form of the Likert scale and checklists. They have introductory paragraphs explaining the research's purposes and the procedure.

There are six sections in both questionnaires; section one is the demographic information section. Participants' age and gender are not among the items, as they are not the focus of this study. Instead, the first section is adapted for pre-service teachers with the following questions;

- Which year of your BA program are you currently in?
- Do you hold any of the following professional certificates?
- Do you have any teaching experience?
- Have you taken the "Research Methods in Education" class?

Practicing teachers answered the questions about their (1) years of experience as English language teachers, (2) academic qualifications, and (3) professional certificates in the first section of the questionnaire.

Section two presents ten specific scenarios to participants and asks whether they consider them research by choosing from the options: definitely not research, probably not research, probably research, and definitely research. Borg (2013) drew inspiration from the Card Sort Task activity in the research design of Ratcliffe et al. (2004), where science teachers are given scenarios involving various types of inquiry and are asked to comment on them, explaining their conceptions of research. The scenarios used in Borg's studies (2007, 2009) aimed to encompass a variety of activities with different features that participants might classify as research based on their characteristics and beliefs. Thus, the term research was intentionally left undefined at the beginning of the questionnaire. Borg (2013) categorizes the scenarios in this section, each of which includes keywords and a form of inquiry. For example, in scenarios 4, 6, and 9, the use of statistics, test groups, and the publication of research results may prompt participants to view these as the most likely examples of research. The other scenarios provide alternatives to the conventional definition of research, encouraging EFL teachers to reevaluate their conceptions of research. The description of the scenarios are as follows; (1) reflective practice and modifying teaching, (2) teacher research, (3) research conducted for postgraduate studies, (4) scientific research, (5) teacher research, (6) teacher research, (7) surveying and reporting the results, (8) evaluative inquiry, (9) research in teacher education and (10) survey for coursebook evaluation (Borg, 2013, p. 55). Borg (2007) discusses the distinction between formal and informal research activities within the educational

context and offers examples of practitioner research, collaborative action research, and reflective practice, along with quantitative and large-scale studies, to highlight this diversity. For the current study, the scenarios were also explicitly named to provide classification for the research activities given. Table 6 presents the descriptions of the scenarios in the questionnaire by Borg (2013) and used for the current study.

Table 6

Description of the Scenarios in the Questionnaire

Scenario	Description by Borg (2013)	Research as
1	Reflective practice and modifying teaching	Reflection on action
2	Teacher research	Testing and analyzing the effectiveness of a new approach
3	Research conducted by postgraduate students	Reading research and reflecting on it
4	Scientific research	Data collection from students
5	Teacher research	Peer observation and co-writing about it
6	Teacher research	Doing an experimental study
7	Surveying and reporting the results	Evaluation by the head of the department
8	Evaluative Inquiry	Improving teaching based on student feedback
9	Research in teacher education	Research on teachers by a teacher trainer
10	Survey for coursebook evaluation	Research on teachers for coursebook evaluation

The third section, "Characteristics of Good Quality Research," examines participants' perceptions of research. It lists 11 characteristics, and participants are asked to share their views on the significance of each in defining research as "good." Borg (2013, p. 33) states that these characteristics were determined with regard to the issues of "research design, data collection, analysis, and application." At the end of the section, there is an open-ended prompt for participants to include any additional characteristics.

Sections four and five contain items related to teachers' research engagement. The purpose of these sections is to examine the frequency and reasons for reading, conducting, and not conducting academic research. Participants respond to different sets of items based on their frequency of reading and conducting research. For example, if they indicate that they read published research 'often' or 'sometimes,' they select from the available sources or specify what they read as research and provide their opinions on the impact of reading on their teaching practices. If they select 'never' or 'rarely,' they explain the possible reasons for that. Similarly, the questionnaire is organized with distinct sets of items regarding the participants' frequency of conducting research.

The third section of the original questionnaire (Borg, 2009) is titled "Research Culture." This part was excluded from the current study because it only applied to practicing teachers. Rather than choosing from the provided options regarding the general attitude toward research in the institution, both pre-service and practicing teachers were interviewed about the reasons for their engagement in research, with the opportunity to discuss the research culture and the facilities at the university.

Taking the population and teachers' schedules into consideration, the estimated time for data collection via questionnaires was around two weeks, and everything proceeded as planned without any technical issues. The questionnaires were administered online to ensure anonymity, time, and resource efficiency.

Interviews

Although questionnaires enable researchers to collect standardized data cost-effectively (Aldridge & Levin, 2001; Dörnyei, 2007), they disadvantageously yield more superficial insights into participants' thoughts and feelings. Consequently, follow-up interviews were conducted to examine their concepts and engagements in greater detail. A research interview involves a dialogue between the researcher and participant that focuses on questions to solve the problem of the study (DeMarrais, 2004). These interviews are highly adaptable, accommodating one-on-one or group formats and varying structures, which makes them advantageous for eliciting deeper and more detailed data from participants (Gall et al, 2014; Merriam & Tisdell, 2016).

After obtaining the consent of the teachers who took part in the quantitative phase of the research, the interview schedule was created. The semi-structured interviews feature open-ended questions regarding participants' experiences and perceptions of academic research. The interview questions maintain the same order as the questionnaire (Appendix C), with the flexibility to address emergent issues and comments. The interviews offered insights into the participants' backgrounds and perspectives in the questionnaires, especially in sections 3 and 4, which cover the scenarios and the sections about participants' frequency of reading and conducting research. For example, it is essential to understand what participants mean when they say they "sometimes" read research or provide detailed explanations

regarding their reasons for engaging in or avoiding research.

28 interviews were conducted in person in an office, and online interviews via Zoom were held with four practicing teachers due to their demanding schedules. Each interview lasted approximately 10 to 15 minutes and was voice-recorded with the participants' permission. The interviews were conducted in English since all the participants were proficient in the language. However, a pre-service teacher and two practicing teachers preferred to answer the interview questions in their native language, Turkish. The written records of these interviews were translated into English word-for-word using *Google Translate* and were subsequently checked and verified by a professional translator. Table 7 shows the duration of the interviews and the number of words transcribed for analysis for each participant and in total.

Table 7

Interview Durations and the Number of Words Analyzed

Participant	Duration (min.)	Word Count
Pre-service Teacher 1	14:52	1047
Pre-service Teacher 2	08:09	638
Pre-service Teacher 3	03:51	277
Pre-service Teacher 4	13:32	1656
Pre-service Teacher 5	17:05	853
Pre-service Teacher 6	09:25	958
Pre-service Teacher 7	07:58	603
Teacher 1	09:09	1173
Teacher 2	12:35	973
Teacher 3	21:14	2116
Teacher 4	13:31	1148
Teacher 5	15:54	1632
Teacher 6	14:02	1530

Participant	Duration (min.)	Word Count
Teacher 7	05:32	523
Teacher 8	09:51	1117
Teacher 9	12:11	1480
Teacher 10	13:08	1039
Teacher 11	54:03	7415
Teacher 12	21:48	1781
Teacher 13	05:23	342
Teacher 14	10:34	989
Teacher 15	12:27	1064
Teacher 16	11:34	1011
Teacher 17	10:17	604
Teacher 18	10:44	1020
Teacher 19	12:43	1141
Teacher 20	11:57	931
Teacher 21	09:50	981
Teacher 22	15:33	1631
Teacher 23	19:29	1999
Teacher 24	09:22	703
Teacher 25	11:46	1038
Total	386:31	31.332

Method of Data Collection

Before the data collection procedure, permission for the use and adaptation of the tools was obtained via email from the developer of the questionnaire, Dr. Simon Borg. After adapting certain parts for the context of the current study and finalizing the questionnaire, approvals were first sought from the İhsan Doğramacı Bilkent University Ethics Committee and the state university where the research took place. All participants were informed about the purpose and procedures of the study, and their consent was secured through an online consent form (Appendix D). The

quantitative data was collected using Google Forms to ensure the anonymity of the participants.

To identify potential issues with face validity and unclear aspects of the items in the questionnaires and interviews, pilot studies were conducted prior to the actual data collection process. Piloting provides researchers with valuable feedback to enhance data collection tools (Fraenkel et al., 2011, p. 628). An online questionnaire was sent to three practicing teachers and three pre-service teachers from various state universities in Türkiye, and they participated in either face-to-face or online interviews. The content and structure of the questionnaires and interviews remained consistent, but the responses facilitated the effective implementation of the questionnaires. More time was allocated for the second stage, during which participants were asked to read and evaluate the provided scenarios. Additionally, some errors, particularly in the question transitions of the online questionnaire, were corrected as a result of the pilot study.

Quantitative data collection was followed by qualitative data collection. Volunteers from the two groups of participants took the versions of Borg's (2009) questionnaires adapted for pre-service and practicing teachers. Sections and the items in the questionnaire directly address the research questions of the study. The results of quantitative analysis are expected to provide a general picture of the pre-service and practicing English language teachers' views and practices of research. At the end of the questionnaires, participants were able to add their contact information if they would like to take part in the second phase of the study. One-to-one interviews were based on the aims of the present study, and participants were asked to elaborate on

their conceptions of and reported engagement in research in those follow-up discussions.

Methods of Data Analysis

In mixed methods research designs, data collection and analysis depend on the priority and sequence of qualitative and quantitative phases of the study (Creswell, 2012, p. 551). In this study, the quantitative data are in the form of numeric scores, and the qualitative data consist of the open-ended responses to the questionnaire and the texts from transcribed interviews.

Numerical data were analyzed via SPSS 30.0 using descriptive and inferential statistics. The content of the qualitative data from the questionnaires and interviews was analyzed by identifying recurring themes and creating categories. Table 8 summarizes the data analysis procedure along with the tools and the research questions of the study.

Table 8

Overview of the Data Analysis Procedure

Research Questions	Research Focus	Participant Group(s)	Analysis Type
1.a	Conceptions of research held by pre-service EFL teachers	Pre-service	Descriptive statistics and content analysis
1.b	Conceptions of research held by practicing EFL teachers	Practicing	Descriptive statistics and content analysis
2.a	Differences by year of study	Pre-service (3 rd /4 th year)	T-test

2.b	Differences by teaching experience	Pre-service (with/without experience)	Mann-Whitney U / T-test
2.c	Differences by the Research Methods course taken	Pre-service (taken/not taken)	T-test
3.a	Differences by years of experience	Practicing (<19/ >19 years)	T-test / Mann-Whitney U
3.b	Differences by certificate status	Practicing (with/without professional certificate)	T-test / Mann-Whitney U
3.c	Differences by postgraduate degree status	Practicing (with/without postgraduate degree)	T-test / Mann-Whitney U
4.a	Research engagement during pre-service education	Pre-service	Frequency and content analysis
4.b	Research engagement during professional practice	Practicing	Frequency and content analysis
5.a	Extent of active research involvement during pre-service education	Pre-service	Frequency and content analysis
5.b	Extent of active research involvement during professional practice	Practicing	Frequency and content analysis
6.a	Reasons for engaging in research during pre-service education	Pre-service	Frequency and Content analysis

6.b	Reasons for engaging in research during professional practice	Practicing	Frequency and Content analysis
-----	---	------------	--------------------------------

Quantitative Data Analysis

The quantitative data collected through questionnaires were first computerized into an Excel file on the researchers' password-protected laptop. The data were edited in Excel and subsequently analyzed using the Statistical Package for Social Sciences (SPSS) version 30.0.

To address research questions 1 and 2, descriptive statistics were utilized to summarize and understand teachers' conceptions of research; the mean and standard deviation of the items were calculated for the entire group. Composite average scores were determined to summarize the responses to each item in the questionnaire, yielding representative total and average figures. Based on these scores, normality tests were performed for the two sections of the questionnaire (conceptions of research and the characteristics of good research).

The responses were categorized into 12 participant groups in total. For pre-service teachers, the three variables were their year of study in the ELT program, whether they had any previous teaching experience, and whether they had taken the Research Methods in Education class. For practicing teachers, the six variable groups were created as follows: (1) teachers with less than 19 years of teaching experience, (2) teachers with more than 19 years of teaching experience, (3) teachers holding a professional certificate, (4) teachers not holding a professional certificate, (5) teachers holding a post-graduate degree, and (6) teachers not holding a post-graduate degree.

Tests of Normality

The quantitative data set was checked in terms of normality to decide on which parametric tests to use, and Shapiro-Wilk Scores were calculated. According to Gall et al. (2014, p. 197), a significant p-value above 0.05 means that the data is normally distributed, allowing the researchers to run inferential statistics to make comparisons between the mean scores of two participant groups. Due to the structure of the questionnaire and the demographic characteristics of the groups, the total number of normality tests conducted for this study is 12, and 8 of them exhibit parametric scores; in the other four groups, normality assumptions were not met. For the parametric groups, inferential statistics were conducted via t-test, and the nonparametric groups were analyzed with the Mann-Whitney U test.

Table 9 presents the normality test results for pre-service and practicing teachers' conceptions of research and their responses on the characteristics of good research, as they are separately inquired in sections 2 and 3 of the questionnaires.

Table 9

The Shapiro-Wilk Test Results and Normality Assumptions for Subgroups

Group	Subgroup	Conceptions of Research (<i>p</i>)	Characteristics of Good Research (<i>p</i>)
Pre-service Teachers (N=122)	3rd-year students	.079	.272
	4th-year students	.328	.451
	With teaching experience	.040**	.587
	Without teaching experience	.410	.417

Group	Subgroup	Conceptions of Research (p)	Characteristics of Good Research (p)
Practicing Teachers (N=79)	Took research methods course	.168	.489
	Did not take the course	.084	.170
	10–19 years' experience	.107	.001**
	19+ years' experience	.473	.554
	With certificate	.696	.004**
	Without certificate	.239	.109
	With a postgraduate degree	.080	.002**
	Without a postgraduate degree	.131	.959

Note. * $p < .05$, ** $p < .01$

When the normality tests were conducted for the research conception (RC) of subgroups, the only non-parametric distribution was found to be the group of pre-service teachers with previous teaching experience ($p = .040$). As for the characteristics of good research (CGR), Shapiro-Wilk test results reveal that three groups do not meet the assumption of normality. These are the teachers with 10-19 years of experience ($p = .001$), teachers holding a professional certificate ($p = .004$), and teachers who have a postgraduate degree ($p = .002$).

Sections four and five align with research questions 4, 5, and 6, concentrating on the participants' research engagements. Analyzing these sections includes both descriptive statistics and qualitative analysis due to the open-ended items at the end asking for the reasons behind the participants' research engagement.

Qualitative Data Analysis

The analysis of interview data aligns with the principles of *credibility*, *transferability*, *dependability*, and *confirmability* proposed by Lincoln and Guba (1985, p. 301). Audio recordings were carefully transcribed, and the translation of the ones conducted in Turkish was checked by a professional translator to ensure credibility. Transferability was provided through the detailed information of the context and participants, including their educational and professional backgrounds. Even though a formal audit trail was not kept, emerging themes and codes were noted clearly to ensure dependability. Finally, peer and expert checks were conducted to provide confirmability of the qualitative analysis.

The specific sample size for saturation was not pre-determined for this study, but it was considered during and after the interviews. For practicing teachers, saturation seemed to be reached as similar themes were obtained in the final interviews. However, only seven interviews were conducted with pre-service teachers due to limited time and access. Some themes recurred in the interviews, but saturation may not have been achieved. This limitation was taken into consideration while interpreting the results.

Although the researcher was also teaching in the same institution, positionality was taken into consideration. Qualitative data collection and analysis were conducted systematically with semi-structured interviews without any interventions of the researcher, and to avoid subjectivity in the interpretation of the qualitative data, participants' own words were directly quoted for analysis.

The process involved the steps of the "data analysis spiral by Cresswell and Poth (2013, p. 182). These steps are (1) managing the data, (2) reading and

memoing, (3) describing, classifying, and interpreting, and (4) representing. First, the interview responses were transcribed using Microsoft Word, and files and numbers were set for each participant. Audio recordings and the scripts were named for the pre-service teachers as Pre1 to Pre7. Practicing teachers' participant numbers were from P1 to P25. For the second step, the audio scripts were read thoroughly to identify the main themes. Following the qualitative data analysis procedure by Yıldırım and Şimşek (2021, p. 232), both pre-determined and emerging codes were used. The pre-determined codes were based on the questionnaire (Borg, 2009), and they were used to make the initial categorizations. Table 10 presents the list of main and sub-categories of pre-determined codes used for the first round of qualitative analysis of the interview data. They involve the themes regarding *research conceptions* and *research engagement*, and the subcategories that are used to elaborate on the participants' responses.

Table 10

List of Pre-determined Codes and Categories

Main Category	Code	Sub Category 1	Code	Sub Category 2	Codes
Research Conceptions	RC	What is research?	WR	Scientific related	SR
				Classroom related	CR
				Teacher related	TR
		What is good research?	WGR	Scientific related	SR
				Classroom related	CR
				Teacher related	TR
Research Engagement	RE	Engagement with research	EnWith	Resources	ReadWhat
			+	Reasons for reading	ReadWhy
			EnWith	Barriers to reading	NoReadW
			-	Effect on teaching	hy

Main Category	Code	Sub Category 1	Code	Sub Category 2	Codes
					EoT
		Engagement in research	EnIn+ EnIn-	Research activities Reasons for doing Barriers to doing Effect on teaching	DoWhat DoWhy NoDoWhy EoT

The preliminary categories are in line with the research questions and the sections in the questionnaire and the interviews. The main categories involve pre-service and practicing teachers' conceptions of and engagement in research. Sub-category 1 of research conceptions refers to how participants define and understand the term research, as well as their descriptions of the features of the "good research". The second category of research conceptions aimed to group the responses in terms of their relevance to scientific research, teachers' needs, and the classroom. The research engagement category was analyzed in two sub-categories. *Engagement with research* refers to participants' habits or views of reading research, and *engagement in research* refers to their conditions or opinions of conducting research. Finally, Sub-category 2 of research engagement addresses the main aspects of the responses, which are *the kinds of research activities they are involved in, the reasons for their research engagement, and the effect of these activities on their current or future teaching practices*.

Pre-service teachers were numbered from Pre1 to Pre7, and practicing teachers' participant numbers were P1 to P25.

After creating codes, the categories and excerpts from participants' responses were organized and analyzed manually in Excel. The columns consisted of

participants' numbers, main and sub-categories, emerging themes, and the relevant quotations. Table 11 displays a sample Excel sheet of the first-round coding organization

Table 11

A Sample Excel Sheet of the First Round Coding Organization

Part. code	Main cat.	Sub cat. 1	Res/ Good res.	Research activity/ Reason	Quotation
Pre 4	RE	EnW+ ReadWhat	-	articles	"When I'm curious about a topic, I refer to sources like Google Scholar to review articles and gain information."
P4	RC	WR	Teacher related	-	"I like to do research when I need, when I first try a new method and see if it is working or not."
P5	RC	WGR	Classroom related	-	"For good research, first of all, you need to have a problem."
P19	RE	EnW+ ReadWhy	-	Postgrad studies -	"I am reading research because I'm writing my Master's thesis this term. I read about my area."

Note. RC: Research conceptions; RE: Research engagement; WR: What is research?; WGR: What is good research?; EnW: Engagement with research; EnIn: Engagement in research

Following the first round of the coding process, checked by another expert researcher, 8 more codes emerged to elaborate on participants' responses regarding their research engagement. Some participants mentioned the issues that they were not

directly asked about, such as the research culture in their institutions and their plans for engagement in research in the future. Additionally, a few participants used metaphors to explain the terms “research” and “good research”. These quotations were also grouped under a separate code within research conceptions. Table 12 shows codes added at the second round of the analysis. The emerged themes are informal research, metaphors, teacher identity, mindset shift, access to resources, research culture in the institution, research methods class, and future plans for reading and doing research. Each code in Table 12 is presented with its abbreviation, full name, and brief description.

Table 12

Themes and Codes for the Second Round of Coding

Main category	Second Round Code	Full Name	Description
Research Conception	Inf	Informal Research	Participants’ description of research as activities helping them access information and solve problems in everyday life
	MT	Metaphors	The metaphors used to describe term research
	TI	Teacher Identity	Views on teacher and researcher roles
	MS	Mindset Shift	The changes in research conceptions
Research Engagement	Acc	Access to the resources	Accessing the resources and effects on research engagement

Main category	Second Round Code	Full Name	Description
	Inst	Research culture in the institution	Institutional factors and effects on research engagement (Practicing teachers)
	RMC	Research methods class	Previous research experiences during the research methods class (Pre-service teachers)
	FP	Future plans	Participants' future plans for reading and conducting reading

As indicated in the table, the emerging themes for the conceptions of research are the *metaphors* and *teacher identity*, as some participants emphasized their role as teachers while mentioning their perceptions of research. *Access to the resources* and the *institutional culture* were used as the sub-categories of participants' conditions of reading and conducting research, both as reasons and barriers. *Research methods class* theme refers to pre-service teachers' perceptions and experiences deriving from the research methods in education class they took. Finally, the *future plans* theme was used to categorize participants' plans and intentions of research engagement for the rest of their careers. The list of pre-determined and emerging themes is presented in Appendix E.

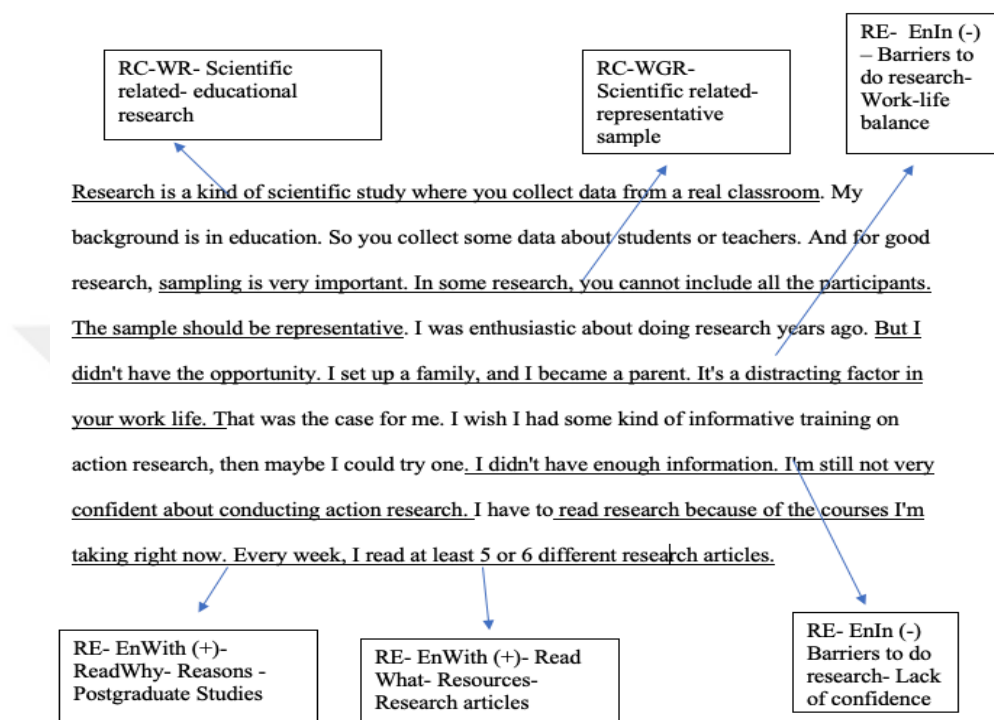
The coding process was checked by an expert researcher and a PhD candidate in the field of ELT to ensure validity.

Figure 2 demonstrates a sample coding of the interview data analysis, where a paragraph from one of the audio scripts of the interviews was analyzed in detail with pre-determined and emergent codes and themes. The participant is one of the

practicing EFL teachers in the study. She mentions her understanding of research and specifies the reasons for not being actively involved in it.

Figure 2

Sample Coding of the Interview Data



As the figure presents, responses were coded with the keywords that participants used. For example, if they mentioned the terms scientific, research methods, or sampling, their research conception was coded as science-related. During the interviews, pre-service teachers had a tendency to talk about their views and habits of reading research when they were asked if they “do” research, possibly due to the wording in their native language.

CHAPTER 4: RESULTS

Introduction

This chapter provides a detailed explanation of the results from both the quantitative and qualitative stages of the current study, which investigated the conceptions of research held by pre-service and practicing EFL teachers, comparing how these conceptions differ between the two groups. It further aimed to explore whether pre-service teachers' views on research depend on their years of study, teaching experience, and whether they have taken the research methods in education class. Similarly, it examined whether practicing teachers' research conceptions varied based on the length of their teaching experience, possession of professional certificates, or completion of a post-graduate degree. In addition, the study sought to answer how much EFL teachers engage in research during their pre-service education and their professional practice. Lastly, it explored the reasons behind the engagement in research across these two groups.

The results chapter comprises two primary sections: (1) EFL teachers' perceptions of research, and (2) EFL teachers' involvement in research. Each section aligns with the six research questions of this study, and the results of the quantitative analysis are explained before the qualitative findings.

EFL Teachers' Conception of Research

Teachers' conception of research is the key element of this study, as reflected in the first three research questions. The findings show how the pre-service and practicing teachers define research in general and in educational contexts, and what features of research they find significant. The conceptions are studied via the two

sections in the questionnaire; the first is about participants' general understanding of the term research, and the other is their opinions on the features of good research. The open-ended responses and interview questions follow the same order, and they will be presented in this chapter.

Research Conceptions of Pre-service Teachers

Pre-service teachers' conceptions of research involve their responses to the items in the questionnaire, their open-ended responses, and the more detailed explanations in the interviews.

Findings from the Quantitative Analysis

Descriptive statistics were employed to analyze this portion of the data. First, the mean (*M*) and standard deviations (*SD*) were calculated to explain the participants' conceptions of research through the provided scenarios and the characteristics of good research. Tables 13 and 14 show the descriptions of each scenario and the characteristics of good research, along with the mean and the standard deviation for the pre-service teachers.

Table 13

M and SD Values for Pre-service Teachers' Research Conceptions (N=122)

Scenario	Research as	<i>M</i>	<i>SD</i>
1	Reflection on action	2.62	0.806
2	Testing and analyzing the effectiveness of a new Approach	3.41	0.689
3	Reading research and reflecting on it	3.26	0.790
4	Data collection from students	3.50	0.763
5	Peer observation and co-writing about it	2.97	0.823
6	Doing an experimental study	3.20	0.757
7	Evaluation by the head of the department	2.70	0.929

Scenario	Research as	<i>M</i>	<i>SD</i>
8	Improving teaching based on student feedback	2.39	0.849
9	Research on teachers by a teacher trainer	2.80	0.890
10	Research on teachers for coursebook evaluation	2.39	0.862

When the participants were presented with 10 scenarios (Appendix A, Appendix B) representing various characteristics regarding research, as can be seen in Table 13, almost all scenarios got mean scores not very high, ranging from 2.39 to 3.50 with standard deviations below 1, suggesting that the group had the tendency to not defining the scenarios as research. The scenario that got the highest mean score, 3.50 ($SD = 0.76$), was scenario 4. This scenario is research as *data collection from students*, and it involves ‘a university lecturer gave a questionnaire about the use of computers in language teaching to 500 teachers.’ The two lowest-ranked scenarios were Scenario 8, *research as improving teaching based on student feedback*, and Scenario 10, *research as coursebook evaluation*, with mean scores 2,39 ($SD = 0.89$) and 2,39 ($SD = 0.86$), respectively.

In section 3 of the questionnaire, participants rated the importance of some characteristics of good research, which were presented in Table 14.

Table 14

M and SD Values for Pre-service Teachers’ Conceptions of Good Research (N=122)

Item	Characteristics of Good Research	<i>M</i>	<i>SD</i>
1	A large number of people are studied	3.99	1.048
2	A large volume of information is collected	4.21	0.874
3	Experiments are used	4.07	0.968
4	Hypotheses are tested	4.39	0.788
5	Information is analyzed statistically	4.29	0.828

Item	Characteristics of Good Research	<i>M</i>	<i>SD</i>
6	Questionnaires are used	3.70	1.059
7	The researcher is objective	4.69	0.681
8	The results apply to many ELT contexts	3.60	1.091
9	The results are made public	3.51	1.180
10	The results give teachers ideas they can use	3.87	1.004
11	Variables are controlled	4.08	0.932

When the preservice teachers were asked to rate the importance of some characteristics of good research, as can be seen above in Table 14, although they thought all of the characteristics were important to some extent, they favored some characteristics as a better representation of good research compared to others. According to the vast majority of participants, research should be objective (item 7, $M = 4.69$, $SD = 0.81$) and should test hypotheses (item 4, $M = 3.39$, $SD = 0.788$). The research characteristic that the group found the least important was that the results of research should be made public (item 9, $M = 3.51$, $SD = 1.18$).

Findings from the Qualitative Analysis

In their responses to the questionnaire, 7 of the participating pre-service teachers suggested some additional characteristics that they consider important features of good research.

The most commonly mentioned additional characteristics of good research are “having practical value” and “being reliable” for all respondents, highlighting the expectations of pre-service teachers regarding the need for credible research results with pedagogical implications.

Table 15 presents these characteristics alongside illustrative quotes from those responses.

Table 15*Other Characteristics of Good Research for Pre-service Teachers (N=7)*

Characteristic	<i>n</i>	Illustrative quotes
Has practical value	2	“The results of the research should be applicable in the classroom.”
Reliable	3	“Authenticity and applicability to daily life” “Peer review” “Peer feedback from other researchers or teacher trainers”
Economical	1	“The study must be officially reported to the experts in the field.” “The study must be economical in terms of time.”
Relevant	1	“Research should have interest and attention.”

Pre-service teachers defined the research and gave features of good research during the interviews. Their responses reveal that the participants have a broad conception of research. Pre-service teachers seemed to understand research as a way of expanding their world knowledge in different areas by benefiting from various resources. Pre-service teacher 1 said, “We are all kind of researchers on our own,” and Pre2 stated, “Research is anything that you look up in any kind of dictionary, any kind of search engine. And that's something I actually like to do because it helps me develop, and you know, gain new knowledge”.

Science-related Conceptions. As for the subcategory of “science-related” responses, Pre4 said, “research is the systematic investigation of topics that people are curious about”.

Classroom-related Conceptions. Classroom-related descriptions of research were also highlighted in the following quotations by Pre4 and Pre6.

“Teachers can also implement a similar research process in their classrooms. For example, questions like "Why are exam results low?" or "Is my teaching method effective?" can help gather classroom data and guide improvements. Observing and analyzing such aspects enables teachers to develop more effective lesson plans in the future.”

“Maybe it is understanding what's going on in the classroom and being able to understand the students' needs and being able to think for a second, and like, what can I do for the students to understand.”

Good Research. When pre-service teachers were asked about the features of good research, they identified “applicability to classroom practice” as the most emphasized characteristic among all the coded features. For instance, Pre5 said, “In education, actually, researchers should take students' behaviors, classroom behaviors.” And Pre2 talked about her preferences for resources, noting, “I read some things that I saw on research places. If I can't apply to my own class, I don't really read the rest of them.”

In addition to the research characteristics given in the questionnaire, pre-service teachers highlighted the significance of interest and motivation in research activities, again with their broad conceptions of research. The following responses point out their conceptions of good research.

“...I think you need to find it interesting...” (Pre1)

“People don't actually do research, I think, with enthusiasm and fun. I think it's a very important thing to do research...” (Pre2)

“... I find the music exciting. I feel like that's what research is.” (Pre7)

Research Conceptions of Practicing Teachers

Findings from the Quantitative Analysis

Practicing teachers were also asked to evaluate the same scenarios in the same range in the questionnaire. Their responses to the given scenarios are illustrated in Table 16.

Table 16

M and SD Values for Practicing Teachers' Research Conceptions (N=79)

Scenario	Research as	<i>M</i>	<i>SD</i>
1	Reflection on action	2.06	1.017
2	Testing and analyzing the effectiveness of a new approach	3.61	0.608
3	Reading research and reflecting on it	2.86	1.129
4	Data collection from students	3.80	0.540
5	Peer observation and co-writing about it	3.25	0.839
6	Doing an experimental study	3.63	0.683
7	Evaluation by the head of the department	2.77	0.939
8	Improving teaching based on student feedback	2.29	0.908
9	Research on teachers by a teacher trainer	2.87	1.079
10	Research on teachers for coursebook evaluation	2.80	1.005

As shown in Table 16, the scenarios got relatively higher mean scores from the pre-service teachers, ranging between 2.06 and 3.80. Similar to the pre-service teachers' responses, the *SD* values are below 1 for most of the scenarios, indicating a

strong agreement among the participants' research conceptions. Item 4, which presents research *as data collection from students*, got the highest mean score, 3.80 ($SD = 0.540$), and it involves "a university lecturer giving a questionnaire to 500 teachers, analyzing the result statistically and publishing them in an academic journal". The scenario with the second-highest mean score is 6, 3.63 ($SD = 0.683$). It considers research as *experimental study* where "a teacher tests two methods for teaching vocabulary for four weeks, aiming to decide the more effective one." The lowest ranked scenarios were 1, which considers research as *reflection on action*, and 8, *improving teaching based on student feedback*, with mean scores of 2.06 ($SD = 1.017$) and 2.29 ($SD = 0.908$) respectively.

The following table 17 summarizes the M and SD results of practicing teachers for the characteristics of good research.

Table 17

M and SD Values for Practicing Teachers' Conceptions of Good Research (N=79)

Item	Characteristics of Good Research	M	SD
1	A large number of people are studied	3.61	1.126
2	A large volume of information is collected	3.63	1.015
3	Experiments are used	3.37	1.168
4	Hypotheses are tested	3.96	0.953
5	Information is analyzed statistically	3.86	1.129
6	Questionnaires are used	3.15	1.167
7	The researcher is objective	4.86	0.476
8	The results apply to many ELT contexts	3.43	1.082
9	The results are made public	3.62	1.041
10	The results give teachers ideas they can use	4.22	0.779
11	Variables are controlled	4.04	0.898

When the practicing teachers were presented with the characteristics of good research, they rated all items as important to some extent, with the mean values ranging from 3.15 to 4.84. On the other hand, Table 16 shows that the majority of the participants favored some items as a more significant feature of good research than the others. The strongest agreement was expressed on the “researcher’s objectivity” in item 7, with the mean score 4.88 ($SD = 0.476$). According to the majority of the participants, “the results of good research should give teachers ideas they can use,” as they expressed in the ratings of item 10, 4.22 ($SD = 0.779$). The research characteristics that the practicing teachers found the least important were “questionnaires are used” (item 6, $M = 3.15$, $SD = 1.167$) and “results apply to many ELT contexts” (item 8, $M = 3.43$, $SD = 1.082$).

Findings from the Qualitative Analysis

11 practicing teachers answered the open-ended question at the end of section 3 in the questionnaire. The additional features of good research show that participants find the practical value of the research significant. Furthermore, they state that good research is systematic, reliable, and ethical. Two responses emphasized that the research should be relevant to the classroom practices, mentioning the learners’ specific needs and backgrounds.

Table 18

Other Characteristics of Good Research for Practicing Teachers (N=11)

Characteristics	<i>n</i>	Illustrative Quotes
Has practical value	3	“If some research were designed and implemented in a way that would hopefully 'inform' me, I'd be more than ok to label it as a 'good' piece of research.”

Characteristics	<i>n</i>	Illustrative Quotes
Systematic	3	“The real deal is whether it influences how teachers teach. Research should not exist in isolation and must be an inherent part of education systems and everyday practice.”
		“The research topic should address a REAL problem.”
		“There should be some meticulously designed steps, like when and how to collect data.”
		“It depends on the design of the research.”
Reliable	3	“Discussion and results sections can be added.”
		“To me, triangulation is also important. Gathering data via a questionnaire only may not give an in-depth understanding of the phenomenon, I guess.”
		“participants' being determined on a voluntary basis is as important.”
Ethical	3	“Ethical concerns should be met.”
		“A good research study should be ethical.”
		“Relevance, rather than volume, seems important.”
Relevant	2	“Students' financial conditions, backgrounds, goals in learning a foreign language, and proficiency in their own mother tongue. Teachers' pragmatic and professional goals. Types of institutions where languages are taught, all should be taken into consideration.”

The analysis of practicing teachers' responses in interviews illustrates their conceptions of research from three main perspectives, which are science-related, classroom-related, and teacher-related descriptions of research.

Their conceptions also involved some informal research activities, such as solving problems in everyday life or looking for answers to the issues they are curious about. P11 stated, "Even daily activities can be considered research. For example, when you encounter an issue on your computer, you search for solutions, watch YouTube tutorials, and experiment with different approaches. That, in a way, is research." According to P24, research is what is done "when you need an answer for something". P19 said "...in our everyday life, we always search for something and do research..." and P11 used a metaphor to explain the concept of research;

"...even simple actions, like checking if a door is locked by turning the knob, can be seen as research. Because you don't know if it is locked or not. We make observations and test hypotheses every day. In this sense, I believe everyone engages in some form of research daily."

Science-related Conceptions. All of the participants, apart from P9 and P15, made reference to the scientific nature of research by mentioning systematic structure and academic purposes. Similar to quantitative findings, practicing teachers seemed to find data collection and analysis in research significant. P2 said, "Research involves focusing on a specific problem, adopting a systematic approach to solve it, collecting relevant data, and analyzing this data in a structured manner," and P5 stated, "After connecting your research, you have your findings, and then how you analyze these findings is also important."

Teachers who emphasized academic research mostly used “systematic” as a keyword, showing they meant the postgraduate studies, and the following quotations exemplify that;

“...whatever was expected from me when I was doing my master’s degree is my definition of research...” (P8)

“Searching the topic systematically, having a research question and then looking into the literature...When you say research, I can think about the systematic steps that you go through during MA or PhD...” (P22)

“... to conduct research, I need a supervisor who has more experience than I...” (P25)

Classroom-related Conceptions. Regarding the classroom-related conceptions of research, practicing teachers seemed to make the connection between teaching and doing research, even though two comments were made that classroom research could not be accepted as research because of its limitations. P8 said, “... it's more local when you talk about action research, and the result and the outcome will benefit your teaching and your students directly. But because I haven't shared it with others, I'm not really contributing to the field.” and P25 stated, “...I do not consider that research as it is not done professionally. We cannot make generalizations, and the number is limited, etc. I think classroom research cannot be considered as research as the time is limited, the number is limited...”

In parallel to the findings of the survey, participants expressed that research helps teachers solve problems in the classroom and improve their practice, even if it does not follow a formal procedure. The remarks of P1 revealed this perspective; she said, “In the classroom, I always approach things with a researcher’s mindset,

questioning what the problem is, what might be causing it, and how I can solve it. However, this is not always highly structured, but very crucial.” P4 emphasized trying new methods of teaching by saying, “I would like to do research in case of a need.... Let’s say I find a new method or try a new method for my students and see if it is working or not.” Giving an example of his own research study, P11 said, “Research should inform practice, and I want to bridge that gap by making my findings accessible to teachers.”

Practicing teachers saw research as a tool for understanding the learners better. For example, P23 stated, “I love research...needs analysis. What my students want, what they need...what are their backgrounds, their intelligence types, their skills, strategies... the factors that would motivate them. These are important for a teacher to tailor their class and plan their class.”

Teacher-related Conceptions. The third category for teachers’ conceptions consists of the teacher-related descriptions of research. Two participants mentioned the impact of research on teachers’ professional development. P8 said, “...there were some weak areas of my own, and I wanted to teach according to the book. Looking into the reflection and the strengths and weaknesses of that action. Research definitely benefits you...”. Similarly, P17 stated, “...it will be beneficial. By benefit, I mean either professional development for yourself, an advantage for your students if you are an educator, or both...”

Good Research. Regarding the features of good research, most of the participants mentioned the methodological soundness of the research, which involves being systematic, having a well-designed methodology, clear objectives, a theoretical

framework, and the procedure of data collection and analysis. The following responses illustrate this point;

“A research study follows a certain framework, emerging from a hypothesis or a problem statement...” (P2)

“The method is very important because it should be appropriate to your study field, like the study area. So, you can apply a qualitative or quantitative “(P5)

“If you have a question in your mind that has not been answered yet. If there is a real problematic situation. If there is a background in literature, then getting information and trying to find information in a systematic way...”

(P20)

“Searching the topic systematically, having a research question, and then looking into the literature, and then formulating your or reformulating your research question, and then deciding on your methods and then research tools, whatever you're going to use.” (P22)

In parallel to the findings of the survey, practical relevance is another significant aspect of good research. Responses reflected that teachers expected educational research to be connected to classroom practice rather than remaining on theoretical foundations. For instance, according to P12, practical relevance is the most important issue. He stated, “My setting is the classroom itself with real people... We're trying to do all the things in our classroom. It can change in a minute, so it should be practically relevant, and it should offer insights or suggestions that I can take some action on. Actually, it should kind of solve my real-world problems. So, practical relevance is one of the key things for me.” This perspective was supported by several other quotations supporting that educational research should be

classroom-centered. P21 said, “When you teach something in the classroom and when there is a problem, of course, you can solve that problem by reading research papers...”. In line with this, P22 said, “...sometimes you have something to improve your classroom and you want to conduct research about that. You want to learn more about your students, and it's the perfect idea.”

Practicing teachers' responses highlighted that good research has a problem in the field of study, and is based on the needs. For example, P5 said, “... research can be a little bit different in scientific fields because there you can conduct some research in laboratories, for example. When it comes to ELT, it's different. Your research should include real people, real contacts, and real things like the language that's used.”

Views on Dissemination. Practicing teachers supported the idea that good research is based on previous studies; there were also contrasting opinions on dissemination or publishing the results of the research. According to P10, “...research is like patchwork. You take one thing from that article, another thing from another article...” and P14 saw research as “*the combination of knowledge*”. Regarding the sharing of the research with others, some participants commented on its necessity for good research. The following responses illustrate this point;

“Publishing or sharing the research results is a must, not just for me, but for everyone. For example, we have to declare it, announce it. I did this. And now? See what I did? Maybe you can find some kind of resemblance in your own context.” (P6)

“You know, publishing it will kind of guarantee that you've done everything according to the book.” (P8)

“If you do this for just your own classroom for your own understanding, and if you don't share it with others, I don't think it means much to the greater community.” (P18)

“...I guess the key point here is helping others to benefit from your findings. So that makes your research research...” (P21)

On the other hand, dissemination was not seen as a must for some practicing teachers. For instance, P3 stated, “...research in general for me doesn't have to include writing up the results for publishing in an academic journal.” And P6 said, “I think we can still call it research if we don't publish the results because I had an aim and a purpose.”

Views on Action Research. Offering a different angle, P8 mentioned action research focusing on the practical benefits for the teachers and learners. According to P8, even though sharing research results is important, action research was a different case. She stated, “... it is more local when you talk about action research, and the result will benefit your teaching and your students directly. Because I haven't shared it with any others, I'm not really contributing to the field. But yes, I would definitely count it as research because I've benefited.” (P8)

Research for Teacher Empowerment. Research for teachers' empowerment was an emerging theme of the interviews. A less commonly mentioned but insightful comment was made by P11, “Traditionally speaking, research is often associated with large-scale studies...This perspective often discourages teachers, making them feel inadequate...That would put teachers at a disadvantage, kind of make them feel small. The spirit of science is not about the grant scale; it is about finding out. It could be just one person.” According to P11, teachers' involvement in research

“represents a meaningful change,” which emphasizes the positive impact of research engagement on teachers' personal and professional development.

Changes in Conceptions. In addition to the participants' current conceptions of research in general and the features of good research, two practicing teachers mentioned the change in their perception of research after actively engaging in it. Both teachers mentioned their MA studies, and they elaborated on their views as seen in the comments below;

“...I really support the idea of being a researcher and being a teacher at the same time, because before doing my master's, I was thinking that becoming a teacher and doing research are two different things, but now, because of the articles I'm reading and because of the research I've conducted. I have come to this conclusion. It's actually a useful thing for a teacher, and if a teacher does his or her own research according to his or her own needs, and according to their own learners, then it works the best.” (P5)

“...until three years ago, I didn't do any research until I started my MA program. But then I realized that I enjoyed doing it and reading.... So, it's been a pleasure so far. (P6)

The Differences between the Research Conceptions of Pre-service and Practicing Teachers

Quantitative Analysis

The present study also seeks to answer how conceptions of research differ between pre-service and practicing EFL teachers.

Table 19 shows the Mean and Standard Deviation values for the conceptions of research for both groups, providing the comparison between them.

Table 19*M and SD Values for the Conceptions of Research*

Scenario	Research as	Pre-service (N=122)		Practicing (N=79)	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1	Reflection on action	2.62	0.806	2.06	1.017
2	Testing and analyzing the effectiveness of a new approach	3.41	0.689	3.61	0.608
3	Reading research and reflecting on it	3.26	0.790	2.86	1.129
4	Data collection from students	3.50	0.763	3.80	0.540
5	Peer observation and co-writing about it	2.97	0.823	3.25	0.839
6	Doing an experimental study	3.20	0.757	3.63	0.683
7	Evaluation by the head of the department	2.70	0.924	2.77	0.939
8	Improving teaching based on student feedback	2.39	0.849	2.29	0.908
9	Research on teachers by a teacher trainer	2.80	0.890	2.87	1.079
10	Survey for coursebook evaluation	2.97	0.862	2.80	1.005

When comparing the two groups in terms of *M* and *SD* scores, Scenario 4, which is about research as *data collection from students*, emerges as the highest-rated item; therefore, it can be stated that both pre-service and practicing teachers view this scenario as research and value research activities that involve “a large

group of participants and the statistical analysis of the data.” Practicing teachers have higher *SD* values than pre-service teachers, which can be interpreted as having a broader conception and more diverse views on the definition of research. Table 20 illustrates the mean and standard deviation values.

Table 20

M and SD Values for the Characteristics of Good Research

Item	Characteristics of Good Research	Pre-service (N=122)		Practicing (N=79)	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1	A large number of people are studied	3.99	1.048	3.61	1.126
2	A large volume of information is collected	4.21	0.874	3.63	1.015
3	Experiments are used	4.07	0.968	3.37	1.168
4	Hypotheses are tested	4.39	0.788	3.96	0.953
5	Information is analyzed statistically	4.29	0.828	3.86	1.129
6	Questionnaires are used	3.70	1.059	3.15	1.167
7	The researcher is objective	4.69	0.681	4.86	0.476
8	The results apply to many ELT contexts	3.60	1.091	3.43	1.082
9	The results are made public	3.51	1.180	3.62	1.041
10	The results give teachers ideas they can use	3.87	1.004	4.22	0.779
11	Variables are controlled	4.08	0.932	4.04	0.898

As for the characteristics of good research, participants in both groups strongly agree that the “objectivity of the researcher” (item 7, $M = 4.69$, $SD = 0.681$, and $M = 4.86$, $SD = 0.476$) is a critical element in good research. For pre-service

teachers, “testing the hypotheses” (item 4, $M = 4.39$, $SD = 0.788$) was agreed to be an important characteristic of good research, and most of the practicing teachers concurred with the “significance of the applicability of the research results in ELT contexts” (item 10, $M = 4.22$, $SD = 0.779$).

Qualitative Analysis

Results of the qualitative analysis also revealed some similarities and differences between pre-service and practicing teachers’ research conceptions. Both groups showed a broad understanding of research, not limiting their definitions to the features of academic research. For example, Pre-service teacher 3 said, “Research is anything that you look up in any kind of dictionary, any kind of search engine.” And Practicing teacher 11 stated, “Even daily activities can be considered research. For example, when you encounter an issue on your computer, you search for solutions, watch YouTube tutorials, and experiment with different approaches.”

Applicability and relevance to teaching are another theme shared by participants from both groups. Pre-service teacher 2 stated, “I read some things that I saw in research places. If I can't apply to my own class, I don't really read the rest of them.” This is consistent with what practicing teacher 17 said, “...the real benefit comes when research is applied in practice. I value classroom-applicable research...”

Despite these common perspectives, some key differences emerged between the two groups, which might be shaped by the professional experience and knowledge of practicing teachers. First of all, they seemed to emphasize the methodology of academic research, mentioning terms such as literature review, data collection, analysis, and conceptual reviews. On the other hand, pre-service teachers’

descriptions of academic research were more general and abstract. The following quotations provide examples for this point;

“...You're getting your results analyzed in the light of your results and the literature before that, and then coming up to synthesis or evaluation. When you say research, I can think about the systematic steps that you go through.”

(P22)

“Research is the systematic investigation of topics that people are curious about...” (P4)

Another difference in participants' views was on the dissemination of the research results. Pre-service teachers mentioned the benefits of research in terms of personal or professional development. For example, Pre-service teacher 1 stated, “It's great to do research because it is a great way to expand your cultural background.” On the other hand, they did not comment on sharing the research results or their contribution to the academic community. The responses by practicing teachers involved a debate on whether research needs to be published to have value. Practicing teacher 3 said, “Publishing the results is a must,” while others like P3 argued, “... research in general for me doesn't have to include writing up the results for publishing in an academic journal.”

Pre-service teachers mentioned they learned about research methodology in the research methods class, but they did not talk about classroom research or action research in the interviews. However, practicing teachers seemed to have a critical awareness of teacher research. For instance, practicing teacher 25 said, “I think classroom research cannot be considered as research as the time is limited, and the number is limited. It might be done in an amateur way.”

The differences in pre-service and practicing teachers' research conceptions are significant in showing the evolution of their understanding as they transition from theoretical training in the faculty of education to practical, classroom-based experience. For instance, as they are exposed to and engaged in different types of research, their definitions of research become more specific.

Pre-service EFL Teachers' Research Conceptions among Subgroups

Descriptive Statistics

When the results of subgroups of the pre-service teachers (3rd-year undergraduate students, 4th-year undergraduate students, pre-service teachers with previous teaching experience, pre-service teachers who haven't taught English before, pre-service teachers who have taken the "research methods in education" class and pre-service teachers who haven't taken the "research methods in education" class) were analyzed, minor differences were found between the groups.

Table 21 presents the mean and standard deviation values of the 3rd and 4th-year pre-service teachers for the ten scenarios regarding their conceptions of research. The values were calculated for 118 participants, as four pre-service teachers did not state their year of study in the questionnaire.

Table 21

M and SD Values of Research Conception by Pre-service Teachers' Year of Study (N=118)

Scenario	Research as	3 rd Year	3 rd Year <i>M</i> <i>SD</i>	4 th Year <i>M</i>	4 th Year <i>SD</i>
1	Reflection on action	2.76	0.711	2.50	0.875

Scenario	Research as	3 rd Year <i>M</i>	3 rd Year <i>SD</i>	4 th Year <i>M</i>	4 th Year <i>SD</i>
2	Testing and analyzing the effectiveness of a new approach	3.44	0.605	3.33	0.808
3	Reading research	3.37	0.726	3.13	0.815
4	Data collection from students	3.49	0.775	3.50	0.772
5	Peer observation and co-writing about it	3.00	0.780	2.90	0.831
6	Doing an experimental study	3.11	0.772	3.27	0.736
7	Evaluation by the head of the department	2.70	0.968	2.71	0.874
8	Evaluative inquiry	2.39	0.889	2.37	0.789
9	Research on teachers by a teacher trainer	2.89	0.956	2.63	0.789
10	Research on teachers for coursebook evaluation and reflecting on them	2.94	0.883	2.92	0.821

For most items, mean and standard deviations were found to be relatively similar between 3rd and 4th-year pre-service teachers. 3rd-year pre-service teachers rated higher for scenarios 1-*Research as reflection on action*, 2-*Research as testing and analyzing the effectiveness of a new approach*, 3-*Research as reading research and reflecting on them*, 5-*Research as peer observation and co-writing about it*, 8-*Research as improving teaching based on student feedback*, 9-*Research as research*

on teachers by a teacher trainer, and 10-Research as coursebook evaluation with minor differences.

The mean and standard deviation values of the pre-service teachers with and without previous teaching experience are summarized in Table 22.

Table 22

M and SD Values of Research Conception by Pre-service Teachers' Teaching Experience (N=122)

Scenario	Research as	Not exp. <i>M</i>	Not exp. <i>SD</i>	Exp. <i>M</i>	Exp. <i>SD</i>
1	Reflection on action	2.58	0.783	2.65	0.823
2	Testing and analyzing the effectiveness of a new approach	3.44	0.659	3.39	0.710
3	Reading research and reflecting on it	3.36	0.645	3.21	0.864
4	Data collection from students	3.51	0.787	3.49	0.754
5	Peer observation and co-writing about it	2.91	0.821	3.00	0.827
6	Doing an experimental study	3.20	0.694	3.19	0.795
7	Evaluation by the head of the department	2.62	1.029	2.75	0.861
8	Evaluative inquiry	2.27	1.031	2.47	0.718
9	Research on teachers by a teacher trainer	2.67	0.929	2.87	0.864
10	Research on teachers for coursebook evaluation	2.96	0.928	2.97	0.827

As the scores illustrate, having experience in teaching did not make a major impact on pre-service teachers' conceptions of research in given scenarios. Scenarios 8, *improving teaching based on student feedback* ($M = 2.47$, $SD = 0.718$), and scenario 9, *research on teachers by a teacher trainer* ($M = 2.87$, $SD = 0.864$) were found more relevant to research by the participants who had teaching experience.

Among 122 pre-service teachers who participated in this study, 26 stated they had not taken the research methods in education class yet. Their conceptions of research were compared to those who had taken that class and illustrated in Table 23 below.

Table 23

M and SD Values of Research Conception by Pre-service Teachers' Conditions of Taking the Research Methods Class (N=122)

Scenario	Research as	Not taken the class <i>M</i>	Not taken the class <i>SD</i>	Taken the class <i>M</i>	Taken the class <i>SD</i>
1	Reflection on action	2.81	0.939	2.57	0.764
2	Testing and analyzing the effectiveness of a new approach	3.50	0.583	3.39	0.716
3	Reading research and reflecting on it	3.12	0.816	3.30	0.783
4	Data collection from students	3.46	0.761	3.51	0.768
5	Peer observation and co-writing about it	3.08	0.891	2.94	0.805
6	Doing an experimental study	3.31	0.679	3.17	0.777

Scenario	Research as	Not taken	Not taken	Taken	Taken
		the class	the class	the class	the class
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
7	Evaluation by the head of the department	2.85	0.675	2.67	0.981
8	Evaluative inquiry	2.46	0.811	2.37	0.861
9	Research on teachers by a teacher trainer	2.85	0.834	2.78	0.908
10	Research on teachers for coursebook evaluation	2.96	0.871	2.97	0.864

Even though the pre-service teachers in both groups did not highly rate the scenarios as research, minor differences were found between the mean and standard deviation values.

Participants who had not taken the research methods in education class were found to rank most of the scenarios (items 1- *Research as reflection on action*, 2- *Research as testing and analyzing effectiveness of a new approach*, 5- *Peer observation and co-writing about it*, 6- *Experimental study*, 7- *Evaluation by head of department*, 8- *Improving teaching based on student feedback*, and 9- *Research on teachers by a teacher trainer*) higher than the group who had taken the research methods in education class which shows a broader conception of research.

Pre-service teachers' year of study is another variable employed in the current study. Table 24 presents the mean and standard deviation values of the 11 items in the questionnaire regarding the characteristics of good research for pre-service teachers who are in the 3rd and 4th year of their undergraduate study in the ELT program.

Table 24

M and SD Values of the Characteristics of Good Research by Pre-service Teachers' Year of Study (N=118)

Item	Characteristics of Good Research	3 rd Year <i>M</i>	3 rd Year <i>SD</i>	4 th Year <i>M</i>	4 th Year <i>SD</i>
1	A large number of people are studied	3.97	1.254	4.02	0.934
2	A large volume of information is collected	4.26	0.879	4.15	0.899
3	Experiments are used	4.19	0.921	3.85	1.031
4	Hypotheses are tested	4.40	0.806	4.35	0.785
5	Information is analyzed statistically	4.40	0.769	4.13	0.890
6	Questionnaires are used	3.87	1.006	3.46	1.129
7	The researcher is objective	4.69	0.692	4.67	0.694
8	The results apply to many ELT contexts	3.62	1.139	3.65	1.041
9	The results are made public	3.53	1.188	3.40	1.180
10	The results give teachers ideas they can use	4.01	0.843	3.71	1.148
11	Variables are controlled	4.04	0.924	4.10	0.973

According to Table 24, the 4th-year pre-service teachers have slightly higher mean scores than the 3rd-year pre-service teachers in most of the characteristics. The majority of the participants in both groups report “the researcher’s objectivity” as an important feature of good research (item 7, $M = 4.69$, $SD = 0.692$, and $M = 4.67$, $SD = 0.694$, respectively). The least important research characteristic is “the publication

of the results” for 3rd-year and 4th-year pre-service teachers (item 9, $M = 3.53$, $SD = 1.188$, and $M = 3.40$, $SD = 1.180$, respectively). As for the SD values, 4th-year participants show more agreement on items 1, 3, 6, and 10, while 3rd-year participants’ responses are more consistent in items 2,4,5,8,9, and 11.

77 of the 122 pre-service teachers in this study stated they had previous teaching experience. Table 25 presents a comparison of the M and SD values between the pre-service teachers who have teaching experience and those who do not.

Table 25

M and SD Values of the Characteristics of Good Research by Pre-service Teachers’ Teaching Experience (N=122)

Item	Characteristics of Good Research	Not exp. M	Not exp. SD	Experienc ed M	Experien ced SD
1	A large number of people are studied	4.16	0.928	3.90	1.107
2	A large volume of information is collected	4.24	0.908	4.19	0.859
3	Experiments are used	4.11	0.959	4.04	0.979
4	Hypotheses are tested	4.56	0.586	4.30	0.875
5	Information is analyzed statistically	4.22	0.902	4.32	0.785
6	Questionnaires are used	3.69	1.145	3.70	1.014

Item	Characteristics of Good Research	Not exp. <i>M</i>	Not exp. <i>SD</i>	Experienc ed <i>M</i>	Experien ced <i>SD</i>
7	The researcher is objective	4.78	0.560	4.64	0.742
8	The results apply to many ELT contexts	3.42	1.270	3.71	0.964
9	The results are made public	3.69	1.083	3.40	1.228
10	The results give teachers ideas they can use	3.91	1.104	3.84	0.947
11	Variables are controlled	4.11	1.005	4.06	0.894

There are minor differences in means between experienced and inexperienced pre-service teachers, and, in general, pre-service teachers with teaching experience have more consistent opinions (lower *SD* values) on the qualities of good research.

The following Table 26 shows the details of the responses by the pre-service teachers who had taken the research methods in education class and the ones who had not.

Table 26

M and SD Values of the Characteristics of Good Research by Pre-service Teachers' Conditions of Taking the Research Methods Class (N=122)

Item	Characteristics of Good Research	Not taken <i>M</i>	Not taken <i>SD</i>	Taken <i>M</i>	Taken <i>SD</i>
1	A large number of people are studied	4.12	0.952	3.96	1.075

Item	Characteristics of Good Research	Not taken <i>M</i>	Not taken <i>SD</i>	Taken <i>M</i>	Taken <i>SD</i>
2	A large volume of information is collected	4.19	0.801	4.22	0.897
3	Experiments are used	4.08	1.017	4.06	0.960
4	Hypotheses are tested	4.12	1.033	4.47	0.695
5	Information is analyzed statistically	4.08	1.093	4.34	0.737
6	Questionnaires are used	3.73	1.041	3.69	1.069
7	The researcher is objective	4.42	0.902	4.76	0.594
8	The results apply to many ELT contexts	3.72	0.980	3.57	1.122
9	The results are made public	3.81	1.021	3.43	1.212
10	The results give teachers ideas they can use	3.81	1.021	3.89	1.004
11	Variables are controlled	4.00	1.058	4.10	0.900

The results show that, similar to the other subgroups of pre-service teachers, the mean and standard deviation do not show a great difference here. Characteristics 2,4,5,7,10, and 11 were rated higher by the pre-service teachers who had taken the research methods class.

Inferential Statistics

Inferential statistics for three subgroups of pre-service teachers are explained in the rest of this section in the same order as the questionnaire. The following three tables are the two Independent Samples T-tests and a Mann-Whitney U test results of participants' responses to the ten items about their research conceptions. An independent samples t-test was conducted to compare the conceptions of research between 3rd and 4th-year pre-service teachers.

Table 27

Independent Samples T-test Results for Pre-service Teachers' Conceptions of Research

Groups	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t (df)</i>	<i>p</i>	Cohen's <i>d</i>
Year of Study						
3 rd year	70	3.01	0.32	1.191 (85)	.237	0.233
4 th year	48	2.92	0.41			
Research methods class						
Taken	96	2.97	0.36	0.901(120)	.369	0.199
Not taken	26	3.04	0.35			

According to Table 27, the difference between the groups of pre-service teachers' year of study is not significant ($t = 1.91$, $p = .237$), even though the mean difference (0.08358) indicates that the 4th year undergraduate students have slightly higher scores to define the given scenarios as research. T-test results show that taking the research methods in education class did not have a significant effect on pre-service teachers' conceptions of research within the participants of the present study, as they rated the given scenarios in the questionnaire ($t = 0.901$, $p = .369$).

The other subgroup of pre-service teachers is created according to their previous teaching experiences. The test statistics, including the Mann-Whitney U, are used to compare the two groups: pre-service teachers who have teaching experience and the pre-service teachers who do not.

The results of the Mann-Whitney U test for these groups of pre-service teachers regarding their responses to the research conceptions section in the questionnaire are presented in Table 28.

Table 28*Mann-Whitney U Test Results for Pre-Service Teachers' Research Conceptions*

Groups	<i>n</i>	Mean Rank	Sum of Ranks	<i>U</i>	<i>Z</i>	<i>p</i>
Teaching Experience						
Yes	77	62.81	4836.50	1631.500	-0.538	.591
No	45	59.26	2666.50			

The results indicate that there is no significant difference in the research conceptions of the two groups when the *U* value ($U = 1631.500$) and Asymp. Sig. (2-tailed) are interpreted together ($p = .591$).

The following three tables show the statistical analysis results of the same groups on another set of items, the characteristics of good research.

Table 29*Independent Samples T-test Results for Pre-service Teachers' Reported**Characteristics of Good Research*

Groups	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t (df)</i>	<i>p</i>	Cohen's <i>d</i>
Year of Study						
3 rd year	70	4.08	0.49	1.541(116)	.126	0.289
4 th year	48	3.95	0.46			
Teaching Experience						
Yes	77	4.01	0.45	0.789(120)	.432	0.148
No	45	4.08	0.51			
Research Methods Class						
Taken	96	4.00	0.46	-0.354(120)	.724	-0.078

Groups	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t (df)</i>	<i>p</i>	Cohen's <i>d</i>
Not taken	26	4.04	0.54			

Assuming equal variances, the Independent Samples t-test results indicate no significant difference between the responses of 3rd and 4th-year pre-service teachers regarding the characteristics of good research ($t = 1.541, p = .126$).

Similarly, teaching experience was found to have no significant impact on pre-service teachers' views about the qualities of good research ($t = 0.789, p = .432$). Additionally, the responses of pre-service teachers who took the research methods class and those who did not showed no significant difference between the groups ($t = -0.354, p = .724$).

Practicing EFL Teachers' Research Conceptions among Subgroups

The six subgroups of the practicing teachers are (1) Teachers with experience between 10 and 19 years, (2) Teachers who have been teaching English for more than 20 years, (3) Teachers who hold professional certificates, (4) Teachers who don't hold any kind of professional certificates, (5) Teachers who hold postgraduate degrees, and (6) Teachers who don't hold postgraduate degrees in any field of study. Both descriptive and inferential statistics were employed to investigate the relationship between those variables and the practicing teachers' conceptions of research and conceptions of the characteristics of good research.

Descriptive Statistics

Table 30 presents the mean and standard deviation values of the second section of the questionnaire within the groups of practicing teachers who have been teaching English for less and for more than 20 years.

Table 30

M and SD Values of Research Conception by Practicing Teachers' Years of Experience (N=79)

Scenario	Research as	10-19	10-19	20+	20+
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1	Reflection on action	2.03	1.104	2.09	0.962
2	Testing and analyzing the effectiveness of a new approach	3.64	0.699	3.59	0.541
3	Reading research and reflecting on it	2.79	1.111	2.91	1.151
4	Data collection from students	3.67	0.692	3.89	0.379
5	Peer observation and co-writing about it	3.21	0.857	3.28	0.834
6	Doing an experimental study	3.61	0.609	3.65	0.737
7	Evaluation by the head of the department	2.97	0.984	2.62	0.886
8	Evaluative inquiry	2.21	0.992	2.35	0.849
9	Research on teachers by a teacher trainer	2.82	1.236	2.91	0.962
10	Research on teachers for coursebook evaluation	2.88	0.960	2.74	1.042

The mean and standard deviation values do not show a significant difference between the subgroups by practicing teachers' years of experience. However, in scenario 4, where the questionnaires and statistical analysis were used for the

research, more experienced teachers ($M = 3.89$, $SD = 0.379$) rated relatively higher than the teachers with 10 to 15 years of experience ($M = 3.67$, $SD = 0.692$).

Table 31

M and SD Values of Research Conception by Practicing Teachers' Holding Professional Certificates (N=79)

Scenario	Research as	Not Holding Certificates <i>M</i>	Not Holding Certificates <i>SD</i>	Holding Certificates <i>M</i>	Holding Certificates <i>SD</i>
1	Reflection on action	2.00	0.910	2.10	1.085
2	Testing and analyzing the effectiveness of a new approach	3.50	0.682	3.67	0.555
3	Reading research and reflecting on it	2.70	1.055	2.96	1.172
4	Data collection from students	3.77	0.679	3.82	0.441
5	Peer observation and co-writing about it	3.23	0.858	3.27	0.836
6	Doing an experimental study	3.47	0.730	3.73	0.638
7	evaluation by the Head of department	2.69	0.967	2.82	0.928

Scenario	Research as	Not Holding Certificates <i>M</i>	Not Holding Certificates <i>SD</i>	Holding Certificates <i>M</i>	Holding Certificates <i>SD</i>
8	Evaluative inquiry	2.33	0.884	2.27	0.930
9	Research on teachers by a teacher trainer	2.90	0.923	2.86	1.173
10	Research on teachers for coursebook evaluation	2.67	1.028	2.88	0.992

When teachers with and without professional certificates were asked to rate the scenarios, the mean values for most of the items were found to be higher in the teachers holding certificates. However, teachers who do not hold any professional certificates ranked scenario 8, research as *improving teaching based on student feedback*, and scenario 9, research as *research on teachers by a teacher trainer* ($M = 2.33$, $SD = 0.884$, and $M = 2.90$, $SD = 0.923$).

Table 32

M and SD Values of Research Conception by Practicing Teachers' Holding Postgraduate Degrees (N=79)

Scenario	Research as	Not Having a Degree <i>M</i>	Not Having a Degree <i>SD</i>	Having a Degree <i>M</i>	Having a Degree <i>SD</i>
1	Reflection on action	1.88	0.816	2.15	1.099

Scenario	Research as	Not Having a Degree <i>M</i>	Not Having a Degree <i>SD</i>	Having a Degree <i>M</i>	Having a Degree <i>SD</i>
2	Testing and analyzing the effectiveness of a new approach	3.62	0.697	3.60	0.566
3	Reading research and reflecting on it	2.65	1.056	2.96	1.160
4	Data collection from students	3.46	0.811	3.96	0.192
5	Peer observation and co-writing about it	3.00	0.849	3.38	0.814
6	Doing an experimental study	3.42	0.809	3.74	0.593
7	Evaluation by the head of the department	2.50	0.949	2.90	0.913
8	Evaluative inquiry	2.15	0.881	2.36	0.922
9	Research on teachers by a teacher trainer	2.65	1.018	2.98	1.101
10	Research on teachers for coursebook evaluation	2.46	0.905	2.96	1.018

The most significant difference within the research conceptions of subgroups is seen in the table above. Teachers holding postgraduate degrees rated higher in the scenarios for all items, apart from scenario 2, which involved *research as testing and analyzing the effectiveness of a new approach*. The mean value by teachers without postgraduate degrees is 3.62 ($SD = 0.697$) for this item, while the other group's value is 3.60 ($SD = 0.566$)

Teachers with postgraduate degrees gave higher rates to define most of the scenarios as research, with the mean values ranging from 2.15 to 3.96 and lower *SD* scores between 0.566 and 1.101.

A total of 79 practicing teachers responded to the qualities of good research in the questionnaire.

Practicing responses regarding the qualities of good research were also analyzed within the same subgroups. Table 33 illustrates the Mean and standard deviation values of the 11 items regarding the features of good research in practicing teachers' years of experience as a variable.

Table 33

M and SD Values of the Characteristics of Good Research by Practicing Teachers' Years of Experience (N=79)

Item	Characteristics of Good Research	10-19 <i>M</i>	10-19 <i>SD</i>	20+ <i>M</i>	20+ <i>SD</i>
1	A large number of people are studied	3.73	1.180	3.52	1.090
2	A large volume of information is collected	3.67	1.021	3.61	1.022
3	Experiments are used	3.24	1.146	3.46	1.187
4	Hypotheses are tested	3.79	1.053	4.09	0.865
5	Information is analyzed statistically	3.64	1.168	4.02	1.085
6	Questionnaires are used	2.88	1.083	3.35	1.197
7	The researcher is objective	4.94	0.242	4.80	0.588
8	The results apply to many ELT contexts	3.30	1.212	3.52	0.983
9	The results are made public	3.64	1.113	3.61	1.000

Item	Characteristics of Good Research	10-19 <i>M</i>	10-19 <i>SD</i>	20+ <i>M</i>	20+ <i>SD</i>
10	The results give teachers ideas they can use	4.27	0.977	4.17	0.608
11	Variables are controlled	3.97	1.075	4.09	0.755

According to the table, both groups rated all characteristics highly, and the highest-rated feature of good research is “objectivity” (item 7, $M = 4.94$, $SD = 0.242$, and $M = 4.80$, $SD = 0.588$, respectively). However, some notable gaps were found, especially in items involving “experiments are used” (item 3, $M = 3.24$, $SD = 1.146$ and $M = 3.46$, $SD = 1.187$) “hypotheses are tested” (item 4, $M = 3.79$, $SD = 1.053$ and $M = 4.09$, $SD = 0.865$) and “questionnaires are used” (item 6, $M = 2.88$ $SD = 1.083$ and $M = 3.35$, $SD = 1.197$) where the more experienced teachers rated higher than their colleagues.

The following Table 34 presents a summary of the responses of the practicing EFL teachers who hold professional certificates, such as CELTA and TESOL, and those who do not.

Table 34

M and SD Values of the Characteristics of Good Research by Practicing Teachers' Holding Professional Certificates (N=79)

Item	Characteristics of Good Research	Not Holding Cert. <i>M</i>	Not Holding Cert. <i>SD</i>	Holding Cert. <i>M</i>	Holding Cert. <i>SD</i>
1	A large number of people are studied	3.77	1.040	3.51	1.175

Item	Characteristics of Good Research	Not Holding Cert. <i>M</i>	Not Holding Cert. <i>SD</i>	Holding Cert. <i>M</i>	Holding Cert. <i>SD</i>
2	A large volume of information is collected	3.83	0.986	3.51	1.023
3	Experiments are used	3.43	1.165	3.33	1.179
4	Hypotheses are tested	4.17	0.791	3.84	1.028
5	Information is analyzed statistically	3.87	1.196	3.86	1.099
6	Questionnaires are used	3.20	1.126	3.12	1.201
7	The researcher is objective	4.73	0.691	4.94	0.245
8	The results apply to many ELT contexts	3.43	0.935	3.43	1.173
9	The results are made public	3.57	0.971	3.65	1.091
10	The results give teachers ideas they can use	4.13	0.681	4.27	0.836
11	Variables are controlled	4.13	0.681	3.98	1.010

Even if the difference between the groups is not significant again, the results show that teachers without professional certificates rated the features of good research higher in most of the questions (1, 2, 3, 4, 5, 6, and 11). Both groups agreed that “the results should apply to many ELT contexts” in item 8, giving exactly the same mean score of 3.43 ($SD = 0.935$ and 1.173 , respectively).

The last *M* and *SD* table shows the values of the characteristics of good research by teachers' conditions of having postgraduate degrees.

Table 35

M and SD Values of the Characteristics of Good Research by Practicing Teachers' Holding Postgraduate Degrees (N=79)

Item	Characteristics of Good Research	Not Having a Degree <i>M</i>	Not Having a Degree <i>SD</i>	Having a Degree <i>M</i>	Having a Degree <i>SD</i>
1	A large number of people are studied	3.77	0.951	3.53	1.203
2	A large volume of information is collected	3.58	0.945	3.66	1.055
3	Experiments are used	3.38	1.023	3.36	1.242
4	Hypotheses are tested	3.88	0.766	4.00	1.038
5	Information is analyzed statistically	4.12	0.952	3.74	1.195
6	Questionnaires are used	3.46	1.104	3.00	1.177
7	The researcher is objective	4.88	0.326	4.85	0.538
8	The results apply to many ELT contexts	3.19	1.059	3.55	1.084
9	The results are made public	3.62	1.023	3.62	1.060
10	The results give teachers ideas they can use	4.27	0.778	4.19	0.786

Item	Characteristics of Good Research	Not Having a Degree <i>M</i>	Not Having a Degree <i>SD</i>	Having a Degree <i>M</i>	Having a Degree <i>SD</i>
11	Variables are controlled	3.85	0.925	4.13	0.878

As can be observed in Table 35, there is not a dramatic difference between the groups overall. Practicing teachers without postgraduate degrees rated the items slightly higher than their colleagues.

The analyzed data for subgroups provided the opportunity to compare variables and improve the perspective to answer research questions 2 and 3 of the present study. The mean and standard deviation values indicate slight differences between the research conceptions of pre-service and practicing EFL teachers according to their backgrounds, experiences, and qualifications.

Inferential Statistics

Inferential statistics were also employed in order to gain a more comprehensive and in-depth understanding of the intergroup differences in research conceptions.

The following Tables 36 and 37 present a detailed summary of the independent samples T-test and Mann-Whitney U test results regarding 79 practicing teachers' years of teaching experience and their conditions of holding any kind of professional certificates or holding postgraduate degrees in any field of study in relation to their conceptions of research and the characteristics of good research.

Table 36 shows the results of the independent samples t-test for the conceptions of research.

Table 36*Independent Samples T-test Results for Practicing Teachers' Research Conceptions*

Groups	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t (df)</i>	<i>p</i>	Cohen's <i>d</i>
Years of Experience						
10-19 years	33	2.98	0.62	-0.184(77)	.853	-0.042
20 +	46	3.00	0.54			
Professional						
Certificates	49	3.03	0.51	-0.808(77)	.421	-0.187
Yes	30	2.92	0.67			
No						
Postgraduate degrees						
Yes	53	3.10	0.54	-2.412(77)	.018*	-0.578
No	26	2.78	0.57			

* $p < .05$ ** $p < .01$

As Table 36 presents, the Sig. ($p = .731$) value is higher than 0.5, which means equal variances are assumed in the groups. As for the effect of practicing teachers' years of experience, the difference in the research conceptions is not significant between the teachers with 10-19 years and more than 20 years of experience ($t = -0.184, p = .854$).

Like the groups of practicing teachers' years of experience, the results of independent samples t-tests show that having professional certificates does not have a significant impact on teachers' research conceptions ($t = -0.808, p = .421$).

An independent samples t-test was also conducted to compare the research conceptions between practicing teachers holding postgraduate degrees and those who do not. The Sig. ($p = .541$) value in Table 35 indicates that the variances between the

two groups are assumed equal. The results revealed a statistically significant difference ($t(77) = -2.41, p = .018$) between the research conceptions of the teachers with and without postgraduate degrees. Participants with postgraduate degrees ($M = 3.10, SD = 0.54$) had higher “research conceptions” results than the teachers without postgraduate degrees ($M = 2.78, SD = 0.57$). The effect size, Cohen’s $d = 0.58$, indicates a moderate effect (Cohen, 1988).

Table 37 shows the statistical analysis results of the same groups of practicing EFL teachers on another set of items, the characteristics of good research.

Table 37

Mann-Whitney U Test Results for Practicing Teachers’ Reported Characteristics of Good Research

Groups	<i>n</i>	Mean Rank	Sum of Ranks	<i>U</i>	<i>Z</i>	<i>p</i>
Years of Experience						
10-19 years	33	38.48	1270.00	709.000	-0.498	.618
20 +	46	41.09	1890.00			
Professional Certificates						
Yes	49	39.29	1925.00	700.000	-0.354	.723
No	30	41.17	1235.00			
Postgraduate degrees						
Yes				687.000	-0.021	.983
No	53	39.96	2118.00			
	26	40.08	1042.00			

The Mann-Whitney U tests were conducted for these groups because normality tests revealed that the data did not meet the assumptions of independent

samples t-tests for participants' responses for 11 items regarding the features of good research.

According to the results in the table, “characteristics of good research” scores do not demonstrate a significant difference between the teachers with 10 to 19 years and more than 20 years of experience ($U = 0.709.000$, $Z = -0.498$). There is no statistically significant difference in the scores of the characteristics of good research according to teachers' conditions of having professional certificates ($U = 700.000$, $Z = -0.354$). These findings suggest that neither extensive teaching experience nor professional certificates strongly influence how practicing teachers conceptualize the features of high-quality research.

Similar results appear regarding the effect of holding postgraduate degrees on teachers' responses to the items about the characteristics of good research. No significant difference was found between the groups of teachers with and without postgraduate degrees ($U = 687.000$, $Z = 0.021$).

EFL Teachers' Research Engagement

Participants' research engagement was investigated through the last two sections of the questionnaire and the interview questions. They were asked about their frequency of reading research, the effect of reading research on their teaching, their frequency of conducting research, and the reasons for this. During the interviews, they had the opportunity to provide more detailed information on these reasons, mentioning their previous research experiences. The following subsections explain the results of quantitative and qualitative data analysis on EFL teachers' engagement with (reading) and engagement in (doing) research.

Reading Research

In section 4 of the questionnaire, participants responded to the question “How frequently do you read published language teaching research?” by selecting one of four options: (1) never, (2) rarely, (3) sometimes, or (4) often. The respondents who indicated they at least “sometimes” read research were asked to identify the resources they read by choosing among books, academic Journals, professional journals, professional magazines, newsletters, and web-based sources of research, or indicating any other resources. The frequency values and qualitative analysis are presented for the per-service and practicing teachers.

Pre-service Teachers

122 pre-service teachers answered the questions regarding their frequency of engagement with and engagement in research. Engagement with research is investigated through their views and habits of reading published research. The reported frequency rates of pre-service teachers, ranging from never to often for reading research, are shown in Table 38.

Table 38

Pre-service Teachers' Frequency of Reading Research (N=122)

Frequency	<i>n</i>	%
Rarely	68	55.7
Sometimes	31	25.4
Never	22	18.0
Often	1	0.8

Table 38 displays the frequency with which pre-service teachers engage in reading research. The majority of participants reported that they “rarely” read

research ($n = 68, 55.7\%$), while 25.4 % indicated that they do so “sometimes”. A smaller portion ($n = 22, 18.0\%$) stated that they “never” read research, and only one participant (0.8 %) reported reading research “often”.

Participants who stated they read research sometimes or often also reported the sources they used, and the findings are shown in Table 39.

Table 39

Pre-service Teachers' Sources of Reading Research (N=32)

Source of Research	<i>n</i>	%
Web-based sources of research	25	78.1
Academic Journals	15	46.9
Books	14	43.8
Professional Journals	7	21.9
Professional Magazines	4	12.5
Newsletters	3	9.4

The most commonly cited resource for pre-service teachers is the web-based sources ($n = 25, 78.1\%$), followed by academic journals ($n = 15, 46.9\%$) and books ($n = 14, 43.8\%$). Newsletters are preferred by only 3 participants ($n = 3, 9.4\%$).

The analysis of interviews also indicated that pre-service teachers selected to read multiple types of materials, including online resources, essays /articles, and books. Essays refer to the reading required for the courses they took, as Pre2 expressed, “... we have courses and those courses require some research that is uploaded on our system weekly. So, I read them before class or when working on midterms or finals...”

Even though most of the participants did not mention whether they had any difficulties in accessing the resources to read, Pre6 said, “...we have a great library

and we can find what we have access to, a lot of books. Not buying them though. It is hard to buy them, but if you want to read something, you have a lot of opportunities to read...So if I don't have access to books, I can find PDFs easily...” expressing the availability of reading materials.

Practicing Teachers

Table 40 presents the reported frequency of reading published research by the practicing teachers.

Table 40

Practicing Teachers' Frequency of Reading Research (N=79)

Frequency	n	%
Rarely	38	48.1
Sometimes	22	27.8
Often	11	13.9
Never	8	10.1

Nearly half of the practicing teachers who participated in the study ($n = 38$, 48.1 %) reported that they “rarely” engage in reading research-based literature. Additionally, 27.8 % of the respondents stated they “sometimes” read research. The percentage of those who read “often” is 13.9 %. 8 of the practicing teachers reported they “never” read research (10.1 %).

Participants who stated they sometimes or often read research were asked to specify the resources they prefer, and 34 pre-service teachers selected the options that applied to them.

Table 41 presents the resources that those participants preferred to read with numbers and the percentages of them.

Table 41*Practicing Teachers' Sources Reading Research (N=34)*

Source of Research	<i>n</i>	%
Web-based sources of research	28	82.4
Academic Journals	25	73.5
Professional Journals	21	61.8
Newsletters	17	50
Professional Magazines	16	47.1
Books	16	47.1

The web-based sources of research ($n = 28$, 82.4 %) and academic journals ($n = 25$, 73.5 %) are the most preferred sources of reading for practicing teachers. On the other hand, participants rated books ($n = 16$, 47.1%) and professional magazines ($n = 16$, 47.1 %) as the least preferred sources for reading.

In parallel to the results of the questionnaire, there was a variety of resources mentioned by practicing teachers during the interviews. In addition to the resources above, they mentioned the social media and the monthly bulletins prepared by the professional development unit at the institution.

Reflecting the need and interest in professional development, P3 stated, "...every night I gave myself 10 minutes to go over on social media for what people were talking about, to see if there's something new..." Similarly, P11 said, "I dedicate about 30 minutes each day to reading research or articles related to my interests. Many researchers share their findings on social media, particularly Twitter, and if something relevant is open-access, I make sure to read it." P8 stated, "I

generally find the things that I will read on LinkedIn. My connections share something. This is interesting. And they summarized it in a way”.

A few participants expressed the “PDU bulletins” as a resource for reading research they stated, “You know, in our school, the PDU unit, they offer a kind of like sources to read. So, I try to follow those as well” (P1), “I follow the PDU department’s articles and webinars” (P7) and “Every month, the teacher development team works very well and they share some articles or research results with us. And we can follow the latest trends very easily thanks to them.” (P9).

Additionally, the participants who are currently working on their MA or PhD studies mentioned the resources to be used as a reference for their research. For instance, P6 said, “I am reading articles, chapters, proceedings, conference papers. I’m reading. Books themselves, you know, whatever. I can lay my hands to give me reference for the future.”

Reported Influence of Reading Research on Teaching

Participants who reported “sometimes” or “often” reading research were asked about its impact on their teaching. Practicing teachers’ responses were about their current teaching practices, while pre-service teachers were asked about the potential effects of reading research on their future teaching experience. Some participants also mentioned those effects during the interviews.

Even if the responses for this section do not provide detailed information about the effect of research on teaching quality, they give the general perceptions of the teachers.

Table 42 summarizes pre-service and practicing teachers’ responses, with the number of participants and their percentages in the groups.

Table 42*Questionnaire Results for the Effect on Teaching*

Impact on teaching	Pre-service Teachers (N=32)		Practicing Teachers (N= 34)	
	<i>n</i>	%	<i>n</i>	%
Strong influence	1	3.1	4	11.8
Fairly strong influence	18	56.3	7	20.6
Moderate influence	9	28.1	19	55.9
Slight influence	3	9.4	4	11.8
No influence	1	3.1	0	0

As the table presents, out of 32 pre-service teachers, 28 indicated that reading research would have at least a moderate influence on their teaching, while only 1 respondent stated there would be no impact. Among the practicing teachers, 34 participants responded to the question, and 30 of them rated the influence of reading research on their teaching practices as moderate or higher.

Even though pre-service teachers did not comment on the effect of research on their teaching practices, two of them stated that their future plans include doing research to be better teachers and solve their problems in the classroom. Pre 2 said, “I want to do some research on how to get rid of the problems of learning for my future students...” and Pre7 said, “When I become a teacher, I want to do research as well. I like the communicative approach. It is meaningful to me.”

Practicing teachers’ comments on the impact of research were on understanding the learners better through reading and conducting research. For example, P22 talked about her PhD experience by saying, “I learned more about the behaviors of the students and finally I can say that I can understand students

better...my attitude toward students has changed positively at the end as a teacher.” (P22). *Another teacher holding an MA degree, P25, stated, “First of all, I looked at things from different perspectives...I mean, first of all, I really felt satisfied with my study, and of course, without boring the students. I was able to explain something about why they criticized me.” (P25).*

A unique perspective came from P9, stating that conducting research could have a negative impact on teachers’ performance in class. P9 stated, “... while teachers are doing their master's or doctoral degrees, their proficiency in teaching efficiency decreases, they say, because they have to spend some of their time on other things”.

Doing Research

The results in this section consist of participants’ responses to the question, “How frequently do you do research yourself?”. Descriptive data analysis is followed by the findings from the thematic analysis of interview responses.

Pre-service Teachers

122 pre-service teachers responded to the question of the frequency of doing research. The results are presented in Table 43.

Table 43

Pre-service Teachers’ Frequency of Doing Research (N=122)

Frequency	<i>n</i>	%
Sometimes	55	45.1
Rarely	42	34.4
Never	17	13.9
Often	8	6.6

As can be seen in the table, more than half of the participants report that they are engaged in research at least “sometimes”. The number of pre-service teachers who sometimes do research is 55 (45.1%), and 8 of them report that they often do research (6.6%).

Pre-service teachers who participated in the interviews were asked whether they were actively involved in research activities. They mentioned their previous research activities and the projects they conducted in the research methods class. Pre 3 stated, “We wrote a simple and small project. It was about learning English,” and pre7 said, “I did research. And when I was in high school, it was like a big performance homework. I asked people on the streets, and I collected data.”

Practicing Teachers

Practicing teachers also responded to the question. Their reported frequency of doing research is presented in Table 44.

Table 44

Practicing Teachers’ Frequency of Doing Research (N=79)

Frequency	<i>n</i>	%
Rarely	38	48.1
Sometimes	27	34.2
Never	10	12.7
Often	4	5.1

Table 44 reveals that the practice teachers’ engagement in reading and conducting research rates align with each other; both are generally limited. Nearly half of the participants ($n = 38$, 48.1 %) reported they “rarely” do research. In terms

of conducting research, only four teachers rated often (5.1 %), and 10 stated they never do research (12.7 %).

Closely related to their conceptions of research, practicing teachers answered the interview question on their research engagement with a range of activities from discussions with colleagues in the staffroom to PhD studies. For instance, P11 stated, "...I have a critical friend at my school with whom I reflect on my teaching. Whenever something goes wrong in my class, I discuss it with her during breaks. She acts as a mirror, helping me analyze what happened and how I might approach things differently next time." P18 mentioned the previous research he conducted in the classroom by saying, "I did a kind of action research. My students had difficulty understanding grammatical topics, and I used an application to see if it would help. I tried this with my students and asked for their reflections."

The responses also reveal that engagement in academic research is common within the participant group. P1, who completed the MA thesis a few years ago, stated, "I did my MA, and I think it deepens your teaching; it adds to your understanding of teaching English as a foreign language. Not only my thesis, during the classes. I read a lot of articles and reviews..." Another participant, P6, elaborated on the PhD study by saying, "I am conducting a mixed-methods research design at the moment on students' test anxiety..."

Reasons for Research Engagement

This section explains the findings of participants' reasons for engagement with research, and the reasons for engagement in research

In the questionnaire, participants who stated they "rarely" or "never" read research were asked about the possible reasons, and they selected from the given

options. The findings were analyzed through the frequency rates and the coding of the additional open-ended responses.

Pre-service Teachers

Reasons for Reading and Not Reading Research. The percentages of the reported reasons for not reading research are presented in Table 45.

Table 45

Pre-service Teachers' Reported Reasons for Not Reading Research (N=90)

Reasons	<i>n</i>	%
I am not interested in research.	49	54.4
I find published research hard to understand.	28	31.1
I do not have time.	22	24.4
Published research does not give me practical advice for the classroom.	16	17.8
I do not have access to books and journals.	14	15.6

As the findings suggested, almost half of the pre-service teachers see “not being interested in research” ($n = 49$, 54.4%) as a reason for not reading research. 28 participants report that they do not read research because they “find published research hard to understand” (31.1 %). The lowest rated reason is “I do not have access to books and journals” ($n = 14$, 15.6 %).

The additional reasons in open-ended responses for not reading research align with the questionnaire results. 4 out of 6 answers involved “*not being interested in the research of language teaching*”. One participant mentioned the “*intensive schedule and the courses,*” and the other referred to their personality by saying, “I procrastinate all the time”.

The interviews provided more detailed data about participants' purposes in reading research and the barriers they face. According to the pre-service teachers, "personal interests", "improving teaching", and "coursework" were the main motivations for engaging with the research-based texts. For example, Pre2 stated, "I try to research for my own classes or for the topics I'm interested in, but other than that, I don't." and Pre7 emphasized the personal interests and said, "...on the internet, I sometimes think that just comes into my head. I just want to examine when I am just curious about something."

Participants reported that their limited competency, lack of motivation, and low attention span made it difficult to read academic texts. The quotations below provide examples of participants' perspectives.

"I don't have the motivation to read 20 pages of research. I get bored immediately" (Pre5)

"...we scroll social media a lot and our attention spans are declining. I think it's related to scrolling ... I cannot read. Essays are so boring for me; I don't know why because it's so long ..." (Pre6)

"I never read research for a course. I'm not a hard-working student; I don't like studying." (Pre7)

Reasons for Doing and Not Doing Research. This section presents the reported reasons why pre-service teachers engage in research. Participants ($N = 63$) were asked to indicate all the reasons that apply to them. Frequency and percentage of each reason are displayed in Table 46.

The most commonly cited reason is "to solve problems in my teaching" ($n = 32, 50.8\%$), which is followed by "because it is good for my professional

development” ($n = 31, 49.2\%$). These two answers suggest that pre-service teachers are aware of the practical and professional benefits of conducting research. On the other hand, only 4 teachers selected “I do research because other teachers can learn from my work” (6.3 %).

Table 46

Pre-service Teachers' Reported Reasons for Doing Research (N=63)

Reasons	<i>n</i>	%
To solve problems in my teaching.	32	50.8
Because it is good for my professional development.	31	49.2
As part of a course I am studying.	28	44.4
To find better ways of teaching.	27	42.9
Because I enjoy it.	21	33.3
Because it will help me get better job opportunities.	16	25.4
Because my professors expect me to.	12	19
Because other teachers can learn from the findings of my work.	4	6.3

Pre-service teachers gave additional reasons in the open-ended question, which showed that professional development and personal interests are two important reasons for conducting research. One of the participants said, “I do research out of curiosity,” and the other stated, “I do research to be a creative teacher and make students learn interactively.”

Qualitative analysis of the interview data reveals that two reasons for participants' engagement in research are their coursework and willingness to improve teaching. Pre3 and Pre4 gave details of their project work on the research methods class and mentioned that they had to do research to graduate. Pre2 said, “I

want to do some research on how to get rid of the problems of learning. I want to combine workshops with speaking clubs so that it's a nice vibe to connect with people...”

The pre-service teachers selected the reasons that apply to them to report why they “rarely” or “never” conduct research. Table 47 illustrates the results.

Table 47

Pre-service Teachers' Reported Reasons for Not Doing Research (N=60)

Reasons	<i>n</i>	%
I am not interested in doing research.	31	51.7
I do not know enough about research methods.	28	46.7
I do not have time to do research.	15	25
Most of my classmates do not do research.	14	23.3
My job is to teach, not to do research.	13	21.7
I need someone to advise me, but no one is available.	9	15

As can be seen in the table, “I am not interested in doing research” was found to be the most common response ($n = 31$, 51.7 %). Another reason indicating their need to learn about research, “I do not know enough about research methods,” is the second-highest rated answer ($n = 28$, 46.7 %).

There was one additional response for this section in the questionnaire. A pre-service teacher emphasized their identity as undergraduate students and the limited opportunities by stating, “I don’t have students to do research with, I am just a university student...”.

In the interviews, three pre-service teachers mentioned four different barriers to conducting research. These are (1) the difficulties in the research process, (2) participants’ conception of research as the domain of academics, (3) the demanding

coursework, and (4) not having enough research opportunities. The following quotations by pre-service teachers present how they express these perspectives.

“...academic research is a bit harsh, hard to do. It is not just my kind of thing, I guess...” (Pre3)

“I don't do research because I'm not thinking about an academic career. I would like to work as a high school or middle school teacher.” (Pre3)

“Currently, I am not conducting active research because my coursework is quite demanding.” (Pre4)

“In the research methods class, we didn't do a project. We just did like slides, in groups of four. But they were just copied and pasted from the book. Nobody actually did anything. So, I cannot say it was helpful” (Pre6)

Practicing Teachers

This section focuses on the research engagement with and engagement in research of practicing EFL teachers who participated in the present study. Their reported reasons for not reading, doing, and not doing research are explained in detail, both with the findings of quantitative and qualitative data analysis.

Reasons for Reading and Not Reading Research. Participants who stated they “rarely” or “never” read research are asked to select all applicable reasons from the given list in the questionnaire.

The specific barriers to engaging with research reported by practicing teachers are listed in Table 48 along with their respective frequencies and percentages. And the findings show they find the practical relevance of research as a significant feature, and they would like to improve their teaching through published research.

Table 48*Practicing Teachers' Reported Reasons for Not Reading Research (N=46)*

Reasons	<i>n</i>	%
Published research does not give me practical advice for the classroom.	35	76.1
I am not interested in research.	18	39.1
I do not have time.	12	26.1
I find published research hard to understand.	4	8.7
I do not have access to books and journals.	1	2.2

As can be seen in the table, the majority of the participants ($n = 35$, 76.1%) see “published research does not give practical advice for the classroom” as a reason for not reading research. Moreover, 39.1% of the practicing teachers ($n = 18$) report they are “not interested in research”. The lowest rated reason is “I do not have access to books and journals” ($n = 1$, 2.2 %), which is significant in showing the facilities they have to access resources.

The qualitative analysis results are in line with these responses. On the other hand, even if the reasons for reading research were not specified in the questionnaire, practicing teachers who are engaging with research elaborated on the reasons for that. The most common responses were coded in the categories of (1) improving teaching, (2) academic requirements, (3) personal interests, and (4) professional development.

Teachers emphasized they needed the resources that give them practical ideas to use in the classroom and expressed that they read research to improve teaching and to keep up-to-date. For example, P18 said, “I read to find things that are practical so that they give me, like, straightforward ideas about classroom teaching.”

Comment by P1 supports this perspective: “Especially, AI is taking place. So, I'm curious about the research, because that's a new area to work on. So. Teaching is an area that is certain to be affected by those developments in AI, so I tried to read articles or research that has been conducted in that area.”

Academic requirements were seen as an important reason for research engagement. Participants who were currently registered in MA or PhD programs stated they read research for their coursework or theses. The following quotations illustrate this point;

“I have to read research because of the courses I'm taking right now. How often do I read? I mean, every week. I read at least 5 or 6 different research articles.” (P5)

“Right now, I'm reading about emotional labor, so that means every day I'm reading like 5 to 6 or 10 articles every day. Not for this topic, but for others as well. For the last 2-3 years, because of my MA and PhD, my life has been Research.” (P6)

“Yes, because I'm a PhD student and I have weekly assignments. That's why I read some research.” (P21)

A few teachers mentioned their personal interests and curiosity as reasons for reading research. P10 expressed, “The first source of my motivation is that I like it. Really, I like to study. I like to read one thing from that. Another thing from that source, and try to analyze them...” and P21 said, “...I also have some research interests. If I see a specific topic about that research, or I know some prominent researchers in the field, if I see some of their papers, I try to download and read them.”

Finally, in addition to the participants' report that they read research to teach better, P8 mentioned a professional development certificate she had taken and stated, "I've done a couple of certificates. I've completed a couple of certificate programs, and there, for example, we were supposed to teach a skill. And before we do that, we searched the literature and we came up with how to, you know, teach those areas..."

As regards the reasons for not reading research, practicing teachers gave various responses. A few participants seemed to find the written research irrelevant to their needs. For instance, P9 stated, "No, I don't read. Because when I read the results of another study or research, I sometimes feel that it is something irrelevant. I mean, it's kind of a waste of time for me because the context is different. Needs are different. Their students are different. Problems are different..."

Results reveal that time and energy constraints were other barriers for practicing teachers to read research. The following comments provide examples for the situation;

"I sometimes do, but I don't read research very often. I have a full-time job. I have a daughter. I don't always have time for that kind of professional development. I have a lot to do." (P3)

"I don't read research at the moment because I don't have time. I'm just going to say I really would like to do it, but I don't have enough time to do that."
(P13)

The two teachers who had completed their postgraduate studies a short time ago mentioned the need to take a break from reading research. P16 said, "I mean, I just finished my MA, so I'm having a break from reading articles..." Similarly, P20 said, "I'm tired of reading these things. For eight years, I was exposed to too much

research, and when I read it, I didn't understand. Because my mind is so full of all this old information, and it still rejects it, I say stop for a while.”

The last barrier to reading research is about practicing teachers' research conceptions and their perceptions of the roles of teachers. P12 and P14 expressed that reading research was not a necessity for them because of the job requirements. The following quotations illustrate this perspective;

“To be honest, OK, I do not most of the time read research. Because it is not. Again, it has to do with my external motivational factors, because I'm a lecturer and my job description doesn't require me to read about research or read different research papers. Instead of this, I need to, you know, go downstairs and close the door and do practical things...” (P12)

“I never read research because our job is to teach English as a foreign language to adults and young adults...” (P14)

One participant gave a response in a similar vein to the comments above for the open-ended section in the questionnaire. The teacher said, “My job is teaching adults and young adults English, and I work at a public university. There is no such research directly relevant to my job.”

Reasons for Doing and Not Doing Research. 32 practicing teachers reported they read research “sometimes” or “often”. The reasons they chose are displayed in Table 49.

According to the findings, practicing teachers report “professional development” and “finding better ways of teaching” as equally important reasons for conducting research ($n = 25$, 78.1 %). “To solve problems in teaching” is the second most cited reason (59.4 %), and 9 and 18 participants stated that they do research

because they “enjoy it” (56.3 %). On the other hand, the two items, which are mostly related to teachers’ extrinsic motivation, “it will help me get a promotion” and “my employers expect me to,” are not seen as important reasons for conducting research ($n = 1$, 3.2 %, for both).

Table 49

Practicing Teachers’ Reported Reasons for Doing Research (N=32)

Reasons	<i>n</i>	%
Because it is good for my professional development	25	78.1
To find better ways of teaching	25	78.1
To solve problems in my teaching	19	59.4
Because I enjoy it	18	56.3
As a part of a course, I am studying	16	50
To contribute to the improvement of the school generally	8	25
Because other teachers can learn from the findings of my work	4	12.5
Because it will help me get a promotion	1	3.1
Because my employers expect me to	1	3.1

When teachers were asked to give additional reasons for doing research, one of them emphasized the need to keep up-to-date with the changes by stating, “*I’ve been teaching for more than 20 years. I find that a lot can change without us noticing. I try to read and/or experiment, so I can keep up with the shift, at least some of it.*” Another teacher focused on the practical benefit of doing research and said, “*to help my students learn better.*”

A similar pattern emerged from both the survey and the interviews. The responses revealed that “improving teaching” and “professional development” were the most common reasons for the practicing teachers. Participants frequently stated

they conduct research to try new methods of teaching and respond to classroom needs. For example, P9 said, “If what I said is research, I do it very often. For example, I see that the students’ vocabulary level is not very good. There is an application, for example, on the telephone or mobile phones, I assign them...” and P11 stated, “In my own teaching, I frequently experiment with new techniques, reflect on why I do things a certain way, and make adjustments to see what works best. That, in itself, is a research process.”

According to P21, research promotes personal and professional development. She explained her reason for conducting research by saying, “So that makes the difference, I guess. And also, I like trying new things as a teacher. And personally, I wanted to leave my comfort zone...”

Participants also mentioned some extrinsic motivation factors, such as (1) having a title, (2) attending international conferences, and (3) keeping their job secure as an instructor at the institution. It is noteworthy here that the research activities of those participants referred to were postgraduate studies or doing academic research to be published in academic journals. The following quotations illustrate each reason respectively;

“...another thing for sure is to be able to continue my studies in the future. To have a title, to be professional in the area...” (P10)

“The reason I conducted that research was to present it at a conference.”
(P17)

“...Like a couple of years ago, the government actually told us that from now on, all the lecturers should have master's degrees. So that they can just restart if they want to relocate themselves to a different city again with the same job

position. That was my main reason for doing research and why I have my Master's degree. Otherwise, I wouldn't feel safe enough because things can change quite quickly. So, if I hadn't done my thesis, my MA degree. I would be feeling stuck here for the rest of my life, so I don't know what happens in Turkey...” (P12).

In addition to the reasons chosen in the survey, “contributing to the institution” came up as a different factor for practicing teachers. Participants seemed to care for the quality of education in their institution and believed their contributions as teacher-researchers would improve it. Several teachers shared similar views, as shown in the comments below;

“...We are planning a project on integrating AI into our school’s curriculum at the School of Foreign Languages.” (P2)

“My goal is not just to complete a thesis but to use the findings to initiate discussions and workshops at my institution...” (P11)

“It was my master's thesis that I conducted to study in my institution, to investigate students' and teachers' perspectives on the course book. I thought that this was a problem in my institution because we tried to choose a course book...” (P21)

“I did an MA to be better at my job. First, to improve myself and for the benefit of my institution.” (P25)

In the questionnaire, 48 practicing teachers were asked to select the reasons that apply to them to report why they “rarely” or “never” conduct research. The given options involved mostly external motivational factors, such as the institutional

conditions, as well as “I’m interested in doing research.” The results are presented in Table 50.

The table shows that when practicing teachers were asked the reasons for not conducting research, half of the participants chose “I am not interested in research” ($n = 24$, 50%). It is followed by “my job is to teach, not to do research” ($n = 18$, 37.5 %) and “I do not have time to do research” ($n = 17$, 35.4 %). None of the participants chose “I do not have access to the books and journals”.

Table 50

Practicing Teachers’ Reported Reasons for Not Doing Research (N=48)

Reasons	<i>n</i>	%
I am not interested in doing research	24	50
My job is to teach, not to do research	18	37.5
I do not have time to do research	17	35.4
I do not know enough about research methods	11	22.9
Most of my colleagues do not do research	6	12.5
The learners would not cooperate if I did research in class	6	12.5
My employer discourages it	3	6.3
I need someone to advise me, but no one is available	3	6.3
Other teachers would not cooperate if I asked for their help	3	6.3
I do not have access to the books and journals I need	0	0

According to the results of the qualitative analysis, there are personal and institutional factors preventing teachers from conducting research. A teacher stated, “*I was unmotivated to do research due to the institution’s budget cuts. I would love our school to provide ways to find relevant, practical, and simple solutions in a short amount of time.*”

In the interviews, a few participants mentioned that there were certain restrictions on the teachers' doing research. for P17, “pursuing a doctorate is not allowed or encouraged, especially if it’s in a different field. So, I don’t think there’s much incentive”. Participants expressed that the lack of financial support was another issue. P2 summarized this as “Financial support was also available. Over time, that support has diminished.” Additionally, teachers talked about the need for training and guidance, especially to conduct action research. P5 said, “I wish I had some kind of informative training on action research, for example, then maybe. I could try one. Because I didn't have enough information at the time, and I still didn't feel confident. By the way, I'm not very confident about conducting action research.”

As for the personal barriers to conducting research, three teachers stated their responsibilities in the family as a reason for not conducting research. The following quotations are examples of this view,

“...I set up a family, and then I became a parent. And of course, there's this family issue, and when you have a family, then I mean your focus. It's a distracting factor, I think, in your work life” (P5)

“...the second reason is that I'm just my baby's 2 right now, and then I just want to spend some time with him.” (P22)

“...Because of the responsibilities that are in my parents, my children. They may need me.” (P25)

CHAPTER 5: DISCUSSION

Introduction

This chapter begins with an overview of the present study, followed by a discussion of the key findings related to pre-service and practicing EFL teachers' conceptions of and engagement in research. Next, it outlines the practical implications of the findings and offers suggestions for further research. Finally, limitations of the study are discussed.

Overview of the Study

This study aimed to explore pre-service and practicing EFL teachers' conceptions and engagement in research with a particular focus on how they perceive research and to what extent they participate in it. Answers for the following research questions were sought throughout the study;

- 1a. *What are the conceptions of research* held by
 - i. pre-service EFL teachers
 - ii. practicing EFL teachers
- 1b. *How do these conceptions compare?*
2. *Do pre-service EFL teachers' conceptions of research* differ according to their
 - a. year of study
 - b. teaching experience
 - c. having taken the "Research Methods in Education" class or not

3. Do *practicing EFL teachers' conceptions of research* differ according to their
 - a. teaching experience
 - b. holding a professional certificate or not
 - c. holding a post-graduate degree or not
4. To what extent do EFL teachers *engage with* research during their
 - a. pre-service education?
 - b. practice in the profession?
5. To what extent do EFL teachers *engage in* research during their
 - a. pre-service education?
 - b. practice in the profession?
6. Why do EFL teachers *engage in* research during their
 - a. pre-service education?
 - b. practice in the profession?

The study employed an explanatory sequential mixed-methods design, combining quantitative data from the questionnaires and qualitative data from the semi-structured interviews. The questionnaire (Borg, 2009) consisted of 25 items in 4 sections, aiming to explore participants' perceptions about the nature and purpose of research and the characteristics of good research, and their experiences in reading and conducting research. A total of 201 participants (122 pre-service and 79 practicing teachers) responded to the survey, and 35 (7 pre-service and 25 practicing teachers) participated in the interview. Subgroups for pre-service teachers were formed based on variables such as year of study, teaching experience, and whether participants had taken the research methods course. The variables for the practicing

teachers were their years of teaching experience, professional certificates, and postgraduate degrees. The quantitative data were analyzed using descriptive and inferential statistics to discover the patterns in participants' conceptions and practices. Thematic analysis was conducted on the data obtained from the questionnaire using the themes from Borg's questionnaire. The findings of the study shed light on participants' understanding of research in general and the features of good research, along with the factors that shape their research engagement.

Discussion of Major Findings

The results of the quantitative and qualitative data analysis of the current study provide insights into pre-service and practicing EFL teachers' research conceptions and engagement. This section discusses the major findings with reference to the existing literature under two sub-sections: conceptions of research and engagement in research. Each sub-section involves the findings for both pre-service and practicing teachers.

Conceptions of Research

This section consists of participant EFL teachers' general understanding of the term research and the different types of inquiry, as well as their description of the features of quality research. Pre-service and practicing EFL teachers first responded to the items involving the scenarios to be labelled as research and the features of good research. Following that, the participants elaborated on their views. The overall findings form the interpretation of the conceptions of research.

Pre-service Teachers

In general terms, pre-service teachers who participated in this study identified research both as a *scientific-academic* and a *classroom-related activity*, and the

findings are mostly aligned with the previous research. Echoing the findings of Borg (2013), pre-service teachers' highest rated research activity is the one involving the use of statistics for data analysis and the results published in an academic journal. This finding is also consistent with the study of Tanış (2019), where the candidate EFL teachers in different years of their study labelled this example of academic inquiry as the most likely research activity of the items in the same questionnaire developed by Borg (2009).

In line with Ratcliffe et al. (2004) and Borg (2009, 2013), this study highlights that *objectivity*, *systematic approach*, and *applicability in the classroom* are seen as significant characteristics of good research by pre-service teachers. In addition to these features, the participants of the current study provided “research should be fun and interesting” (Pre2) as an alternative perspective.

Although pre-service teachers seemed to acknowledge the importance of reading or doing research to teach better, they did not directly refer to classroom research and action research during the interviews, and as indicated in the questionnaire results, *evaluative and reflective inquiries were less seen as research than the “traditional” research activities*. This might be due to their limited knowledge because, as Ölçü Dinçer and Seferoğlu (2018) showed, pre-service teachers do not see action research and reflective practice as professional development activities because they do not know what they are. So, in contrast to Van Katwijk et al. (2023), this study *did not demonstrate a positive attitude or a specific link between practitioner research and teaching quality*. Pre-service teachers' need for better training on practitioner research was also reported in Yan's (2017) study.

One key finding was that the participants who wanted to pursue a career in teaching English as a foreign language stated *they were not interested in research, as it was done by the faculty members at universities*. Even if few see the value in using it for improving the practice, research is *often viewed by pre-service teachers as irrelevant to the classroom needs*. This reveals that their research conceptions are confined to the scientific studies by academics, reaffirming the conclusions drawn by Kincheloe (2003), Trent (2012), İnal and Büyükyavuz (2013), Elmas and Aydın (2017), and Tanış (2019).

Some pre-service teachers described the research *as a way of generating knowledge and understanding the world better*. This broad conception was not found in the results of the questionnaire or the previous research. The findings might be seen as a new insight into the issue, or may reflect a misconception, more precisely, considering reading various resources to obtain knowledge to be the same as conducting research.

Although there is a number of research studies (Talandis & Stout, 2015; Akyel, 2015; Schulte & Klipfel, 2006; Yan, 2017) investigating the changes in pre-service teachers' attitudes and perceptions of research as a result of action research or training programs but this was beyond the scope and objectives of the present study.

Finally, the subgroups of pre-service teachers according to their year of study, teaching experience, and the conditions of having taken the research methods class were studied to investigate any differences in participants' conceptions of research. Unlike the reported increase in participants' interest in research after taking the research methods class in Savaşçı and Rets' (2021) study, the analysis of the

present data showed *no significant distinction* between these groups of pre-service teachers who took the research methods class and those who did not.

Practicing Teachers

The conclusions drawn from this study confirm that practicing teachers' research conceptions in many aspects align with the relevant literature. Participants conceptualize research in three ways: *academic/scientific, classroom-related, and teacher-related research*. This variety of conceptualization highlights the importance of seeing the value of different research activities and researcher identities (Consoli & Dikilitaş, 2021, p. 351).

According to the results, teachers *generally conceptualize research as a formal and academic inquiry* (McNamara, 2002; Borg, 2009; Banegas, 2018; Mermer & Soyer, 2021), while some participants *recognize reflective practice or research to solve problems in the classroom as research* (Lytle & Cochran-Smith, 1994; Zeichner & Noffke, 2001). Additionally, research is valued for its positive impact on *improving teaching practice* and teachers' *professional development* (Stenhouse, 1975; Johnson, 2012; Everton et al., 2002; Kincheloe, 2003).

Another significant finding emerged from the qualitative phase of the present study regarding the practicing teachers' conceptions of research. Besides the perspectives mentioned above, for some teachers, research is not confined to formal projects or academic procedures. *Informal inquiries in everyday life* involve questioning, reflecting, and exploring, and therefore can be seen as research that supports the arguments by Lytle and Cochran-Smith (1994, pp. 22-51) and Zeichner and Noffke (2001, pp. 298-310). This finding expands the research conceptions,

highlighting the academic practices as in the studies by Borg (2009) and Tanış (2019).

The views of practicing teachers on action research/classroom research are two-sided; *some consider action research valid and beneficial* (Akşit, 2013; Atay, 2008; Tanış & Dikilitaş, 2018), while *for some teachers, action research/ classroom research is non-rigorous and too narrow* (Burns, 1999; Borg, 2010).

A less emphasized but significant finding of the present study is *the influence of research on teacher empowerment and the transformative effect on teachers' identities and their conceptions of research*. Johnson (2012) notes that engaging in research can change how teachers see themselves and their roles. The qualitative findings are in line with Borg's study (2009), as the participants state *that they used to think that research was something specific to academics before actively conducting research*. According to Akşit (2010), pursuing further academic studies can facilitate the development of positive attitudes toward research. This is also among the findings of the present study; some participants stated that they found academic research beneficial and enjoyable after their postgraduate studies. A few participants *see research as a vehicle for contributing to their institution*, reflecting the arguments of Zeichner and Noffke (2001).

Practicing teachers' opinions on the characteristics of good research show that systematic features such as *well-designed methodology* and *objectivity* are highly valued, and teachers also emphasized the practical relevance. The findings align with the studies by Banegas (2018) and Borg (2009). In the same vein, Mermer and Sayer (2021) identified that objectivity, testing hypotheses, and using statistical analysis are the most important features of good research for in-service teachers.

Practicing teachers in this study expressed a range of views about the dissemination of research, which is also evident in Borg's (2009) research. While some participants *value sharing the results of the research* by publishing in academic journals or presenting at conferences, others see *dissemination as optional*. These findings are consistent with the previous research by Freeman (1998) and Banegas (2018), indicating that many teachers conduct research without feeling that they have to make publications.

Although teachers' years of teaching experience and the conditions of holding professional certificates statistically *showed no significant difference*, and may not be related to teachers' research conceptions, *teachers with postgraduate degrees showed a broader understanding of research*. They rated more scenarios as research overall, with higher Mean scores, unlike Kılınç (2022) and Hahs-Vaughn and Yanowitz (2009).

The Difference Between Research Conceptions of Pre-service and Practicing Teachers

Quantitative and qualitative findings of the current study reveal the shared perspectives and differences between the research conceptions of pre-service and practicing EFL teachers.

Both groups show the conception of traditional research and emphasize that research follows a formal and systematic procedure (Borg, 2009). Furthermore, *objectivity* is the most valued feature of good research for both pre-service and practicing teachers (Everton et al., 2004). *Applicability of the research in the classroom* is another point that both groups find significant (Rattcliffe et al., 2004;

Tanış, 2009). Finally, *both groups possess an informal conception of research and consider the problem-solving activities in daily life as research.*

With regard to the differences, pre-service teachers' descriptions of research are more abstract and general, while practicing teachers are more knowledgeable in the research methodology and give more detailed descriptions of various types of inquiry.

Research Engagement

In this study, participants' research engagement refers to their views and activities of reading and conducting research. The kinds of research activities they are involved in, the reported frequency of research engagement, and the reasons for and barriers to research engagement are among the themes that emerged from the findings.

Pre-service Teachers

Empirical studies investigating the research engagement of pre-service EFL teachers are limited in number. However, the overall findings of the present study give insights into the present situation in pre-service EFL teacher research engagement.

Reading Research. The findings indicate that *reading research is not a common activity* among pre-service EFL teachers, and participants made use of web-based resources and academic journals when they needed or wanted to read research (Akşit, 2010). Similarly, according to McNamara (2002) and Christenson et al. (2002), pre-service teachers infrequently read research and rarely participate in research activities.

Participants *read research because of their coursework, personal interests, and the willingness to improve their teaching*. Even if there is not much comment on the effect of reading research on their current research activities, some have future plans of reading research and using that information while teaching. Most pre-service teachers *report not being interested and not having enough time as the barriers to reading research*, and these findings are in line with Borg's (2013) study.

A new insight was brought by the participant who mentioned the negative impact of using social media on their attention span and, consequently, on their habits of reading research. This might be interpreted as another barrier to reading research, although there is seemingly no previous literature to support this.

Doing Research. *The frequency of conducting research is higher than the frequency of reading research*. Although they do not have considerable research experience, pre-service teachers' previous research *consists of the project works they were involved in during the research methods class, and even in high school*. A response given as an additional reason for the lack of research engagement; "I don't have students to do research with, I am just a university student..." shows that during their undergraduate years, pre-service teachers mostly have "*limited access to real classroom environments*" to conduct research in line supporting the argument by Dikilitaş and Bostancıoğlu (2019).

Coursework emerges both as a reason and a barrier to conducting research for pre-service teachers. Confirming the earlier research by Borg (2013), participants report that they conduct research to improve their teaching and their professional development. Pre-service teachers added "curiosity" as an additional reason that supports their conceptions of research to be "interesting and fun."

The difficulties in the research process and limited support hinder some pre-service teachers from actively engaging in it, which aligns with Karakaya's (2015) and Banegas's (2018) research. Furthermore, participants' conceptions of research that confines it to academic studies are a barrier for pre-service teachers. Pre-service teachers who think that research is a technical process are less willing to engage in it, and this finding supports the arguments of McNamara (2002), Akyel (2015), and Tanış (2019).

Practicing Teachers

The following section summarizes the findings obtained from practicing EFL teachers' self-reported frequency of research engagement and the reasons.

Reading Research. According to the quantitative findings, most of the practicing teachers do not read research frequently. However, 35 teachers who participated in the interviews are more engaged, especially in *academic research* such as research projects and postgraduate studies, compared to the whole group.

Teachers' low frequency of reading research was also reported in studies by Çelik (2017) and Fareh and Saeed (2011). According to Borg (2009), even though teachers find research valuable, they rarely engage with it.

Borg (2013) reports that teachers prefer books as a resource for research. On the other hand, the two most preferred resources for the participants of the present study are web-based resources and academic journals, as in Akşit's study (2010). According to Shkedi (1998), teachers prefer easy-to-access and practical resources over academic journals, which is also expressed by the participants of this study.

In addition to these resources, teachers mention *social media, AI tools, and the online bulletins* prepared by the professional development team at the institution

as resources for reading, and this reflects their current digital habits.

Findings show that *teachers recognize the positive influence of research on their teaching*, especially for knowing the learners better and making informed decisions (Borg, 2009).

Concerning the reasons for reading and not reading research, findings are in line with the literature. Teachers read research *to improve teaching, meet academic requirements, and for personal interests*. According to McNamara (2002) and Christenson et al. (2002), teachers often do not read academic research voluntarily but engage with it when required.

The reported barriers are the *lack of time, dense academic language, and resources irrelevant to their needs*. Borg (2009) and Akşit (2010) highlighted that teachers are discouraged from reading research when they feel that research is not related to the real classroom practices. These confirm the literature regarding teacher research engagement (McDonough & McDonough, 1990; McNamara, 2002; Shkedi, 1998).

Doing Research. Similar to the findings for reading research, practicing teachers *rarely conduct* research. Those who report active engagement are *mostly in the process of completing their MA or PhD studies or working on some research projects*. Besides, *some participants conduct classroom* research to solve problems and improve teaching, although they do not follow a formal procedure and hesitate to label it as research.

Unlike the study of Akşit (2010), which indicated that teachers are engaged in research because they enjoy doing so, the most frequently reported reasons for doing research are *to help teachers' professional development, to improve practice,*

and to keep up-to-date, supporting the data shared by Borg (2006, 2013). Some external motivational factors mentioned include *attending international conferences, having a title, and job security*. For a few participants, their research *contributes to the improvement of the institution*, which is another reason for engagement.

With regard to the reasons for not conducting research, teachers mention *limited time* (Akşit, 2010; Akşit, 2013; Borg, 2009; Burns, 1999; Woore et al., 2020; Sakarkaya & Bümen, 2022), *lack of interest*, and some state that their *job description as teachers does not involve engagement in research* (Atay, 2008; Banegas, 2018; Borg, 2013; Dikilitaş & Bostancıoğlu, 2019).

Findings reveal that *limited support from the institution* is another barrier to conducting research (Karakaya, 2015; Sakarkaya & Bümen, 2022). And lastly, personal barriers such as *family responsibilities* are seen as an obstacle for the teachers who want to conduct research.

The findings of the current study align closely with those reported in previous research that employed the same data collection instrument by Borg (2009). Those studies by Gao et al. (2010), Çelik (2017), Banegas (2018), Mermer and Soyer (2021), and Kılınç (2022) yielded similar results to the current study, which indicates a consistent pattern across contexts and time.

Table 51 presents the summary of these studies along with the researcher, year, contexts, major findings, and the extent to which the findings correspond with those of the current study.

Table 51*Summary of Studies using Borg's (2009) Questionnaire*

Researcher & Year	Context	Main Findings	Comparison to the Current Study
Borg, 2007	50 teachers at a university in Türkiye	Teachers read research to improve classroom practice. Workload and institutional constraints are seen as barriers.	The findings are in line with the current study.
Gao et al., 2010	Primary school EFL teachers in China	Teachers engage in research. Their motivation is to solve problems faced in the classroom.	Teachers' reported frequency of research engagement is lower in the current study. However, both studies indicate that teachers read research to improve teaching.
Çelik, 2017	55 EFL teachers at a private university in Türkiye	Research is seen as a systematic process following certain steps. Participants value teacher research. The majority of them read & do research on a regular basis	Research conceptions align with the findings of the current study. Research engagement of teachers is more frequent in Çelik (2017).
Banegas, 2018	622 EFL teachers in Argentina	Research is an academic and systematic activity. It should be objective. Lack of time and knowledge are barriers.	Findings are in line with the current study.
Mermer & Soyer, 2021	152 EFL teachers teaching at	Participants conceptualize research as an academic	Findings are in line with the current study.

Researcher & Year	Context	Main Findings	Comparison to the Current Study
	various levels in Türkiye	inquiry. Objectivity and hypothesis testing are the most important features of good research. Lack of time and interest hinders research engagement	
Kılınç, 2022	75 EFL teachers teaching at various primary schools in Türkiye	Teachers are aware of the features of research, but they have some misconceptions. They need institutional support and training to conduct research. Busy schedules are also seen as a barrier.	Participants of the current study show a better understanding of research terminology and have more experience in various kinds of research such as action research and reflective practice.

As Table 51 presents, the main findings from different dates and contexts are consistent with each other and the present study. EFL teachers conceptualize research mostly as an academic inquiry, and they find it significant to improve classroom practices. In almost all studies, lack of time and training were reported as the barriers to research engagement. In Gao et al. (2010) and Çelik (2017), participants report a higher frequency of research engagement than in the current study, and this might be related to contextual and institutional factors. Another difference can be seen in the findings of Kılınç (2022), where participants were EFL teachers working in primary schools. The tertiary level EFL teachers in the present study showed a more in-depth understanding and knowledge of research types and

methodology than in Kılınç (2022), which can show the impact of the academic environment on teachers' conceptions of research.

Implications for Practice

The findings of this study suggest several practical implications for language teacher education and continuing professional development programs for practicing EFL teachers.

The study reveals that pre-service EFL teachers value research as an academic practice but view it as distinct from teaching. Depending on pre-service teachers' conceptions of research, the curriculum for language teacher education programs and the research methods class can be redesigned with a more integrated approach to help candidate teachers strengthen the connections between research and classroom practices, as well as giving them opportunities for more experience in various types of research activities. Teacher educators should interpret these findings as a need to provide more guidance and support for candidate teachers to be involved in research.

According to the findings of the current study and the research by Schulte and Klipfel (2016), the lack of support, motivation, and knowledge for conducting research is a challenge for pre-service teachers. Research projects with mentorship and collaboration could be organized to help pre-service teachers gain confidence and motivation to be engaged in research activities.

Regarding reading research, as web-based resources are the most commonly preferred tools by pre-service teachers for whom short attention span is a barrier, teacher educators can use digital tools to improve pre-service EFL teachers' research engagement.

Practicing teachers who participated in this study are more aware of the research methodology than the pre-service teachers, and almost all of them have some experience in different types of research activities with different motivational factors. The findings reveal that they engage more when research is linked to solving problems in the classroom and helping students learn better. Since they also mention following the bulletins by the professional development unit in the institution, activities involving short and applicable research modules could be organized to improve their research engagement and their identity as teacher-researchers.

Additionally, practicing teachers express willingness and a positive attitude towards action research, although they lack confidence or training in how to conduct such research. Professional development units in educational institutions and graduate programs can integrate practical training for action research into the in-service programs or the coursework (Akşit, 2013; Allwright, 2005).

Time constraints and family responsibilities are the challenges that practicing teachers face while conducting research activities. Institutions can provide time allowances through, for example, teaching load reduction, and childcare support for the in-service teachers pursuing postgraduate studies or conducting research projects.

When the previous research using Borg's (2009) tool was compared (Borg, 2007; Gao et al., 2010; Çelik, 2017; Banegas, 2018; Mermer & Soyer, 2021; Kılınç, 2022), teachers' research conceptions mostly seem confined to academic studies, and the lack of time, knowledge, and institutional support are the key barriers to their research engagement. Despite these conclusions being drawn at different points in time, the issues remain unchanged. This might reflect inadequate endeavors towards

the solution of the problems and insufficient support offered to pre-service and practicing teachers towards this end.

The overall findings of the present study indicate the need for encouragement of teacher research, both for pre-service and practicing teachers

Implications for Further Research

As the present study was conducted in one institution at the tertiary level, the findings might be limited to this specific context. Exploring EFL teachers' research conceptions and engagements in different types of institutions can provide a more in-depth understanding of the subject and show the impact of institutional factors on pre-service and practicing teachers' research conceptions and engagement.

In addition to understanding how teachers perceive research and to what extent they are engaged in it, future studies can focus on the effect of teacher research on teaching quality and learner outcomes, which can offer further insights for the relevant literature. Those studies could employ various research methodologies that may include other qualitative data collection procedures, like classroom observations or document analysis of lesson plans or teaching materials.

The current study involved the examination of the research conceptions of subgroups of pre-service and practicing teachers. These were arranged according to the features such as the year of study/ teaching experience, professional certificates, and postgraduate degrees. Further research could focus on these variables and their impact on teachers' experiences in research, and provide a deeper understanding of the factors to promote teacher research.

In-service teachers in the present study provided invaluable data because they were all experienced both in teaching and conducting research. Their motivation for

research engagement could be further explored according to their current situation of studying for a postgraduate program. Future research can explore the role of actively being a postgraduate student as a variable to identify the real motivational factors behind teachers' research engagement.

As also stated in the limitations of this cross-sectional research, the data were collected once at a time, which makes it difficult to track the changes during a specific training activity and the process of research engagement. A longitudinal research design is recommended for further exploration of pre-service and practicing teachers' beliefs and experiences in research.

Limitations

Despite its contributions to implications for future practice and research, this study has several limitations that need to be taken into account while interpreting the results. First of all, the data were collected at a state university in Türkiye, and even if they were from a variety of backgrounds and had different lengths of teaching experience, all practicing teachers were teaching English as a foreign language at the preparatory school. Similarly, the pre-service teachers were studying at the same state university. The findings provide significant insights into the current research setting but may not be generalizable to all EFL teacher populations in different regional, educational, and cultural contexts.

The number of participants is a crucial factor for achieving more representative results regarding participants' conceptions of and engagement in research. Possibly due to their hectic schedules of classes and exams, the number of interview participants, especially pre-service teachers, was relatively small compared

to the total sample. This might have limited the depth and diversity of the perspectives in the qualitative stage of the research.

Finally, there is another limitation regarding the design of the study. The data were collected through different instruments, but at a single point in time. Thus, the interpretation of the results might not be able to explore the changes in participants' conceptions and practices over time.



REFERENCES

- Akkari, A., & Wentzel, B. (2014). Debates in educational research. In D. Matheson (Ed.), *An introduction to the study of education* (pp. 384-396). Routledge.
<https://doi.org/10.4324/9780203105450>
- Akşit, T. (2013). EAP teacher action research: A means of reflection to improve EAP teaching practice. In J. Wigglesworth (Ed.), *EAP within the higher education garden: Cross-pollination between disciplines, departments and research* (pp. 231-239). Garnet Publishing.
- Akşit, Z. (2010). *Teachers and research: A case study of attitudes and behaviors in an EFL context* (Publication No. 264822) [Master's thesis, İhsan Doğramacı Bilkent University]. Ulusal Tez Merkezi.
- Akyel, A. (2015). Research engagement in the EFL pre-service practicum. *LIF- Language in Focus Journal*, 1(1). <https://doi.org/10.1515/lifjsal-2015-0001>
- Aldridge, A., & Levine, K. (2001). *Surveying the social world: Principles and practice in survey research*. Open University Press.
- Allison, D., & Carey, J. (2007). What do university language teachers say about language teaching research?. *TESL Canada Journal*, 24(2), 61-81.
- Allwright, D. (1997). Quality and sustainability in teacher-research. *TESOL Quarterly*, 31, 368-370.
- Atak Damar, E., & Salı, P. (2022). Pre-service EFL teachers as future professionals and researchers. *Journal of Uludağ University Faculty of Education*, 35(3), 763-784. <https://doi.org/10.19171/uefad.1171718>
- Atay, D. (2008). Teacher research for professional development. *ELT Journal*, 62(2), 139-147. <https://doi.org/10.1093/elt/ccl053>

- Banegas, D. L. (2018). Towards understanding EFL teachers' conceptions of research: Findings from Argentina. *Profile: Issues in Teachers' Professional Development*, 20(1), 39-52. <https://doi.org/10.15446/profile.v20n1.61881>
- Bartlett, S., & Burton, D. (2016). *Introduction to education studies* (4th ed.). Sage.
- Berry, A., & Taylor, M. (2017). Personal experience methods in practitioner research. In D. Wyse, L. E. Suter, E. Smith, & N. Selwyn (Eds.), *The BERA/SAGE handbook of educational research: Two-volume set (Vol. 2*, pp. 589-608). Sage. <https://doi.org/10.4135/9781473983953>
- Berthoff, A. E. (1987). The teacher as researcher. In D. Goswami & P. Stillman (Eds.), *Reclaiming the classroom: Teacher research as an agency for change* (pp. 28-39). Boynton/Cook.
- Borg, S. (2007). Research engagement in English language teaching. *Teaching and Teacher Education*, 23(5), 731-747. <https://doi.org/10.1016/j.tate.2006.03.012>
- Borg, S. (2009). English language teachers' conceptions of research. *Applied Linguistics*, 30(3), 358-388. <https://doi.org/10.1093/applin/amp007>
- Borg, S. (2010). Language teacher research engagement. *Language Teaching*, 43(4), 391-429. <https://doi.org/10.1017/S0261444810000170>
- Borg, S. (2013). *Teacher research in language teaching: A critical analysis*. Cambridge University Press.
- Borg, S. (2015). Facilitating teacher research: Course design, implementation, and evaluation. In S. Borg & H. S. Sanchez (Eds.), *International perspectives on teacher research* (pp. 98-113). Palgrave Macmillan.
- Brown, H. D. (2001). *Teaching by principles: An interactive approach to language pedagogy* (2nd ed.). Addison Wesley Longman, Inc.

- Burns, A. (1999). *Collaborative action research for English language teachers*. Cambridge University Press.
- Burns, A. (2010). *Doing action research in English language teaching: A guide for practitioners*. Routledge.
- Burns, A., Edwards, E., & Ellis, N. J. (2022). *Sustaining action research: A practical guide for institutional engagement* (1st ed.). Routledge.
<https://doi.org/10.4324/9780429265273>
- Çelik, A. (2017). *EFL teachers' research engagement at a private university* (Publication No. 497565) [Master's thesis, Yeditepe University]. Ulusal Tez Merkezi.
- Christenson, M., Slutsky, R., Bendau, S., Covert, J., Dyer, J., Risko, G., & Johnston, M. (2002). The rocky road of teachers becoming action researchers. *Teaching and Teacher Education*, 18(3), 259-272. [https://doi.org/10.1016/S0742-051X\(01\)00068-3](https://doi.org/10.1016/S0742-051X(01)00068-3)
- Coghlan, D. (2003). Practitioner research for organizational knowledge. *Management Learning*, 34(4), 451-463.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Coşkun, D. (2023). Teacher research engagement in English language teaching. In K. Büyükkarcı & A. Önal (Eds.), *Current studies in foreign language education* (pp. 98-120). ISRES Publishing.
- Consoli, S., & Dikilitaş, K. (2021). Research engagement in language education. *Educational Action Research*, 29(3), 347-357.
<https://doi.org/10.1080/09650792.2021.1933860>

- Corey, S. M. (1954). Action research in education. *The Journal of Educational Research*, 47(5), 375-380.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- Creswell, J., & Poth, C. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Davies, P. (1999). What is evidence-based education? *British Journal of Educational Studies*, 47(2), 108-121. <https://doi.org/10.1111/1467-8527.00106>
- DeMarrais, K. (2004). Qualitative interview studies: Learning through experience. In K. DeMarrais & S. D. Lapan (Eds.), *Foundations for research: Methods of inquiry in education and the social sciences* (pp. 51-68). Lawrence Erlbaum Associates.
- Dikilitaş, K. (2015). Professional development through teacher research. In K. Dikilitaş, R. Smith, & W. Trotman (Eds.), *Teacher researchers in action* (pp. 47-58). IATEFL.
- Dikilitaş, K., & Bostancıoğlu, A. (2019). *Inquiry and research skills for language teachers* (1st ed.). Springer International Publishing.
<https://doi.org/10.1007/978-3-030-21137-0>
- Dikilitaş, K., & Çomoğlu, I. (2020). Pre-service English teachers' reflective engagement with stories of exploratory action research. *European Journal of Teacher Education*, 45(1), 26-42.
<https://doi.org/10.1080/02619768.2020.1795123>
- Dikilitaş, K., & Göktürk Sağlam, A. L. (2023). Exploring the practical impacts of research engagement on English language teaching: Insights from an online

- community of practice. *Journal on Efficiency and Responsibility in Education and Science*, 16(1), 46-54. <https://doi.org/10.7160/eriesj.2023.160105>
- Dikilitaş, K., & Mumford, S. E. (2018). Teacher autonomy development through reading teacher research: Agency, motivation, and identity. *Innovation in Language Learning and Teaching*, 13(3), 253-266.
<https://doi.org/10.1080/17501229.2018.1442471>
- Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. Oxford University Press.
- Dörnyei, Z., with Taguchi, T. (2002). *Questionnaires in second language research: Construction, administration, and processing* (2nd ed.). Routledge.
- Elmas, E., & Aydın, S. (2017). Pre-service foreign language teachers' perceptions of research skills: A qualitative study. *The Qualitative Report*, 22(12), 3088-3101.
- Everton, T., Galton, M., & Pell, T. (2002). Educational research and the teacher. *Research Papers in Education*, 17(4), 373-402.
- Everton, T., Galton, M., & Pell, T. (2000). Teachers' perspectives on educational research: Knowledge and context. *Journal of Education for Teaching*, 26(2), 167-182.
- Fareh, S., & Saeed, A. T. (2011). The teacher as researcher in the context of language teaching. *Procedia - Social and Behavioral Sciences*, 15, 153-159.
<https://doi.org/10.1016/j.sbspro.2011.03.066>
- Farrell, T. S. C. (2022). *Reflective practice in language teaching*. Cambridge University Press.

- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2011). *How to design and evaluate research in education* (8th ed.). McGraw-Hill.
- Freeman, D. (1998). *Doing teacher research: From inquiry to understanding*. Heinle & Heinle.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2014). *Applying educational research: How to read, do, and use research to solve problems of practice* (7th ed.). Pearson.
- Gao, X. A., Barkhuizen, G., & Chow, A. (2010). 'Nowadays, teachers are relatively obedient': Understanding primary school English teachers' conceptions of and drives for research in China. *Language Teaching Research*, 15(1), 61-81.
<https://doi.org/10.1177/1362168810383344>
- Gay, L. R., Mills, G. E., & Airasian, P. W. (2009). *Educational research: Competencies for analysis and applications* (10th ed.). Pearson.
- Hahs-Vaughn, D. L., & Yanowitz, K. L. (2009). Who is conducting teacher research? *The Journal of Educational Research*, 102(6), 415-426.
<https://doi.org/10.3200/JOER.102.6.415-426>
- Hancock, R. (1997). Why are class teachers reluctant to become researchers? *British Journal of In-service Education*, 23(1), 85-99.
<https://doi.org/10.1080/13674589700200009>
- Hollingsworth, S., & Sockett, H. (1994). *Teacher research and educational reform: Ninety-third yearbook of the National Society for the Study of Education*. University of Chicago Press.
- İnal, S., & Büyükyavuz, O. (2013). English trainees' opinions on professional development and pre-service education. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 28, 221-23.

- Johnson, A. P. (2012). *A short guide to action research*. Pearson Education.
- Karakaya, N. (2015). *A qualitative case study of English language teachers' views towards teacher research as a professional development tool* (Publication No.399974) [Master's thesis, Middle East Technical University]. Ulusal Tez Merkezi.
- Kincheloe, J. (2003). *Teachers as researchers: Qualitative inquiry as a path to empowerment* (2nd ed.). Falmer.
- Kirkwood, M., & Christie, D. (2006). The role of teacher research in continuing professional development. *British Journal of Educational Studies*, 54(4), 429-448.
- Kılınç, G. S. (2022). *An investigation into teacher research: Turkish primary EFL teachers' perceptions and engagement* (Publication No. 754648) [Master's thesis, Çukurova University]. Ulusal Tez Merkezi.
- Lankshear, C., & Knobel, M. (2004). *A handbook for teacher research: From design to implementation*. Open University Press.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.
- Lyle, S. (2003). An investigation into the impact of a continuing professional development programme designed to support the development of teachers as researchers in South Wales. *Journal of In-Service Education*, 29(2), 295-314.
- Lytle, S. L., & Cochran-Smith, M. (1990). Learning from teacher research: A working typology. *Teachers College Record*, 92, 83-103.
- Lytle, S. L., & Cochran-Smith, M. (1994). Inquiry, knowledge, and practice. In S. Hollingsworth & H. Sockett (Eds.), *Teacher research and educational*

- reform: Ninety-third yearbook of the National Society for the Study of Education*. (pp. 22-51). University of Chicago Press.
- Matheson, C., & Matheson, D. (2014). Research in professional contexts. In D. Matheson (Ed.), *An introduction to the study of education*. (pp. 397-412). Routledge. <https://doi.org/10.4324/9780203105450>
- McDonough, J., & McDonough, S. (1990). What's the use of research? *ELT Journal*, 44(2), 102-109.
- McNamara, O. (Ed.). (2002). Evidence-based practice through practice-based evidence. In O. McNamara (Ed.), *Becoming an evidence-based practitioner*. (pp. 1-12). Routledge- Falmer.
- Mehrani, M. B. (2015). English teachers' research engagement: Level of engagement and motivation. *Iranian Journal of Language Teaching Research*, 3(1), 83-97. <https://doi.org/10.30466/ijltr.2015.20403>
- Mermer, İ. Ü., & Soyer, Ö. N. (2021). ELT teachers' research engagement: Perspectives from Turkey. *Innovational Research in ELT*, 2(2), 1-21. <https://doi.org/10.29329/irelt.2021.416.1>
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.
- Morgan, C., & Neil, P. (2003). *Continuing professional development for teachers: From induction to senior management* (1st ed.). Routledge. <https://doi.org/10.4324/9780203416785>
- Nunan, D. (1992). *Research methods in language learning*. Cambridge University Press.

OECD. (2003). *New challenges for educational research: Knowledge management*.

OECD Publishing. <https://doi.org/10.1787/9789264100312-en>

Ölçü Dinçer, Z., & Seferoğlu, G. (2018). Pre-service English teachers' career

development aspirations: Professional development and leadership.

Kastamonu Education Journal, 26(6), 2033-2044.

<https://doi.org/10.24106/kefdergi.2308>

Ratcliffe, M., Bartholomew, H., Hames, V., Hind, A., Leach, J., Millar, R., &

Osborne, J. (2004). *Science education practitioners' views of research and its influence on their practice*. Department of Educational Studies, University of York.

Richards, J. C., & Farrell, T. S. C. (2005). *Professional development for language*

teachers: Strategies for teacher learning. Cambridge University Press.

Sakarkaya, V., & Bümen, N. (2022). What triggers teacher research engagement and

sustainability in a higher education context in Turkey? *Participatory*

Educational Research, 9(2), 325-342. <https://doi.org/10.17275/per.22.43.9.2>

Savaşçı, M., & Rets, I. (2021). "As the twig is bent, so is the tree inclined": Research

engagement among pre-service EFL teachers. *The Journal of Language*

Teaching and Learning, 11(2), 114-137.

Schulte, A. & Klipfel, L. (2016). External influences on an internal process:

supporting pre-service teacher research. *The Educational Forum*, 80(4), 457-

465. <https://doi.org/10.1080/00131725.2016.1206158>

Shkedi, A. (1998). Teachers' attitudes towards research: A challenge for qualitative

researchers. *International Journal of Qualitative Studies in Education*, 11(4),

559-577. <https://doi.org/10.1080/095183998236467>

Stenhouse, L. (1975). *An introduction to curriculum research and development*.

Heinemann.

Taber, K. S. (2017). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48, 1273-1296. <https://doi.org/10.1007/s11165-016-9602-2>

Talandis, G. Jr., & Stout, M. (2015). Towards new understandings: Reflections on an action research project with Japanese university students. In S. Borg & H. S. Sanchez (Eds.), *International perspectives on teacher research*. (pp. 14-29). Palgrave Macmillan.

Tanış, A., & Dikilitaş, K. (2018). Turkish EFL instructors' engagement in professional development. *Eurasian Journal of Applied Linguistics*, 4(1), 27-47. <https://doi.org/10.32601/ejal.460628>

Tanış, S. (2019). *Research engagement in and beyond pre-service teacher education: A case study of an English language teacher education program in Turkey* (Publication No. 593179) [Master's thesis, Middle East Technical University]. Ulusal Tez Merkezi.

Thornbury, S. (2006). *An A-Z of ELT: A dictionary of terms and concepts used in English language teaching* (1st ed.). Macmillan Publishing.

Trent, J. (2012). Research engagement as identity construction: Hong Kong preservice teachers' experiences of a compulsory research project. *Teacher Development*, 16(2), 145-160. <https://doi.org/10.1080/13664530.2012.688677>

Van Katwijk, L., Jansen, E., & Van Veen, K. (2023). Pre-service teacher research: A way to future-proof teachers? *European Journal of Teacher Education*, 46(3), 435-455. <https://doi.org/10.1080/02619768.2021.1928070>

- Wallace, M. J. (1998). *Action research for language teachers*. Cambridge University Press.
- Woore, R., Mutton, T., & Molway, L. (2020). 'It's definitely part of who I am in the role'. Developing teachers' research engagement through a subject-specific Master's programme. *Teacher Development*, 24(1), 88-107.
<https://doi.org/10.1080/13664530.2019.1693421>
- Wyatt, M. (2011). Teachers researching their own practice. *ELT Journal*, 65(4), 417-425. <https://doi.org/10.1093/elt/ccq074>
- Yıldırım, A., & Şimşek, H. (2021). *Sosyal bilimlerde nitel araştırma yöntemleri* (12th ed.). Seçkin Yayıncılık.
- Yükseköğretim Kurulu (YÖK). (2024). *İngilizce öğretmenliği lisans programı*.
https://eski.yok.gov.tr/Documents/Kurumsal/egitim_ogretim_dairesi/Yeni-Ogretmen-Yetistirme-Lisans-Programlari/Ingilizce_Ogretmenligi_Lisans_Programi.pdf
- Zeichner, K. M., & Noffke, S. E. (2001). Practitioner research. In V. Richardson (Ed.), *Handbook of research on teaching*. (pp. 298-332). American Educational Research Association.

Appendix A

Questionnaire for the Pre-service Teachers

ENGLISH LANGUAGE TEACHERS' VIEWS ON RESEARCH

This is an adapted version of Borg's (2009) questionnaire designed to investigate your conceptions and practices of research. The questionnaire will take 15–20 minutes to complete. Participation in this study is voluntary. All the information will solely be used for research purposes and will be kept strictly confidential. To further the data collected, participants are kindly invited to volunteer for an optional interview. Those interested can indicate their willingness at the end of the survey. Thank you for your interest in contributing.

SECTION 1: ABOUT YOURSELF

1. Which year of the ELT program are you in?

- ☐ 1st year
☐ 2nd year
☐ 3rd year
☐ 4th year

2. Professional certificates

- ☐ CELTA
☐ DELTA
☐ TESOL
☐ OTHERS _____
☐ None

3. Do you have any teaching experience

- ☐ Yes
☐ No

SECTION 2: SCENARIOS

This section aims to elicit your views on the kinds of activities that can be called research. There are no right or wrong answers. Read each description below and choose one answer to say to what extent you feel the activity described is an example of research.

1. A teacher noticed that an activity she used in class did not work well. She thought about this after the lesson and made some notes in her diary. She tried something different in her next lesson. This time, the activity was more successful.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

2. A teacher read about a new approach to teaching writing and decided to try it out in his class over a period of two weeks. He video-recorded some of his lessons and

collected samples of learners' written work. He analyzed this information then presented the results to his colleagues at a staff meeting.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

3. A teacher was doing an MA course. She read several books and articles about grammar teaching then wrote an essay of 6000 words in which she discussed the main points in those readings.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

4. A university lecturer gave a questionnaire about the use of computers in language teaching to 500 teachers. Statistics were used to analyze the questionnaires. The lecturer wrote an article about the work in an academic journal.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

5. Two teachers were both interested in discipline. They observed each other's lessons once a week for three months and made notes about how they controlled their classes. They discussed their notes and wrote a short article about what they learned for the newsletter of the National Language Teachers' Association.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

6. To find out which of two methods for teaching vocabulary was more effective, a teacher first tested two classes. Then, for four weeks, she taught vocabulary to each class using a different method. After that she tested both groups again and compared the results to the first test. She decided to use the method which worked best in her own teaching.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

7. A headmaster met every teacher individually and asked them about their working conditions. The head made notes about the teachers' answers. He used his notes to write a report which he submitted to the Ministry of Education.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

8. Mid-way through a course, a teacher gave a class of 30 students a feedback form. The next day, five students handed in their completed forms. The teacher read these and used the information to decide what to do in the second part of the course.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
---	---	---	---

9. A teacher trainer asked his trainees to write an essay about ways of motivating teenage learners of English. After reading the assignments the trainer decided to write an article on the trainees' ideas about motivation. He submitted his article to a professional journal.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
---	---	---	---

10. The Head of the English department wanted to know what teachers thought of the new course book. She gave all teachers a questionnaire to complete, studied their responses, then presented the results at a staff meeting.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
---	---	---	---

SECTION 3: CHARACTERISTICS OF GOOD QUALITY RESEARCH

Here is a list of characteristics that research may have. Tick ONE box for each to give your opinion about its importance in making a piece of research 'good.'

		Unimportant	Moderately important	Unsure	Important	Very important
1.	A large number of people are studied					
2.	A large volume of information is collected					
3.	Experiments are used					
4.	Hypotheses are tested					
5.	Information is analyzed statistically					
6.	Questionnaires are used					

7.	The researcher is objective					
8.	The results apply to many ELT contexts					
9.	The results are made public					
10.	The results give teachers ideas they can use					
11.	Variables are controlled					

If there are any other characteristics which, in your opinion, a study must have for it to be called 'good' research, please list them here.

--

SECTION 4: READING RESEARCH

1. How frequently do you read published language teaching research? (Tick ONE)

☐ Never	☐ Rarely	☐ Sometimes	☐ Often
--------------------------------	---------------------------------	------------------------------------	--------------------------------

If you chose **Rarely** or **Never** go straight to **Question 4** in this section.

2. You said that you read published language teaching research **often** or **sometimes**. Which of the following do you read? (Tick all that apply)

- ☐ Books
- ☐ Academic journals (e.g., TESOL Quarterly)
- ☐ Professional Journals (e.g., ELT Journal)
- ☐ Professional magazines (e.g., ET Professional)
- ☐ Newsletters (e.g., IATEFL SIG Newsletters)
- ☐ Web-based sources of research
- ☐ Other (Please specify) _____

3. To what extent do you think the research you read would influence your teaching?

Choose ONE.

- ☐ It would have no influence on what I do in the classroom.
- ☐ It would have a slight influence on what I do in the classroom.
- ☐ It would have a moderate influence on what I do in the classroom.

- ☐ It would have a fairly strong influence on what I do in the classroom.
- ☐ It would have a strong influence on what I do in the classroom.

Please continue with **Section 5**

4. In question 1 of this section, you said that you read published research **rarely** or **never**. Here are some possible reasons for this.

Tick the ones that are true for you.

- ☐ I am not interested in research.
- ☐ I do not have time.
- ☐ I do not have access to books and journals.
- ☐ I find published research hard to understand.
- ☐ Published research does not give me practical advice for the classroom.
- ☐ Other reasons (Please specify) _____

SECTION 5: DOING RESEARCH

1. How frequently do you do research yourself? (Tick ONE)

☐ Never	☐ Rarely	☐ Sometimes	☐ Often
--------------------------------	---------------------------------	------------------------------------	--------------------------------

If you chose **Rarely** or **Never** go straight to **Question 3** in this section.

2. You said you do research **often** or **sometimes**. Below are a number of possible reasons for doing research. Tick the ones that are true for you.

I do research...

- ☐ as a part of a course I am studying on
- ☐ because I enjoy it
- ☐ because it is good for my professional development
- ☐ because it will help me get better job opportunities
- ☐ because my professors expect me to
- ☐ because other teachers can learn from the findings of my work
- ☐ to find better ways of teaching
- ☐ to solve problems in my teaching
- ☐ other reasons (Please specify) _____

3. You said that you do research **rarely** or **never**. Below are a number of possible reasons for not doing research. Tick the ones that are true for you.

I don't do research because...

- ☐ I do not know enough about research methods
- ☐ my job is to teach not to do research
- ☐ I do not have time to do research
- ☐ I am not interested in doing research
- ☐ I need someone to advise me, but no one is available
- ☐ most of my classmates do not do research
- ☐ I do not have access to the books and journals I need
- ☐ other reasons (Please specify) _____

Appendix B

Questionnaire for the Practicing EFL Teachers

ENGLISH LANGUAGE TEACHERS' VIEWS ON RESEARCH

Dear participant,

This is an adapted version of Borg's (2009) questionnaire designed to investigate your conceptions and practices of research. The questionnaire will take 15–20 minutes to complete. Participation in this study is voluntary. All the information will solely be used for research purposes and will be kept strictly confidential. To further the data collected, participants are kindly invited to volunteer for an optional interview. Those interested can indicate their willingness at the end of the survey.

Thank you for your interest in contributing.

SECTION 1: ABOUT YOURSELF

1. Years of experience as an English language teacher

- ☐ 0-4
- ☐ 5-9
- ☐ 10-14
- ☐ 15-19
- ☐ 20-24
- ☐ 25+

2. Academic Qualifications & the Field

- ☐ Bachelor's degree in _____
 - ☐ Master's degree in _____
 - ☐ Doctoral degree in _____

3. Professional certificates

- ☐ CELTA
 - ☐ DELTA
 - ☐ ICALT
 - ☐ TESOL
 - ☐ OTHERS _____

SECTION 2: SCENARIOS

This section aims to elicit your views on the kinds of activities that can be called research. There are no right or wrong answers. Read each description below and choose one answer to say to what extent you feel the activity described is an example of research.

1. A teacher noticed that an activity she used in class did not work well. She thought about this after the lesson and made some notes in her diary. She tried something different in her next lesson. This time, the activity was more successful.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

2. A teacher read about a new approach to teaching writing and decided to try it out in his class over a period of two weeks. He video-recorded some of his lessons and collected samples of learners' written work. He analyzed this information then presented the results to his colleagues at a staff meeting.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

3. A teacher was doing an MA course. She read several books and articles about grammar teaching then wrote an essay of 6000 words in which she discussed the main points in those readings.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

4. A university lecturer gave a questionnaire about the use of computers in language teaching to 500 teachers. Statistics were used to analyze the questionnaires. The lecturer wrote an article about the work in an academic journal.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

5. Two teachers were both interested in discipline. They observed each other's lessons once a week for three months and made notes about how they controlled their classes. They discussed their notes and wrote a short article about what they learned for the newsletter of the National Language Teachers' Association.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

6. To find out which of two methods for teaching vocabulary was more effective, a teacher first tested two classes. Then, for four weeks, she taught vocabulary to each class using a different method. After that she tested both groups again and compared the results to the first test. She decided to use the method which worked best in her own teaching.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
--	--	--	---

7. A headmaster met every teacher individually and asked them about their working conditions. The head made notes about the teachers' answers. He used his notes to write a report which he submitted to the Ministry of Education.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
---	---	---	---

8. Mid-way through a course, a teacher gave a class of 30 students a feedback form. The next day, five students handed in their completed forms. The teacher read these and used the information to decide what to do in the second part of the course.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
---	---	---	---

9. A teacher trainer asked his trainees to write an essay about ways of motivating teenage learners of English. After reading the assignments the trainer decided to write an article on the trainees' ideas about motivation. He submitted his article to a professional journal.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
---	---	---	---

10. The Head of the English department wanted to know what teachers thought of the new course book. She gave all teachers a questionnaire to complete, studied their responses, then presented the results at a staff meeting.

Definitely not research ☐	Probably not research ☐	Probably research ☐	Definitely research ☐
---	---	---	---

SECTION 3: CHARACTERISTICS OF GOOD QUALITY RESEARCH

Here is a list of characteristics that research may have. Tick ONE box for each to give your opinion about its importance in making a piece of research 'good.'

		Unimportant	Moderately important	Unsure	Important	Very important
1.	A large number of people are studied					
2.	A large volume of information is collected					
3.	Experiments are used					
4.	Hypotheses are tested					

5.	Information is analyzed statistically					
6.	Questionnaires are used					
7.	The researcher is objective					
8.	The results apply to many ELT contexts					
9.	The results are made public					
10.	The results give teachers ideas they can use					
11.	Variables are controlled					

If there are any other characteristics which, in your opinion, a study must have for it to be called 'good' research, please list them here.

--

SECTION 4: READING RESEARCH

1. How frequently do you read published language teaching research? (Tick ONE)

☐ Never	☐ Rarely	☐ Sometimes	☐ Often
--------------------------------	---------------------------------	------------------------------------	--------------------------------

If you chose **Rarely** or **Never** go straight to **Question 4** in this section.

2. You said that you read published language teaching research **often** or **sometimes**. Which of the following do you read? (Tick all that apply)

- ☐ Books
- ☐ Academic journals (e.g., TESOL Quarterly)
- ☐ Professional Journals (e.g., ELT Journal)
- ☐ Professional magazines (e.g., ET Professional)
- ☐ Newsletters (e.g., IATEFL SIG Newsletters)
- ☐ Web-based sources of research
- ☐ Other (Please specify) _____

3. To what extent does the research you read influence your teaching?
Choose ONE.

- ☐ It has no influence on what I do in the classroom.
- ☐ It has a slight influence on what I do in the classroom.
- ☐ It has a moderate influence on what I do in the classroom.
- ☐ It has a fairly strong influence on what I do in the classroom.
- ☐ It has a strong influence on what I do in the classroom.

Please continue with **Section 5**

4. In question 1 of this section, you said that you read published research **rarely** or **never**. Here are some possible reasons for this.

Tick the ones that are true for you.

- ☐ I am not interested in research.
- ☐ I do not have time.
- ☐ I do not have access to books and journals.
- ☐ I find published research hard to understand.
- ☐ Published research does not give me practical advice for the classroom.
- ☐ Other reasons (Please specify) _____

SECTION 5: DOING RESEARCH

1. How frequently do you do research yourself? (Tick ONE)

☐ Never	☐ Rarely	☐ Sometimes	☐ Often
--------------------------------	---------------------------------	------------------------------------	--------------------------------

If you chose **Rarely** or **Never** go straight to **Question 3** in this section.

2. You said you do research **often** or **sometimes**. Below are a number of possible reasons for doing research. Tick the ones that are true for you.

I do research...

- ☐ as a part of a course, I am studying on
- ☐ because I enjoy it
- ☐ because it is good for my professional development
- ☐ because it will help me get a promotion
- ☐ because my employer expects me to
- ☐ because other teachers can learn from the findings of my work
- ☐ to contribute to the improvement of the school generally
- ☐ to find better ways of teaching
- ☐ to solve problems in my teaching
- ☐ other reasons (Please specify) _____

3. You said that you do research **rarely** or **never**. Below are a number of possible reasons for not doing research. Tick the ones that are true for you.

I don't do research because...

- ☐ I do not know enough about research methods
- ☐ my job is to teach not to do research
- ☐ I do not have time to do research
- ☐ my employer discourages it
- ☐ I am not interested in doing research
- ☐ I need someone to advise me, but no one is available
- ☐ most of my colleagues do not do research
- ☐ I do not have access to the books and journals I need
- ☐ the learners would not cooperate if I did research in class
- ☐ other teachers would not cooperate if I asked for their help
- ☐ other reasons (Please specify) _____

Appendix C

Interview Questions

Interview questions for pre-service teachers

1. Can you tell me about your background, both as a teacher and as a researcher?
2. What comes to your mind when we say research?
3. What are the features of good quality research for you?
4. How often do you read research? Why?
5. How often do you do research? Why?

Interview questions for practicing teachers

1. Can you tell me about your background, both as a teacher and as a researcher?
2. What comes to your mind when we say research?
3. What are the features of good quality research for you?
4. How often do you read research? Why?
5. How often do you do research? Why?

Appendix D

Consent Form for Research Participation

Study Title

Pre-service and Practicing EFL Teachers' Conceptions of and Engagement in Research

Researcher: Hilal Sarıkaya Arslantaş

Supervisor: Asst. Prof. Dr. Tijen Akşit

Purpose: The aim of this study is to explore and understand pre-service and practicing EFL teachers' conceptions and practices regarding research at a state university in Türkiye. The extent to which pre-service and in-service EFL teachers read and conduct research, and the reasons behind them, are the focus of the present research.

Procedures

Participation: In order to participate in this study, you must be at least 18 years old. If you choose to participate, you will be asked to complete a questionnaire and may be invited to participate in an interview. The survey will take approximately 15-20 minutes, and the interview, if applicable, will last about 30-45 minutes.

Voluntary Participation: Your participation is entirely voluntary, and you may withdraw from the study at any time without consequences. You may choose not to answer specific questions or to stop participating at any time.

Risks and Benefits

Risks: There are no known risks involved in this study.

Benefits: This data will help the researcher identify pre-service and practicing EFL teachers' conceptions and practices of research.

Confidentiality: The responses to the questionnaire, interview, and any other information (including personal information) will be kept confidential. The data will be stored securely

Questions: If you have any questions regarding this study, feel free to contact the researcher at the given e-mail address and phone number.

I have read the information about the research project, and the purpose of the research project has been explained to me.

I understand and agree to participate.

- I understand the purpose of the research project and my involvement in it.
- I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future.
- I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential.
- I understand that I may contact the researcher or supervisor if I require further information about the research.
- I understand that the researcher will record interviews and spoken tasks.
- I am over 18 years old.

Signed (participant)

Appendix E

Themes Used for the First and Second Rounds of Coding

Below are the main and subcategories of coding. The themes in white boxes are pre-determined themes, while the gray boxes represent emerging themes.

