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Department of Foreign Language Education

English Language Teaching Program

AN INVESTIGATION INTO FORMATIVE ASSESSMENT LITERACY OF PRE-SERVICE  
AND IN-SERVICE EFL TEACHERS

Mustafa SIRAKAYA

Master's Thesis

Ankara, 2024

With leadership, research, innovation, high quality education and change,

*To the leading edge... Toward being the best...*



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İNGİLİZCE ÖĞRETMENLERİNİN VE ÖĞRETMEN ADAYLARININ BİÇİMLENDİRİCİ  
DEĞERLENDİRME OKURYAZARLIKLARININ İNCELENMESİ

Mustafa SIRAKAYA

Master's Thesis

Ankara, 2024

### Acceptance and Approval

To the Graduate School of Educational Sciences,

This thesis prepared by **MUSTAFA SIRAKAYA** and entitled “An Investigation into Formative Assessment Literacy of Pre-Service and In-Service EFL Teachers” has been approved as a thesis for the Degree of **Master** in the **Program of English Language Teaching** in the **Department of Foreign Language Education** by the members of the Examining Committee.

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## Abstract

Recently, there has been a growing interest in the study of Formative assessment (FA) in teaching English as a foreign language (EFL). Several attempts have been made to examine the FA strategies used by language teachers from various backgrounds as well as their effect on the language teaching process. However, previous studies have overlooked the Turkish EFL teachers' Formative assessment literacy (FAL) levels owing to the difficulty in finding a reliable scale for the measurement and the predominant state of summative assessment (SA). With this respect, this study aims to achieve a broader understanding of FAL levels of both pre-service and in-service teachers touching upon variables such as gender, age, teaching experience, department of graduation, and postgraduate education for in-service teachers, and year of study for pre-service teachers. A mixed methods research methodology with an explanatory sequential design was adopted in this study. For the quantitative phase, 75 EFL instructors and 154 EFL 3<sup>rd</sup> and 4<sup>th</sup> grade students from different universities were contacted to fill in the validated FAL scale from the work of Yan and Pastore (2022). For the qualitative part, 5 instructors and 6 pre-service teachers were invited for semi-structured interviews. The findings indicate that in-service teachers demonstrate higher FAL levels compared to pre-service teachers. Furthermore, in comparison to their counterparts, in-service teachers aged 51 and above and teachers with a work experience over 31 years showed a slightly reduced level of FAL. The findings also underscore the necessity for enhanced pre-service training to improve FA implementation.

**Keywords:** language assessment, formative assessment, assessment literacy, assessment for learning, efl teachers

## Öz

Son zamanlarda, İngilizceyi yabancı dil olarak öğretmede biçimlendirici değerlendirme (BD) çalışmasına artan bir yönelim olmuştur. Çeşitli çalışma deneyimine sahip dil öğretmenleri tarafından kullanılan stratejilerini ve bunların dil öğretim süreci üzerindeki etkilerini incelemek için çalışmalar yapılmıştır. Ancak, önceki araştırmalar, ölçüm için güvenilir bir ölçek bulmanın zorluğu ve özetleyici değerlendirmenin baskın durumu nedeniyle Türk İngilizce öğretmenlerinin biçimlendirici değerlendirme okuryazarlığı düzeylerini göz ardı etmiştir. Bu bağlamda, bu çalışma, cinsiyet, yaş, öğretmenlik deneyimi, mezun olunan bölüm ve lisansüstü eğitim gibi değişkenlere göre karşılaştırmalar yaparak İngilizce öğretmen adaylarının hem de İngilizce öğretmenlerinin biçimlendirici değerlendirme okuryazarlığı (BDO) düzeylerinin daha geniş bir şekilde anlaşılmasını amaçlamaktadır. Bu çalışmada açıklayıcı sıralı tasarıma sahip karma yöntem araştırma yöntemi benimsenmiştir. Nicel aşama için, Yan ve Pastore'nin (2022) çalışmasından elde edilen biçimlendirici değerlendirme okuryazarlığı ölçeğini doldurmaları için farklı üniversitelerden 75 İngilizce öğretmeni ve 154 İngilizce öğretmenliği 3. ve 4. sınıf öğrencileri çalışmaya katılmıştır. Nitel kısım için, 5 İngilizce öğretmeni ve 6 öğretmen adayı yarı yapılandırılmış görüşmelere davet edilmiştir. Sonuçlara bakıldığında İngilizce öğretmenleri, öğretmen adaylarına göre daha iyi bir BDO düzeyi göstermiştir. Ayrıca, İngilizce öğretmenleri içerisinde 51 yaş ve üzeri öğretmenler ile 31 yıl ve daha fazla mesleki deneyime sahip olanlar diğer gruplara göre daha düşük bir BDO seviyesine sahiptir. Bulgular ayrıca, BD uygulamasını iyileştirmek için öğretmen yetiştirme programlarının geliştirilmesinin gerekliliğinin vurgulamakta ve hem öğretmenler hem de öğretmen adayları için planlanmış eğitim programlarının önemini göstermektedir.

**Anahtar sözcükler:** biçimlendirici değerlendirme, yabancı dilde değerlendirme, ölçme ve değerlendirme okur-yazarlığı, İngilizce öğretmenleri, öğrenme için değerlendirme

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## Table of Contents

Abstract .....	iii
Öz.....	iv
Acknowledgements .....	v
List of Tables .....	viii
List of Figures.....	x
Symbols and Abbreviations .....	xi
Chapter 1 Introduction.....	1
Background of the Study.....	1
Statement of the Problem .....	3
Aim and Significance of the Study.....	5
Research Questions.....	5
Assumptions .....	6
Limitations.....	7
Definitions .....	7
Chapter 2 Theoretical Basis of Research and Literature Review .....	9
An Overview of Assessment .....	9
Studies on Formative Assessment Abroad .....	11
Studies on Formative Assessment in Turkey .....	22
Chapter 3 Methodology .....	29
Research Design.....	29
Participants .....	31
Data Collection.....	34
Instruments .....	35
Data Analysis .....	36
Chapter 4 Findings, Comments and Discussion.....	40
Findings .....	40



What Is the FAL Level of In-service EFL Teachers?.....	41
What is the FAL Level of Pre-service EFL Teachers?.....	49
Is There any Significant Difference between 3rd and 4th-grade Students in Terms of the FAL Level? .....	50
Semi-structured Interviews.....	52
Discussion.....	61
Chapter 5 Conclusion and Suggestions .....	66
Conclusion .....	66
Summary of the study .....	66
Pedagogical Implications .....	66
Limitations and Suggestions for Further Research .....	67
References .....	70
APPENDIX-A: Teacher Formative Assessment Literacy Scale (In-service Teachers) .....	15
APPENDIX-B: Teacher Formative Assessment Literacy Scale (Pre-service Teachers) .....	17
APPENDIX-C: Consent of the Scale Developers for the Use of TFALS.....	19
APPENDIX-D: Interview Questions (In-service Teachers) .....	20
APPENDIX-E: Interview Questions (In-service Teachers) .....	21
APPENDIX-F: Ethics Committee Exemption Form / Ethics Committee Approval.	22
APPENDIX-G: Declaration of Ethical Conduct .....	23
APPENDIX-H: Thesis/Dissertation Originality Report .....	24
APPENDIX-I: Yayınlanma ve Fikrî Mülkiyet Hakları Beyanı .....	25

## List of Tables

<b>Table 1</b> <i>Justifications for Using Mixed Method (Bryman, 2006)</i> .....	30
<b>Table 2</b> <i>Participant Profile</i> .....	32
<b>Table 3</b> <i>In-service Teachers by Age, Work Experience, Department of Graduation and Postgraduate Education</i> .....	33
<b>Table 4</b> <i>Pre-service Teachers by Grade</i> .....	34
<b>Table 5</b> <i>Reliability of the Scale</i> .....	36
<b>Table 6</b> <i>Normality Test</i> .....	37
<b>Table 7</b> <i>FAL Level of In-service Teachers</i> .....	41
<b>Table 8</b> <i>FAL Level of In-service Teachers by Gender</i> .....	42
<b>Table 9</b> <i>Independent Samples T-test of Gender and FAL</i> .....	42
<b>Table 10</b> <i>Homogeneity Test of Variances by Age</i> .....	43
<b>Table 11</b> <i>One-way ANOVA Results of Age and FAL</i> .....	43
<b>Table 12</b> <i>Post Hoc Analysis of Age and FAL</i> .....	44
<b>Table 13</b> <i>Homogeneity Test of Variances by Work Experience</i> .....	45
<b>Table 14</b> <i>One-way ANOVA Results of Work Experience and FAL</i> .....	45
<b>Table 15</b> <i>Post Hoc Analysis of Work Experience and FAL</i> .....	46
<b>Table 16</b> <i>FAL Level of In-service Teachers by Department of Graduation</i> .....	47
<b>Table 17</b> <i>Independent Samples T-test of Department of Graduation and FAL</i> ....	47
<b>Table 18</b> <i>Homogeneity of Variances by Postgraduate Education</i> .....	48
<b>Table 19</b> <i>One-way ANOVA Results of Postgraduate Education and FAL</i> .....	48
<b>Table 20</b> <i>FAL Level of Pre-service Teachers</i> .....	49
<b>Table 21</b> <i>FAL Level of 3rd Grade Students</i> .....	49
<b>Table 22</b> <i>FAL Level of 4th-grade Students</i> .....	50
<b>Table 23</b> <i>Independent Samples T-test of 3<sup>rd</sup> Grade and 4<sup>th</sup> Grade Students</i> .....	50
<b>Table 24</b> <i>Mean Scores of Pre-service and In-service Teachers</i> .....	51
<b>Table 25</b> <i>Independent Samples T-test of Pre-service and In-service Teachers</i> ...	51
<b>Table 26</b> <i>In-service Teachers' Definition of FA</i> .....	53
<b>Table 27</b> <i>Pre-service Teachers' Definition of FA</i> .....	53
<b>Table 28</b> <i>In-service Teachers' Views on Effectiveness of FA</i> .....	54
<b>Table 29</b> <i>Pre-service Teachers' Views on Effectiveness of FA</i> .....	55
<b>Table 30</b> <i>In-service Teachers' Task Types</i> .....	56
<b>Table 31</b> <i>Pre-service Teachers' Task Types</i> .....	58

<b>Table 32</b> <i>Socioemotional Dimension of FA of In-service Teachers</i> .....	59
<b>Table 33</b> <i>Socioemotional Dimension of FA of Pre-service Teachers</i> .....	60

## List of Figures

<b>Figure 1</b> <i>Testing, Measurement, Assessment and Evaluation</i> .....	10
<b>Figure 2</b> <i>Explanatory Sequential Design</i> .....	31
<b>Figure 3</b> <i>Six Steps of Thematic Analysis</i> .....	38

## **Symbols and Abbreviations**

**AL:** Assessment Literacy

**CEFR:** Common European Framework of Reference

**EFL:** English as a Foreign Language

**ELT:** English Language Teaching

**ELTE:** English Language Testing and Evaluation

**FA:** Formative Assessment

**FAL:** Formative Assessment Literacy

**LAL:** Language Assessment Literacy

**MoNE:** Ministry of National Education

**SPSS:** Statistical Package for the Social Sciences

## **Chapter 1**

### **Introduction**

The primary purpose of this initial chapter is to comprehensively present and elucidate various aspects integral to the research. It includes the detailed description of the background information that establishes the context of the study, the precise formulation of the problem, and an explicit statement of main goals and their relevance to the larger field of study. Furthermore, the chapter elaborates on the research questions that will direct the investigation, clarifies the underlying assumptions that form the research framework, recognizes and addresses the study's limitations, and provides clear definitions for terms that are crucial for a precise comprehension of the discussion that follows. Lastly, this chapter provides readers with a comprehensive overview of the scope and contextual framework, acting as a basic road map.

### **Background of the Study**

In the ever-evolving landscape of education, testing and assessment can be regarded as fundamental and inseparable aspects of educational practices, notably in the field of language education (Alderson, 2005; Davison & Leung, 2009a; Hatipoğlu, 2017; Popham, 2006; Stiggins, 2008). Despite being used interchangeably by mistake (Clapham & Carson, 1997; Ioannou-Georgiou & Pavlou, 2003), it is essential to understand that these concepts do not always refer to the same processes. Testing can be explained as “a method of measuring a person’s ability, knowledge or performance in a given domain at the conclusion of a period of instruction.” (Brown, 2006, p.3). On the other hand, the concept of assessment considered an overarching and broader term than testing (Brown, 2006; Joan, 1994; Kunnan, 2004; Purpura, 2016) refers to the ongoing process of gathering information about student learning in a period (Brown, 2006). More specifically, Leung and Lewkowicz (2006) highlighted that assessment is an umbrella term for any means to measure student

achievement; however, testing is only one specific type of assessment. In addition, assessment has been emphasized by its feature of promoting instructional practices (Black & William, 1998; Inbar-Lourie, 2008; Nitko & Brookhart, 2011; Rea-Dickins, 2004) through informing educators and students about the extent of student learning obtained by a variety of methods other than tests. In this respect, the Common European Framework of Reference (CEFR) (2001), an exceptionally legitimate foundation for standardized language syllabuses, curriculum guidelines, and examinations, underlines that assessment procedures may take several forms depending on the type of assessment. From this perspective, CEFR (2001) also illustrates 13 contrasting categories of assessment types, one of which can be represented as formative and summative assessment (p.183). The summative assessment, referred to as the *assessment of learning* (Stiggins, 2002), could be defined as the method of gathering information to identify overall student learning, typically at the end of the instruction (Cheng & Fox, 2017; Dolin et al., 2018). On the other hand, in the renowned book of Andrade and Cizek (2010), formative assessment is described as “the collaborative processes [...] for the purpose of understanding the students’ learning [...] a source of information that teachers can use in instructional planning and students can use in deepening their understandings and improving their achievement.”(p.6-7). Moreover, there is a growing body of literature that recognizes the importance of FA in education (Bennett, 2011; Black et al., 2004; Heritage, 2007; Hunt & Pellegrino, 2002; Gan & Leung, 2019; Inbar-Louri, 2008; Ruiz-Primo, 2011).

Correspondingly, why learning evidence is found to be crucial in terms of FA was also stressed since the teaching process must be tailored to the needs of students (William & Thompson, 2008). Recent trends in FA have led to a proliferation of studies that put an emphasis on pre-service and in-service teachers’ knowledge, literacy, and effective use of FA in their classrooms (Golzar et al., 2022; Gu & Lam, 2023; McCallum & Milner, 2021; Lee et al., 2020; Li et al., 2023; Li & Gu, 2023; Rahman et al., 2021; Wylie, 2020; Xie & Cui, 2021; Yan et al., 2023; Yan & King, 2023; Yan & Pastore, 2022). In this regard, Formative

Assessment Literacy (FAL) is termed as “an interrelated set of knowledge, skills, and dispositions that a teacher can use to design and implement appropriate, context-based assessments with an aim to promote learning and improve teaching.” (Yan & Pastore, 2022a, p.8). For the context of language education, FAL of pre-service and in-service language teachers’ may be considered pivotal for a sophisticated implementation of detecting learner needs and tailoring to-the-point instructional processes.

### **Statement of the Problem**

From a broader point of view, it is noteworthy to mention that a paradigm shift occurred regarding testing and assessment practices in language teaching, which resulted in an abundance of studies turning their axis towards a multidimensional language assessment practice rather than the mere use of language tests (Farhady, 2005; Purpura, 2016). As stated by Purpura (2016), instead of constructing traditionally appreciated tests with an overemphasis on summative assessment, teachers must be encouraged to utilize the means of FA in order for a better understanding of instructional gaps. Nevertheless, it would not be inaccurate to claim that language education in Turkey still suffers from overuse of single-shot examinations and traditional methods of summative assessment. Hatipoğlu (2010) characterized Turkish education system as exam-oriented since there are a number of high-stakes examinations that learners must participate in throughout their education. In other words, Şahin (2019) also stressed the traditional way of language assessment in Turkey underlining the factor that language teachers not only need to prepare instruments to check learners’ progress but also gradually monitor and lead the way for better learning through providing effective feedback. Furthermore, Somuncu (2021) asserted that in spite of the domination of wide-ranging testing to document student accomplishment, there is a growing body of research that encompasses the formative aspect of the assessment process. In this sense, there are a few studies related to the significance of the FA practices of Turkish EFL teachers (e.g. Büyükkarcı, 2010; Hotaman, 2020; Karaman, 2021; Konkur, 2013; Ozan, 2018; Ökten, 2009; Sarı, 2019; Solgun Günel, 2014; Sönmez & Çetinkaya,



2022; Uysal Kurtulmuş, 2018; Uzun & Ertok, 2020) However, whether Turkish EFL teachers possess sufficient FAL levels or not still poses an undiscovered phenomenon.

In another aspect, assessment literacy (AL), first coined by Stiggins (1991) can briefly be defined as teachers' ability to develop high-quality assessment tasks that posit clear-cut criteria for student achievements. In the field of language education, according to Fulcher (2012), Language Assessment Literacy (LAL) refers to possessing the necessary knowledge, competencies, and capacities to create, enhance, manage, or appraise extensive standardized tests, as well as tests conducted within classrooms. This includes being acquainted with testing procedures, having a grasp of the fundamental principles and concepts that inform such practices, and being aware of the ethical considerations and standards of practice governing the field. It should be highlighted that the LAL of English teachers is of paramount importance for better achievement of language instruction (Hatipoğlu, 2010; Kömür, 2018; Sevimeş Şahin, 2019; Şahin, 2019; Yastibas & Takkac, 2018; Yetkin, 2015; Yastıbaş, 2018). Nevertheless, a few studies on the LAL level of Turkish EFL teachers uncovered that the LAL levels of Turkish EFL teachers are either moderate or low (Büyükkarcı, 2016; Hatipoğlu, 2015; Öz & Atay, 2017; Şahin, 2019) unlike a most recent study where the findings demonstrated that Turkish EFL teachers possess adequate level of LAL (Kaya & Mede, 2021). As an essential component of LAL, FAL may in similar terms be regarded as pivotal for language teachers. From all stated above, no study as far as the researcher knows has directly attempted to investigate the FAL levels of EFL teachers. To this end, FAL levels of pre-service and in-service teachers might be considered in urgent need of investigation to inform the developers of English Language Teaching Program and Testing and Evaluation (ELTE) courses for pre-service EFL teachers as well as the creators of training programs for in-service EFL teachers.

## **Aim and Significance of the Study**

As stated above, teachers must be assessment literate to be able to come up with some favorable insights into determining not only students' level of achievement yet developing the view of deficiencies in instructional processes and taking action accordingly.

Research in Turkey has explored Formative Assessment (FA) through teacher and student perceptions, its influence on student achievement, and within teacher cognition. However, to the best of the researcher's knowledge, there has been no direct investigation into FA as a literacy within the Turkish EFL context. Consequently, prior research has failed to adequately establish the levels of FAL among Turkish EFL teachers, leaving this aspect largely unexplored and unclear in the existing literature. From this perspective, the primary aim of the study is to gauge FAL levels of both pre-service and in-service teachers. Pre-service teachers can be defined as the 3<sup>rd</sup> and 4<sup>th</sup>-year students of English language teaching undergraduate programs in public universities. In-service teachers in this context account for the instructors who teach English at preparatory programs in public universities.

After the measurement of FAL levels of both teacher groups, the data will further be scrutinized through some essential variables such as age, gender, department of graduation, and postgraduate education for in-service teachers; year of study for pre-service teachers and make comparisons between groups of teachers. The secondary aim of the research is to find out if there is a significant relationship regarding FAL levels between the groups of teachers and the aforementioned variables and also find out what contributes to this consequence. By this way, what parts of formative assessment literacy must be improved would be unambiguous for ELT program developers and ELTE course syllabus designers as well as in-service teacher training programs.

## **Research Questions**

Numerous studies have explored the knowledge, skills, and utilization of formative assessment (FA) among English teachers. However, a gap exists in conclusive evidence

regarding the proficiency of pre-service and in-service English as a Foreign Language (EFL) teachers in formative assessment literacy (FAL). This knowledge gap highlights the necessity to ascertain the FAL levels of Turkish EFL teachers. This study aims to gain a deeper understanding of the FAL levels of pre-service and in-service teachers through a comparative analysis between the two groups, while also considering various variables related to in-service EFL teachers. As such, the following research questions are formulated to guide the study:

1. What is the formative assessment literacy level of in-service EFL teachers?
  - Does FAL level differ by gender?
  - Does FAL level differ by age?
  - Does FAL level differ by work experience?
  - Does FAL level differ by department of graduation?
  - Does FAL level differ by postgraduate education?
2. What is the formative assessment literacy level of pre-service EFL teachers?
  - What is the FAL level of 3rd-grade students?
  - What is the FAL level of 4th-grade students?
  - Is there any significant difference between 3rd and 4th-grade students in terms of the FAL level?
3. Is there any statistical difference between in-service and pre-service EFL teachers in terms of the FAL level?

As can be understood from the questions, the first set focuses on in-service EFL teachers, exploring potential variations in FAL levels based on gender, age, work experience, department of graduation, and postgraduate education. The second set of questions delves into the FAL levels of pre-service EFL teachers and the potential differences in FAL levels between 3rd and 4th-grade students. Lastly, the research seeks to identify any statistical differences in FAL levels between in-service and pre-service EFL teachers.

### **Assumptions**

Some assumptions were made prior to conducting the study. Firstly, as illustrated before, pre-service teachers represent the 3<sup>rd</sup>-year and 4<sup>th</sup>-year students in the department

of English Language teaching departments. Students from both groups undertake some practical courses, and 4<sup>th</sup>-year students take practicum (genuine teaching practice) at the schools. Thus, questions regarding the practical aspect of Formative assessment will not yield an unknown notion and pose a discrepancy between pre-service and in-service teachers. Secondly, teachers of both groups are considered to answer the questionnaire objectively and provide reliable information related to their demographic and performance-related questions.

### **Limitations**

In this study, EFL teachers working in public schools affiliated with the Ministry of National Education (MoNE) and EFL instructors working at private universities were not included in the sample. Besides, the sample size may not be comprised of EFL instructors from all public universities since it would be highly impractical and unattainable to reach out to all the public universities all around the country.

### **Definitions**

In the course of this research, certain terms will be recurrently utilized. Therefore, it is necessary to provide a clarification of these terms to make connections between the concepts and their significance for the study. With this aim, this particular part of the chapter is devoted to providing a basis for the comprehension of some key terms.

**Assessment:** Brown (2006) defines assessment as an ongoing process of a teacher's interpretations of student responses, comments, or utterances unceasingly

**Assessment Literacy (AL):** Teachers' ability to develop high-quality assessment tasks that posit clear-cut criteria for student achievements (Stiggins, 1991)

**Language Assessment Literacy (LAL):** Proficiency in creating, managing, or assessing extensive standardized tests, whether in traditional classroom settings or on a broader scale. Familiarity with the procedures involved in testing, along with a deep

understanding of the foundational principles and ethical considerations that inform such practices. (Fulcher, 2012).

**Formative Assessment (FA):** Formative assessment entails the cooperative procedures involved in comprehending students' learning and conceptual structures, recognizing their strengths, pinpointing areas of weakness, and identifying areas for enhancement. It serves as a valuable source of information for teachers to utilize in devising instructional strategies and planning. (Andrade & Cizek, 2009)

**Formative Assessment Literacy (FAL):** Formative assessment literacy refers to a cohesive combination of understanding, abilities, and attitudes that empower educators to develop and execute tailored assessments within specific contexts. These assessments are designed to enhance learning outcomes and refine teaching strategies. (Yan & Pastore, 2022a)

This section provides essential definitions for key terms repeatedly used in this research. The clarity offered aims to establish connections between these concepts and underscores their significance in the study, guiding readers through subsequent discussions.

## Chapter 2

### Theoretical Basis of Research and Literature Review

This chapter devoted to reflecting a review of the literature is subdivided into three sections. To begin with, an overview of the primary concepts related to assessment will be presented. Then, specific attention will be given to the studies of FA abroad and lastly, a brief analysis of the studies of FA in Turkey will be provided.

#### An Overview of Assessment

As one of the pillars of education, assessment might be considered the backbone of effectively functioning curricula and instructional processes. Since the term assessment is associated with the concepts of testing, measurement, and evaluation, which occasionally engenders misuse, the definitions along with some distinctive features and overlapping aspects might be remarkable to be stated in the following paragraphs.

To start with, the concept of testing involves the specific actions of gathering information on student learning in various categories such as ability, knowledge, strengths, weaknesses (Hughes, 1989). In another words, testing can be defined as a process to measure a person's ability, comprehension, or performance in a particular area at the end of an instructional session (Brown, 2006). In addition, the term measurement involves the process of quantifying, assigning numbers or scores in line with the criteria (Adamos & Guzman, 2015). Furthermore, assessment and evaluation can be considered as more general and more global processes thereby seem to be more suitable for educational setting. Purpura (2016) defines assessment as structured process aimed at gathering both test-based and non-test-based data systematically to draw conclusions or assertions regarding specific language-related traits of an individual. In addition, Leung and Lewkowicz (2006) underlined that assessment can stand as an umbrella term for any means to measure student achievement; however, testing can be considered only one specific type of assessment.

Lastly, in a broader sense, evaluation can be defined as the process of developing a perspective on both the efficacy of the curriculum and the progress and achievement of individual students. Bachman (1990) stated that evaluation encompasses “the collection of reliable and relevant information” with the aim of making decisions on a given situation. Thus, it may cover all other three terms as the last element of the continuum. Figure 1 below illustrates the relationship among the terms and the place of evaluation.

### Figure 1

#### *Testing, Measurement, Assessment and Evaluation*



As a significant type of assessment, formative assessment entails the process of collecting information about the gap between what students know and what they should learn as well as the action taken by the teachers to identify the learning gaps and close them (Black & William, 1998). Moreover, in their oft-cited article, William and Thompson (2008) identified the building blocks of FA and suggested five key principles.

- “1. Clarifying and sharing learning intentions and criteria for success;
- 2.Engineering effective classroom discussions, questions, and learning tasks;
- 3.Providing feedback that moves learners forward;
- 4.Activating students as instructional resources for one another; and
- 5.Activating students as the owners of their own learning.” (p.15)

Along with the proliferation of the studies concerning FA, the term FAL commenced to gain popularity. FAL can briefly be defined as the set of knowledge and skills that teachers must have for an effective implementation of FA (Yan & Pastore, 2022). The literature proposes a scant number of research including FAL in contrary to FA. Thus, a revision of

the studies concerning FA in both abroad and Turkish context will be provided to depict a detailed image of FAL of teachers.

### **Studies on Formative Assessment Abroad**

In this part of the literature review, several FA studies conducted abroad are presented in a chronologically ascending way.

The study of Hunt and Pellegrino (2002) investigated the potential of FA to replace summative assessment in educational settings. The research design involves a qualitative approach. The findings suggest that FA, when integrated within instruction, can significantly enhance student learning and performance compared to traditional summative assessment practices. Students who engage with embedded FA activities demonstrate improved learning outcomes and performance in project-based learning activities. Furthermore, FA is emphasized by its potential to transform instructional practices and improve student learning experiences. It was concluded that embedding FA strategies within inquiry activities can increase student learning.

In another study, Leung (2004) delves into how FA of teachers functions within the context of classroom discussion to determine what this implies regarding student learning and teacher development. Employing a qualitative method, the research design highlights the significance of close-up examination of genuine classroom discourse and the co-constructed aspect of conversation in spoken language performance testing. The findings suggest that formative teacher assessment is a complicated and dependent process that may be affected by a number of variables, including the knowledge and beliefs of the teachers as well as the socially co-constructed structure of classroom discourse. The study emphasizes the necessity of revisiting and reshaping the inquiry into teacher assessment, taking into account theoretical and educational viewpoints that diverge from psychometrically oriented testing.



Furthermore, Nicol and Macfarlane-Dick (2006) investigate the role of FA and feedback in promoting self-regulated learning in educational settings. They use empirical data and theoretical frameworks to analyze data from multiple studies. The findings suggest that self-regulated learners are better at understanding and implementing internal and external feedback to achieve learning objectives. The study emphasizes the importance of self-assessment training in improving academic performance. It suggests empowering students to develop self-regulation skills through formative evaluation and feedback procedures, advocating for a shift from a feedback transmission model to one emphasizing student agency.

In addition, Heritage (2007) aims to explore the significance of FA in the classroom and its impact on student learning. The researcher emphasizes that FA plays a crucial role in addressing students' motivational beliefs and providing assistance within the Zone of Proximal Development (ZPD), thereby enhancing student achievement. Moreover, she highlights challenges such as educators' and administrators' lack of understanding of assessment concepts and the misconception that formative tests are additional burdens. The study underscores the importance of comprehensive training for educators and administrators in assessment principles to effectively integrate FA practices aligned with instructional objectives. This can be achieved by utilizing various sources of evidence, including student and peer assessments, to gain a comprehensive understanding of the learning process.

Moreover, Furthermore, Bennett (2011) conducts an analysis of diverse variables associated with FA and its potential impact on student achievement to explore the efficacy of FA. The methodology entails an extensive review of literature and empirical studies, thoroughly examining the correlation between FA, student achievement, and related constructs such as classroom self-efficacy and uncontrollable attributions. The study's findings suggest a nuanced and intricate relationship between FA and student achievement. While potential effects on student achievement are noted, the study emphasizes the

complexity of interpreting this relationship, lacking clear evidence of causality or specific impacts. Thus, it advocates for further research to clarify the cause-and-effect relationship between FA and student accomplishment.

From another point, the primary objective of Ruiz-Primo's (2011) study was to investigate how instructional dialogues serve as a type of informal FA to gauge students' learning. The study focused on incorporating assessment into classroom activities through the use of assessment conversations as a pedagogical method. The data collection process involved analyzing classroom interactions and the types of questions posed by both teachers and students. The results indicated that assessment conversations, when successful, can support students in thinking for themselves and promote self-regulation. The implications of the study underlined the significance of instructional dialogues and the quality of classroom interactions in enhancing student learning outcomes. The research emphasized the need for further exploration of the link between the quality of assessment conversations and student learning, providing valuable insights for educators and policymakers.

In addition, Kingston and Nash (2011) conducted a meta-analysis to examine the effectiveness of FA techniques in educational settings. The study encompassed various FA methods such as curriculum-embedded assessment, detailed student feedback, assessment discussions, and student reflection activities. Its aim was to investigate how these techniques influenced student learning outcomes. Employing a systematic review methodology, including peer-reviewed and non-reviewed literature, the meta-analysis revealed that FA interventions enhanced student learning outcomes, particularly when incorporating comprehensive feedback and FA practices. Additionally, the study emphasized the importance of considering the quality and frequency of FA activities when assessing their effectiveness.

Moreover, Moss et al. (2013) investigated the process by which school administrators acquire an understanding of FA, support teachers, and effectively coach

them in its implementation. Participants included school administrators and teachers, focusing on their interaction within the context of FA. Data, collected through observations, interviews, and document analysis, underwent thematic analysis to delineate administrators' evolution into formative leaders. Results underscore the necessity for principals to receive targeted professional development to enhance collaboration with teachers and improve classroom practices, impacting student achievement. The study emphasizes the pivotal role of principled leadership in realizing FA objectives and significantly influencing student outcomes.

In their study, Saito and Inoi (2017) investigated FA within the realm of teaching English to foreign or second language learners (EF/SL). Employing a mixed-methods approach, the study involved 727 Japanese EF/SL teachers. Results unveiled the intricate nature of human behavior in classroom assessment and underscored substantial cultural and contextual variations in the utilization of FA. Furthermore, the study highlighted the critical significance of acquiring a nuanced understanding of teachers' FA practices. It recommended taking into account contextual variables and individual variations in order to support efficient FA practices. As a reflection of teachers' assessment competency, the study also emphasized the importance of having explicit intentions and goals when implementing FA. The results provide insightful information for addressing the challenges of classroom assessment in EF/SL contexts and encouraging successful FA practices.

In addition, Xiao (2017) study investigated the use of FA in a test-dominated environment in Chinese high school classrooms. Data was collected for the study using a qualitative methodology through document analysis, interviews, and observation. The results showed that student follow-up activities, customized teacher-student conferences, and teacher explanations constitute effective formative strategies. The study further highlighted the significance of student involvement in assessments and the demand for student-centered and dialogic feedback. The results indicate that FA strategies can be

successfully incorporated into instructional practices, especially when it comes to student engagement and test follow-up activities.

In another study, an inventory was created by Khodabakhshzadeh et al. (2018) to evaluate the FA literacy and conceptions of EFL instructors. 302 Iranian EFL teachers participated in the study by answering a questionnaire. It was discovered that the inventory, which comprised both theoretical and practical knowledge, was reliable and valid. The results imply that the inventory can help EFL instructors become more conscious of their FA-related knowledge and activities, which will improve their comprehension and application of instructional strategies. This study provides insightful information about creating and verifying this kind of inventory.

Besides, Arrafii and Sumarni (2018) explored the understanding of FA among secondary school English teachers, assessing four dimensions—accountability goals, test-centric learning, procedural learning and assessment approaches, and student's passive role—using the Teacher Formative Assessment Literacy Questionnaire (TFALTQ). Variables like gender, major, education, assessment training, and teaching experience could influence teachers' assessment literacy. The study revealed a poor recognition of FA among teachers. Clear learning objectives, precise targets, suitable assessment techniques, and key elements like goal setting, assessment design, feedback, and teacher intervention were deemed crucial. The findings suggest tailored strategies to enhance teachers' grasp of FA, accounting for gender, major, education, and assessment training.

Moreover, Panadero et al. (2018) conducted a study investigating the interplay between FA and self-regulated learning (SRL), aiming to elucidate their relationship and offer insights into their current status, historical development, and potential future trajectories. Bridging gaps in understanding, the research showcases how advancements in student self-assessment can inform teaching strategies for promoting self-regulation. Through a narrative review methodology encompassing theoretical and empirical literature, the study underscores that effective FA empowers students to take ownership of their

learning, aligning with contemporary learning theories emphasizing students' central role in shaping their educational journey.

In addition, the aim of Prashanti and Ramnarayan (2019) was to provide ten maxims that show how FA can be used, understood, and valued more effectively. As part of the research methodology, an in-depth literature review was conducted to determine the fundamental concepts and best practices for FA. The results demonstrated the significance of FA in enhancing learning and the importance of an adjustment in the assessment culture in accordance with educational achievement. The findings emphasized how important formative evaluations are for encouraging a healthy learning environment and supporting ongoing development. The study concluded that it is essential for teachers to use FAs to improve instruction as well as provide students opportunities to improve continuously.

Furthermore, the study by Menéndez et al. (2019) investigated FA's function in the teaching-learning process. The study employed a qualitative methodology with the aim of comprehending the needs and interests of the students. At the Technical Educational Unit "Walter Francisco Andrade Ortiz" in Pedernales, a survey was carried out to increase awareness of the significance of formative evaluation. The results demonstrated how FA raised the overall level of the learning process and enhanced student performance. The study highlighted the dynamic nature of evaluation and its continuous application in guiding teaching and learning.

Besides, Gan and Leung's (2020) study investigated the use of FA in task-based language teaching (TBLT) in English as a Second Language (ESL) classrooms. The study concentrates on the difficulties that educators encounter when introducing FA into Hong Kong's intensely competitive, test-driven educational system. Teachers' acceptance of FA principles, student participation, promoting school leadership, and alignment with curriculum objectives and government policies constitute essential components of successful implementation. The study places a strong emphasis on the qualitative theory of

learning achievement as well as the value of feedback techniques that promote discussion and introspection.

In addition, Lee et al. (2020) conducted a systematic review of FA interventions within the K-12 education system in the United States. The research encompassed a meta-analysis of 33 studies aimed at identifying key features and their impact on learning outcomes. The findings revealed an overall mean effect size of 0.29, with slightly varied means across different subject categories. The study underscored the significance of student-initiated self-assessment and emphasized the necessity for proactive learning progressions. Highlighting the positive influence of FA interventions on student learning, the study's implications hold substantial importance for the development and implementation of effective FA interventions within educational contexts.

Further, the study by Wylie (2020) aimed to explore the utilization of observation protocols to bolster FA practices in educational environments. The study aimed to foster teacher self-reflection, assess the efficacy of professional development initiatives and assessment systems, and gauge the current status of FA integration. Results indicated that observation protocols positively influence teaching and learning, playing a crucial role in professional development and iterative improvement. Effective guidelines for observation were found to enhance the FA process and facilitate the professional growth of teachers.

In another study, McCallum and Milner (2021) aimed to assess the effectiveness of FA from both student perspectives and staff reflections. The study focused on staff reflections and student voice, using questionnaires to gauge the efficacy of frequent formative e-assessments. The results demonstrated how formative e-assessments enhanced study habits, self-monitoring, and student success. Technology-enabled methods had a positive impact on feedback procedures and student involvement as well. In order to improve work and feedback literacy, the study emphasized the significance of ongoing feedback and student interaction.

In addition, Luthfiyyah et al. (2021) investigated how Indonesian EFL teachers perceived FA enhanced by technology along with the way it is implemented in the classroom. Using a qualitative case study methodology, the study involved semi-structured interviews with three participants from various universities. The results demonstrated that although Indonesian EFL teachers usually had a positive view of technology-enhanced FA, socio-cultural variables made it difficult for them to put their knowledge into practice. The report also emphasized how technology can minimize burden, automate feedback, and accelerate the evaluation process. The study emphasizes how important it is for instructors to have additional training and assistance in order to better comprehend and apply FA techniques in higher education.

Moreover, the study by Luckritz Marquis (2021) investigates the connection between online learning scaffolding and FA. In order to promote adult learner engagement, it highlights the significance of carefully considered strategies for embedding FA and scaffolding. FA encourages lifelong learning, helps students with discipline-specific projects, and supports self-regulated learning. The study also emphasizes how FA fosters community and links among students. In general, the study offers guidance on how to use scaffolding and FA in online learning to increase learner engagement.

In their systematic review, Yan et al. (2021) discovered that the school environment, professional development, self-efficacy, educational innovations, and external policies all had a substantial impact on teachers' intents and implementations of FA. Teachers' implementation was also influenced by personal variables such as instrumental attitude, skill and ability, belief in teaching, and emotional attitude. To better understand teachers' intents and implementations, the study proposes an integrated method that takes into account environmental and personal elements.

Furthermore, Xie and Cui (2021) explored how FA was implemented in English writing classrooms during a teaching practicum in Hong Kong. Through the use of various case studies, the research examined three preservice teachers who attempted to implement

FA strategies. The results indicated that putting these techniques into action could be challenging, particularly when applying an examination-driven approach. The study also emphasized how mentoring influenced the teachers' experiences, showing how various mentoring beliefs affected the teachers' self-assurance and creativity. Given the challenges of using both traditional and innovative assessment methods in the classroom, the preservice educators were forced to choose between them. The study offers insightful information about the difficulties preservice teachers encounter when putting those strategies into practice.

Moreover, Rahman et al. (2021) carried out a qualitative study on the application of school-based assessment (SBA) in Bangladeshi secondary schools. Interviews for the study were conducted with students from twelve schools, head teachers, and English teachers. According to the report, teachers deal with issues like lack of training, severe workloads, time limits, and teacher-centric methods. The study underlined the necessity of professional training and practical solutions to deal with these issues and improve SBA implementation. The results highlight the importance of introducing SBA to educators and improving their understanding of FA methods through professional development.

In another study, Zou et al. (2021) analyzed how teachers employed online FA to assess EFL writing during China's COVID-19 pandemic. Purposeful sampling and a multifaceted description of teacher engagement and tactics were used in the study. It identified three categories of engagement—disturbing, auxiliary, and integral; impacted by contextual, technological, and individual factors. The results underscored the importance of comprehending how teachers engage in online FA, particularly in instances of emergency such as the pandemic, as well as taking the socio-technical position of teacher involvement into account.

In their prominent study, Yan and Pastore (2022a) aimed to develop and validate the Teacher Formative Assessment Literacy Scale (TFALS) in order to gauge teachers' FA literacy. The study included 585 instructors from Hong Kong and comprised 32



items covering the practical, conceptual, and socio-emotional dimensions. High validity and reliability were shown by the TFALS, and there were evident connections between the conceptual and practical components. From differential item functioning analyses across gender and educational levels, the study deduced generalizability validity. Through navigating the methodological gap, the TFALS offers a comprehensive picture of instructors' knowledge and proficiency in using FA procedures.

In another study, Yan and Pastore (2022b) endeavored to evaluate teachers' approaches to FA utilizing the Teacher Formative Assessment Practice Scale (TFAPS). Gathering data from 758 instructors in Italy and Hong Kong, the study examined the validity and reliability of TFAPS. The results indicated satisfactory levels of validity and reliability, with factor analysis revealing a two-component structure. Despite teachers maintaining a central role in FA practices, the study revealed a lack of improvement in supporting students' active engagement in the process.

Additionally, Fitriyah et al. (2022) investigated the differences between inexperienced and experienced EFL teachers' professional development needs and classroom-based language assessment literacy (CBLAL). The study discovered that inexperienced EFL teachers encountered difficulties in performing tasks related to educational measurement, including creating items and doing statistical computations on validity and reliability. They stated that in order to improve their evaluation procedures, they needed more CBLAL training. Employing alternative assessments that are appropriate for their students, experienced EFL teachers displayed an increased understanding of assessment theory and the way it integrates with language education.

Additionally, Golzar et al. (2022) conducted a study aimed at exploring the perceptions of Afghan English teachers and students regarding FA. Employing a comparative analysis approach, the research sought to delineate the disparities in perceptions between the two cohorts. The study comprised 91 teachers and 125 students, with data collection facilitated through a survey questionnaire developed based on prior

research. Four primary categories of FA emerged from the study: self-evaluation, interactive formal assessment, in-class diagnostic assessment, and subjective assessment. Both teachers and students expressed positive views regarding FA procedures, highlighting their efficacy in facilitating English language learning and fostering self-regulation among students.

In a separate study conducted by Li and Yongqi Gu (2023), the objective was to enhance the FA literacy of five English as a Foreign Language (EFL) teachers in Hebei, China, within their classroom settings. Through a collaborative action research approach spanning 12 weeks, the study incorporated observations, interviews, and document analysis. The findings illustrated a significant improvement in the assessment literacy and practices of the teachers, indicating a deeper understanding of FA principles and the implementation of more comprehensive assessment cycles. The effective utilization of the collaborative action research strategy enabled teachers to cultivate classroom-based FA literacy.

Yan and King's study (2023) investigated the phenomenon of social contagion regarding FA techniques among teachers in Hong Kong. The research involved a significant sample of 1,837 teachers from 122 primary schools. Using the Teacher Formative Assessment Practice Scale (TFAPS) and the Teacher's Conceptions and Practices of FA Questionnaire, the study evaluated teachers' practices and self-efficacy. Results revealed a potential expansion of FA practices among instructors through social contagion, as evidenced by the positive correlations observed between teachers' practices and both their own and their colleagues' self-efficacy levels.

Lastly, Li et al. (2023) carried out a study on a professional development program for 48 in-service primary teachers in Hong Kong. The training program contained lectures, discussions, group projects, and reflections on formative evaluation techniques. It continued for ten weeks with ten sessions. Professional learning communities were established by educators to assist one another in implementing FA. The approach greatly enhanced

instructors' FA literacy in all three domains—conceptual, practical, and socioemotional—according to the findings. Programs that incorporated reflection, theory-practice integration, and cooperative learning were found to be the most effective. The study draws the conclusion that professionally designed programs can address issues in the classroom and assist teachers in becoming more proficient in FA.

### **Studies on Formative Assessment in Turkey**

In this part of the literature review, studies related to FA in Turkey was represented in a chronologically ascending order.

Firstly, Ökten (2009) conducted a case study to explore whether FA has a considerable impact on students' language proficiency and views about learning in a foreign environment. Data were collected using interviews, reflection sheets and students' mid-term and final marks. The results demonstrated that FA improves students' motivation and self-efficacy by enabling them to monitor their progress and produce greater results. Additionally, it provides students decision-making experience, which enhances their motivation, self-awareness, and learning outcomes.

Moreover, Büyükkaracı (2010) sought to explore the influence of FA on students' test anxiety and assessment preferences. Employing both qualitative and quantitative methodologies, the study utilized an experimental design for the quantitative segment. Over a 14-week period, EFL students underwent FA treatment, supplemented by survey data obtained through the test anxiety inventory and assessment preference scale. Qualitative data collection involved the use of field notes, observations, and semi-structured interviews conducted before and after the treatment. The findings revealed that the group subjected to FA treatment exhibited reduced levels of test anxiety. Overall, the study underscored the significance of integrating FA into EFL contexts to mitigate test anxiety and accommodate students' assessment preferences, ultimately enhancing their learning experiences and outcomes.

In another study, Konkur (2013) attempts to cultivate a positive learning atmosphere in an EFL classroom through the integration of both summative and FA techniques. This case study utilized various data collection methods, including diaries, interviews, and observations. Results indicated that effective employment of FA played a pivotal role in establishing an optimal learning environment, both inside and outside the classroom. Additionally, the implications of the study underscored the importance of adopting a well-adjusted attitude to assessment, incorporating both formative and summative techniques to comprehend students' strengths and weaknesses, monitor their learning progress, and strategize for future improvements.

Furthermore, Solgun Günel (2014) examined the influence of FA on students' engagement within an English language program. Both qualitative and quantitative data were collected from the students enrolled in the program. Through a case study approach, it was observed that FA heightened students' awareness of their learning progress and facilitated active participation. The study also underscored the significance of peer assessment and interaction in shaping students' experiences, highlighting the importance of social engagement and peer evaluation in cultivating a participatory learning culture.

In her research, Gökçe (2014) explored how FA influences students' learning processes and academic performance. Engaging 100 EFL teachers from 39 schools in Turkey's Central Black Sea region, data were collected via a questionnaire. Contrary to summative assessment, FA was found to affect student motivation, learning processes, and academic achievement positively. The study advocates prioritizing FA methods to progress learning outcomes, transitioning from performance-driven to learning-focused objectives. Overall, the study underscores the pivotal role of FA in enhancing learning outcomes and fostering an optimal learning environment.

Moreover, Öz (2014) scrutinized the assessment procedures and preferences of Turkish teachers with regard to Assessment for Learning. 120 teachers from both public and private schools received the Assessment for Learning Questionnaire for Teachers as

part of the study. The results showed that teachers in private schools were more likely to provide scaffolding for their students. Facilities accessibility, social support, teacher evaluation literacy, teacher autonomy, and school responsibility were all factors that influenced AFL practices. The study emphasizes the necessity of comprehending AFL practices in Turkey on a more profound level.

Furthermore, Aydeniz and Doğan (2016) aimed to assess the pedagogical capacity of 53 final-year pre-service science teachers in Turkey regarding FA. Employing a mixed-methods approach, the study analyzed participants' ability to evaluate student answers, infer conceptual understanding, and make pedagogical decisions. Results revealed that while many could identify student errors, they struggled to elaborate on them or recognize strengths. Moreover, instructional strategies varied in effectiveness. The study suggests that engaging pre-service teachers in activities focusing on student reasoning could enhance their noticing skills and feedback quality. Overall, the research sheds light on the need for further development in pre-service science teachers' FA skills.

To investigate teachers' intentions and actions concerning FA, Karaman (2017) adapted the "Teachers' Conceptions and Practices of Formative Assessment Scale (TCPFS)," based on the Theory of Planned Behavior (TPB), to align with Turkish cultural contexts. Employing this modified TCPFS within the TPB framework, the study collected data from Turkish teachers. Results indicated that teachers' intentions to utilize FA were more effectively predicted by the TPB model than by their observed practices. Furthermore, teachers' self-efficacy exerted a stronger influence on their intentions than their instrumental approach did.

According to a study by Ozan and Kıncal (2018), FA dramatically increased students' academic success, self-regulation skills, and attitudes toward lessons. A variety of tools were employed in the study, such as observation questionnaires, attitude inventories, and performance tests. The significance of frequent assessment opportunities and prompt explicit feedback were also emphasized by the study. The results imply that

successful FA practices may have a favorable effect on students' attitudes, learning outcomes, and capacity for self-regulation in the classroom.

Additionally, Uysal Kurtulmuş (2018) conducted a comparative study on the viewpoints on FA among adult EFL students from Turkey and other countries. Data collection methods included interviews, handouts, student projects, and video recordings. Findings indicated differing perceptions regarding self and peer assessment, with a preference for self-assessment over peer assessment among students. Moreover, students tended to focus on their weaknesses rather than their strengths when receiving feedback. The study underscored the importance of teachers possessing pedagogical expertise, articulating learning objectives clearly, and delivering constructive feedback to facilitate effective FA practices.

Moreover, Can Daşkın and Hatipoğlu (2019) attempted to explore the informal aspect of FA within a second language (L2) context. The study sought to uncover instances of reference to past learning events (RPLEs) in L2 classroom interactions and their significance in informal FA utilizing Conversation Analysis (CA) as the research methodology. It was discovered that RPLEs occur when teachers spontaneously extend instructional activities to revisit earlier content, aiming to gauge student comprehension and address any gaps observed. This approach serves to enhance learning outcomes and tailor instruction based on student responses.

Furthermore, Sarı (2019) conducted action research to investigate how formative evaluation impacted the writing anxiety of EFL students. Three different essay types were integrated into the study, and both oral and written feedback were provided. The Second Language Writing Anxiety Inventory (SLWAI) was used to gather the data. The results demonstrated that students improved their writing skills and motivation to write a second time with the help of FA and the provision of feedback. The study also underlined the importance of offering feedback in order to improve writing skills.

In another study, Arda Özkan (2020) explored the attitudes, intentions, and practices of English as a Foreign Language (EFL) preparatory school instructors in Turkey towards FA were investigated. Employing a quantitative methodology, a questionnaire was utilized to gather demographic data. Findings revealed that instructors with theoretical knowledge of FA exhibited more favorable attitudes and perceptions towards its implementation. Additionally, peer assessment was generally well-received by students, though some reservations were noted. The study underscored the importance of teacher education and training in promoting the development of FA practices.

Moreover, Uzun and Ertok (2020) examined ELT students' views on exam-based and task-based approaches in education. The research compared the summative exam-based approach and the formative task-based approach. The findings showed that task-based approaches were perceived to be more beneficial for professional and personal development, critical and creative skills, and critical thinking. The study also highlighted the disadvantages of exam-based approaches, such as memorization and surface learning, and the need for responsibility-taking, planning, and creativity.

In the similar vein, Hotaman (2020) explored the impact of FA on the academic success levels of prospective teachers. The study group comprised 220 prospective teachers participating in a Teacher Training Course at a university in Turkey. Utilizing a mixed research approach, the study gathered data that was both qualitative and quantitative. The findings demonstrated that, in comparison to regular course instruction, FA techniques greatly enhanced students' academic progress. According to the study, including FA techniques into the teaching process can enhance the quality of instruction and learning results.

In addition, Karaman (2021) examined the impact of FA practices on student learning, focusing on factors related to achievement. According to a meta-analysis of 32 research that included American K–12 students, FA procedures have been shown to have a considerable positive impact on student learning. The study also discovered that the effect

sizes differed according to the formative feedback received, such as feedback from computers, teachers, and students. According to the results, FA interventions that incorporate feedback from many sources are essential for fostering student learning and the development of self-regulation abilities. The study emphasized the value of taking into account various forms of feedback and the active participation of students in effective FA procedures.

In an extensive investigation, Somuncu (2021) examined the cognitive processes of FA among pre-service language teachers, exploring the influences on its development and the role of sociocultural resources. This exploration was conducted within a comprehensive single-case study as part of a PhD dissertation, involving eight pre-service teachers. Data collection methods included reflective journals, interviews, and observations. From the analysis, three primary factors were identified as shaping FA cognition: previous language learning experiences, teacher education, and contextual elements. Notably, "teacher education" emerged as a significant influencer in FA cognition, highlighting its crucial role in shaping pre-service language teachers' comprehension of FA practices. The study's findings provide valuable pedagogical insights for L2 teacher education and the refinement of FA practices.

In another study, Sönmez and Çetinkaya (2022) inquired into the way FA techniques influenced the reading comprehension of fifty third graders from a Kocaeli, Turkey, and primary school. The research evaluated students' reading comprehension abilities using a variety of FA techniques, such as story maps, cloze tests, sentence verification, and retelling fluency. The findings demonstrated that regular evaluations and positive feedback were two FA techniques that greatly enhanced students' reading comprehension abilities. The study discovered, however, that the use of traditional approaches did not considerably raise students' accomplishment levels, underscoring the necessity of providing individualized instruction. The study emphasizes the value of FA in determining the requirements of students and enhancing instruction in light of individual differences.



Furthermore, a recent study by Torun and Bektaş (2023) on FA in Turkey found that FA generally leads to improvements in student learning and instruction quality. The research used thematic content analysis to examine 38 doctoral theses from the National Thesis Center of the Council of Higher Education in Turkey. The results demonstrated the importance of FA practices in shaping students' learning experiences as well as factors such as pedagogical knowledge, content knowledge, subject area knowledge, time, and experience affect teachers' use of FA components. Furthermore, the study underlined that the studies on FA in Turkey can be low in number. The research highlights the significance of integrating FA methods within educational environments to improve both student learning outcomes and the quality of instruction.

Overall, studies in Turkey have examined FA from various angles, including teacher and student perspectives, its impact on student success, and its integration into teacher cognition. However, as far as the researcher knows, there has not been a specific inquiry into FA as a form of literacy within the Turkish EFL domain. Consequently, prior research has not sufficiently determined the levels of FAL among Turkish EFL educators, leaving this area largely unexplored and ambiguous in the literature. Therefore, the primary objective of this study is to assess the FAL levels of both pre-service and in-service teachers.

## **Chapter 3**

### **Methodology**

This chapter focuses on the methodology utilized in this study. To assess the FAL levels of both pre-service and in-service EFL teachers, a mixed methods approach was employed to gain a comprehensive understanding of the subject matter. The subsequent sections will provide a rationale for selecting this methodology, outline the participant demographics, detail the data collection procedures, and conclude with an explanation of the data analysis process.

#### **Research Design**

As mentioned earlier, this study adopts a mixed-methods research approach with an explanatory sequential design. One significant advantage of employing a mixed method is its capacity to integrate both quantitative and qualitative methodologies. Consequently, using both approaches allows for a more thorough understanding of research issues compared to using either method in isolation. Additionally, this approach enables researchers not only to elucidate the relationship between variables but also to validate this relationship by merging qualitative and quantitative data (Fraenkel et al., 2012). Furthermore, another benefit of utilizing mixed methods is the removal of constraints imposed by solely relying on one method, thereby facilitating a comprehensive comprehension of the research problem (Creswell & Creswell, 2018). In other words, Teddlie and Tashakkori (2010) pointed out that mixed method studies are utilized for a better comprehension of social issues as well as creating opportunities for the implementation of practices for positive change.

Furthermore, there could be multiple justifications for conducting a mixed method study. To provide an example, Bryman (2006), building on the work of Greene et al. (1989), highlighted five reasons for combining qualitative and quantitative methodologies, as shown in the following table:

**Table 1***Justifications for Using Mixed Method (Bryman, 2006)*


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Triangulation	Bringing together, confirming, aligning, or comparing findings derived from various methodologies. In the context of coding triangulation, the focus was on validating connections between quantitative and qualitative data.
Complementarity	Seeks to expand upon, enrich, exemplify, or clarify the findings obtained from one method by comparing them with the results derived from another method. (Greene et al., 1989: 259)
Development	Aims to utilize the outcomes obtained from one method to guide the refinement or guidance of the other method, with "development" broadly encompassing aspects such as sampling procedures, implementation strategies, and decisions related to measurement.
Initiation	'Seeks the discovery of paradox and contradiction, new perspectives of [sic] frameworks, the recasting of questions or results from one method with questions or results from the other method' (Greene et al., 1989: 259).
Expansion	'Seeks to extend the breadth and range of enquiry by using different methods for different inquiry components' (Greene et al., 1989: 259).

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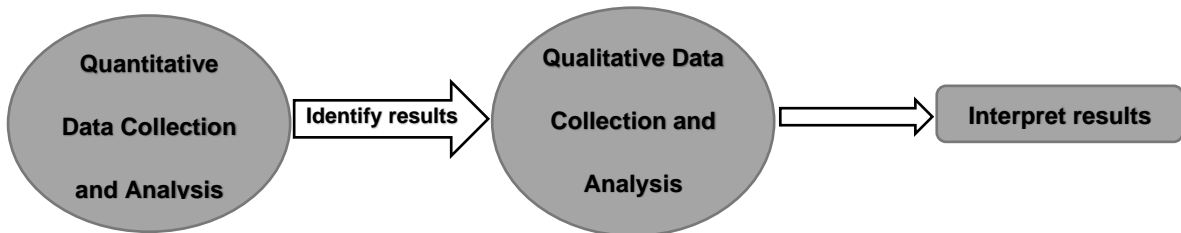
Of the justifications stated above, triangulation and complementarity can be considered the reason for the selection of mixed method for this study. From the researcher's point of view, quantitative data collected from pre-service and in-service teachers might remain ambiguous unless a further investigation regarding every dimension of FAL levels are conducted through a series of semi-structured interviews. Qualitative data elaborated on not only the selection of participants for qualitative phase but also the clarification and verification of the previous findings.

Furthermore, among mixed method designs, explanatory sequential design is employed in this study. Explanatory sequential design concerns a two-phase data collection

and analysis. Firstly, quantitative data were collected through a survey and results were analyzed. Then, based on the results obtained from the quantitative data, the qualitative part of the study was completed with the help of semi-structured interviews (See Figure 1).

**Figure 2**

*Explanatory Sequential Design*



The general aim of this design is to achieve an in-depth understanding of research questions with the support of quantitative data (Creswell & Creswell, 2018). Moreover, explanatory sequential design promotes the dominance of quantitative section as the collection of qualitative data is shaped through the information gleaned from quantitative section (Creswell & Creswell, 2018; Fraenkel et al., 2012)

### **Participants**

The data were collected from two groups of teachers: pre-service and in-service EFL teachers. The group of pre-service EFL teachers consists of 3rd and 4th-year students from universities located in various regions of Turkey. Since the students at their first two years may neither be familiar with the term formative assessment nor have an opportunity to practice in their teaching courses or practicum, only the 3<sup>rd</sup> and 4<sup>th</sup> year students were recruited for the study. Besides, it is worth stating that purposive sampling was utilized to choose the participants for the qualitative aspect as it enables the researcher to select the most suitable participants for further investigation based on the quantitative results. Furthermore, the same participants from the quantitative part took part in the qualitative section as well. To clarify this point in the method Creswell and Creswell (2018) claimed:

Another challenge is whether the qualitative sample should be individuals that are in the initial quantitative sample. The answer to this question should be that they are the same individuals because the intent of the design is to follow up the quantitative results and explore the results in more depth.  
(p.304)

**Table 2**

*Participant Profile*

	In-service	Pre-service	
Male	16	55	66
Female	59	99	139
Total	75	154	229
	32,8%	67,2%	100,0%

As can be pointed out in table 2, the number of pre-service teachers participating in the study was 154 (67,2%) for the quantitative section and 6 for the qualitative aspect. The second group of participants includes EFL instructors from diverse universities. The number of participants was 51 (32,8%) for the quantitative phase and 5 for the qualitative phase. The participants were selected through convenience sampling for the initial phase as the participation of the study was on a voluntary basis.

**Table 3**

*In-service Teachers by Age, Work Experience, Department of Graduation and Postgraduate Education*

		Frequency	Percent
<b>Age</b>	21-30	25	33,3
	31-40	19	25,3
	41-50	20	26,7
	51+	11	14,7
	Total	75	100%
<b>Work Experience</b>	Less than 3 years	11	14,7
	3-10	10	13,3
	11-20	34	45,3
	21-30	12	16,0
	31+	8	10,7
	Total	75	100%
<b>Department of Graduation</b>	English Language Teaching	61	81,3
	Other	14	18,7
	Total	75	100%
<b>Postgraduate Education</b>	No	9	12,0
	Master	31	41,3
	PhD	35	46,7
	Total	75	100%

As shown in the table 3, the age of participants was listed under 4 groups and most of the in-service teachers (33,3%) are between the ages of 21 and 30 followed by the ones aged between 41-50 (26,7%) and 31-40 (25,3). About work experience, more than a third of the respondents (45,3%) have 11 to 20 years of experience while 16% of the respondents indicated 21 to 30 years of experience. Only a minority of the participants (10,7%) have work experience more than 31 years. As to the department of graduation, a vast majority of the participants (81,3%) graduated from the department of English Language Teaching (ELT). Considering the last category under investigation, a parallel number of the respondents pursue Master's (41,3%) and Ph. D (46,7%) as postgraduate education while fewer than a quarter of the respondents (12%) stated no postgraduate education.

**Table 4***Pre-service Teachers by Grade*

	Frequency	Percent
3rd Grade	63	40,9
4th Grade	91	59,1
Total	154	100%

Table 4 displays the distribution of pre-service teachers regarding the year of study. It is apparent that the 4<sup>th</sup> grade students (59,1%) outnumber the 3<sup>rd</sup> grade students (40,9%).

**Data Collection**

Since this is a mixed-methods study, the data collection process will be two-fold. Quantitative data will be collected first. After the analysis of quantitative data and identification of results, qualitative data will be collected accordingly.

***Quantitative Data Collection***

As stated by Hopkins (2000), the main purpose of quantitative research is to find out the relation between dependent and independent variables. In this section, the Teacher Formative Assessment Literacy Scale (TFALS) consisting of 22 items by Yan & Pastore (2022) was employed as a tool for collecting quantitative data (See appendices A & B). Because of ethical concerns, the consent of the scale developer was sought and obtained (See appendix C). Moreover, for the study to be conducted in legal terms, ethical approval was obtained from the Ethical Committee of Hacettepe University. Upon the collection of ethical approval, demographic information section was inserted to the scale, and it was converted into a Google Forms questionnaire to be sent to the head of the departments in the universities to further be distributed to in-service and pre-service teachers. The data were compiled automatically on an Excel sheet and invalid responses were excluded.

***Qualitative Data Collection***

After the collection and analysis of quantitative data, the results were scrutinized in terms of the responses of each dimension in the scale along with the demographic

information. On a purposive sampling basis, participants representative of in-service teachers (N: 5) and pre-service teachers (N: 7) were invited for semi-structured interviews. The questions were prepared by the researcher and approval from the supervisor was granted (See appendices D & E). Prior to the application of each interview, the interviewees were asked what language they would feel comfortable using and based on their response, the language of the interview was determined. The reason behind this act was to eliminate the potential hindrance of language and make the participants feel more pleased to provide longer responses. Then, the data was recorded and transcribed before the analysis.

### **Instruments**

This study employed two distinct instruments for data collection to ensure a comprehensive investigation. The quantitative aspect utilized the Teacher Formative Assessment Literacy Scale (TFALS), providing structured and measurable insights. Subsequently, qualitative data were gathered through the implementation of semi-structured interviews, allowing for in-depth exploration and a profound understanding of participants' perspectives and experiences.

#### ***Teacher Formative Assessment Literacy Scale (TFALS)***

In the quantitative phase, TFALS validated in the work of Yan & Pastore (2022) based on the formative assessment theoretical model of Pastore and Andrade (2019) was utilized to obtain qualitative data. The scale is intended to measure FAL under 3 dimensions: conceptual, practical, and socio-emotional dimensions. After the implementation of expert opinions, and exploratory and confirmatory factor analyses, 22 close-ended items in total indicated acceptable validity. Besides, Cronbach's alpha for each dimension was calculated as 0.88, 0.88, 0.89 for conceptual, practical, and socio-emotional dimensions respectively in the original study. The 6-point Likert scale include numbers from 1 to 6 respectively are indicators of the following: Strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree. Questions for gender, age, teaching experience, graduation



department, and postgraduate education are asked and for pre-service teachers, gender, the university studied, and year of study are conveyed. Furthermore, table 8 shows the overall reliability of the scale as well as the following tables demonstrate the reliability of each dimension obtained from the dataset of this study.

**Table 5**

*Reliability of the Scale*

<b>Reliability Statistics</b>		
	Cronbach's Alpha	N of Items
Overall	,965	22
Conceptual	,932	7
Practical	,926	8
Socioemotional	,942	7

The data regarding the reliability of TFALS clearly shows that TFALS is a reliable scale to gauge the level of formative assessment literacy in the conceptual (0,94), Practical (0,93), and socioemotional (0,93) respectively. The Cronbach's Alpha value of the overall scale is 0,96 indicating that the scale represents high internal consistency within the data of this study.

***Semi-Structured Interviews***

The questions for semi-structured interviews were generated by the researcher based on the TFALS, sample group, and related literature. As in the TFALS, interview questions were prepared separately for pre-service and in-service teachers, and both include some questions related to personal information acting as warm-up questions. For the subsequent questions, TFALS design was taken as an example and the questions display more depth about the concepts and practices.

**Data Analysis**

This study is explanatory sequential mixed methods research. Therefore, two types of data were collected from the EFL teachers. First, the TFALS were implemented to obtain quantitative data. The data collected from the questionnaire were analyzed via SPSS 26

(Statistical Package for the Social Sciences) with the help of descriptive and inferential statistics. For the second part, qualitative data gathered through semi-structured interviews were analyzed with the help of thematic analysis.

### **Quantitative Data Analysis**

Data analysis for the quantitative section involved the tabulation of data to SPSS 26 and conduction of normality tests to ascertain the necessity of parametric or non-parametric tests for the analysis.

**Normality Tests:** In order to present the dataset by mean values and make comparisons between variables, the data must be assumed to be in a normal distribution (Mishra et al, 2019). In this way, normality tests might be applied to the data to ensure that appropriate type of statistical test for further analysis could be employed. If the dataset proves normal distribution, parametric tests could be run; otherwise, non-parametric test can be preferred for additional analysis. In this study, test of normality was achieved through the analysis of skewness and kurtosis values displayed in Table 6 below.

**Table 6**

#### *Normality Test*

		Statistic	Std. Error
FormativeAssessmentLiteracy	Mean	4,7672	,05684
	95% Confidence Interval for Mean		
	Lower Bound	4,6552	
	Upper Bound	4,8792	
	5% Trimmed Mean	4,8348	
	Median	5,0000	
	Variance	,740	
	Std. Deviation	,86015	
	Minimum	1,23	
	Maximum	6,00	
	Range	4,77	
	Interquartile Range	,95	
	Skewness	-1,319	,161
	Kurtosis	1,888	,320

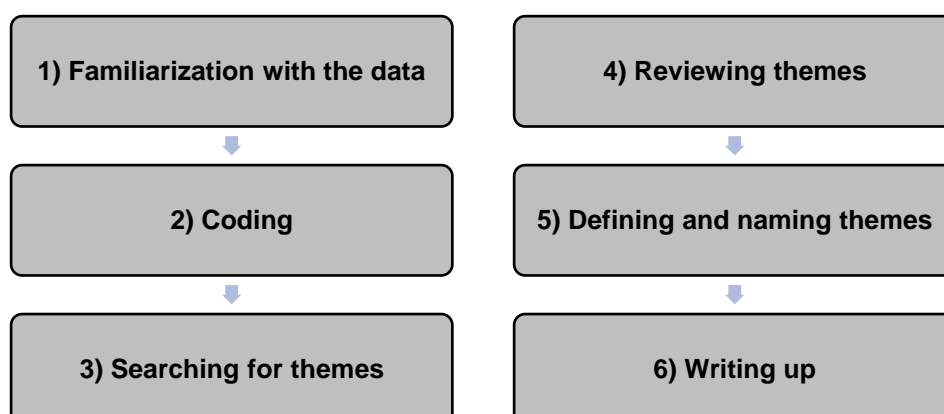
As can be inferred from the table 6, skewness and kurtosis values can be seen as -1,319 and 1,888 respectively, which may point out that the data shows a normal distribution according to George and Mallery (2010) who claim that values between -2 to +2 might be considered acceptable for normal distribution. Based on the analysis of normality, parametric tests determined to be utilized can be listed as independent samples t-test and one way ANOVA.

### ***Qualitative Data Analysis***

As previously mentioned, thematic analysis was employed to scrutinize the qualitative data acquired from semi-structured interviews for the second phase of the study. According to Clarke and Braun (2013), thematic analysis can be succinctly characterized as a technique for examining and recognizing patterns within qualitative data. Besides, the use of thematic analysis can be perceived as a quite flexible regarding the type of research question, the types of data, and various sample size (ibid.). In addition, upon characterizing thematic analysis as a recursive process, a six-step guideline is also provided by Braun and Clarke (2006) as shown figure 2 below:

### **Figure 3**

#### *Six Steps of Thematic Analysis*



It may seem feasible to conduct a comprehensive thematic analysis of the qualitative data using MaxQDA as the analysis program, adhering to the six phases outlined by Braun and Clarke (2006). MaxQDA is referred as a versatile qualitative data analysis software commonly utilized in empirical social research. The software excels in systematically indexing and automatically coding large volumes of text, making it applicable for diverse purposes (Kuckartz & Rädiker, 2019).

The initial phase was to gain familiarity with the data through repeatedly reviewing both textual and audio-recorded data. Subsequently, the coding phase involved generating concise labels for significant data features related to the overarching research question after the interview questions are merged under 4 broad questions in line with the TFALS. Following this, the active process of searching for themes began to obtain coherent and meaningful patterns within the data. The review of themes ensured that they effectively captured the essence of the coded extracts and the entire dataset. Defining and naming themes involved crafting a detailed analysis for each theme. In the final writing stage, the analytic narrative was skillfully blended with vibrant data extracts, providing context by linking the findings to existing literature.

## **Chapter 4**

### **Findings, Comments and Discussion**

The objective of this research is to analyze the levels of FAL among both pre-service and in-service EFL teachers. The study aims to gain insights into the current FAL of teachers and investigate potential differences based on various demographic factors, such as gender, age, professional experience, department of graduation, and postgraduate education for in-service teachers, as well as the year of study for pre-service teachers. The overarching aim is to promote the improvement of ELT programs and to guide the development of effective training initiatives for both pre-service and in-service EFL teachers, ultimately aiming to enhance formative assessment practices within language education.

The study employs a mixed-methods approach, utilizing a structured questionnaire to quantitatively assess FAL levels among pre-service and in-service EFL teachers. T-tests and ANOVA are applied to identify patterns and distinctions in FAL levels across various demographic factors. Additionally, qualitative interviews or semi structured interviews are conducted to provide nuanced insights, enhancing the overall understanding of the complex relationship between demographic variables and FAL.

#### **Findings**

In this part of the thesis, the findings obtained from both quantitative and qualitative data will be presented respectively. Since the research design involves the use of quantitative data collection first, the results of quantitative data regarding the research questions are scrutinized thoroughly, followed by the findings of qualitative aspect constituted by descriptive analysis of semi structured interviews.

#### **Research Questions**

The primary objective of this study, as mentioned above, is to enhance our comprehension of FAL levels among pre-service and in-service teachers by conducting a

comparative analysis between these groups. Additionally, the research aims to delve into specific variables pertaining to in-service EFL teachers. To achieve this, the study sought the answers to the following research questions:

1. What is the formative assessment literacy level of in-service EFL teachers?
  - Does FAL level differ by gender?
  - Does FAL level differ by age?
  - Does FAL level differ by work experience?
  - Does FAL level differ by department of graduation?
  - Does FAL level differ by postgraduate education?
2. What is the formative assessment literacy level of pre-service EFL teachers?
  - What is the FAL level of 3rd-grade students?
  - What is the FAL level of 4th-grade students?
  - Is there any significant difference between 3rd and 4th-grade students in terms of the FAL level?
3. Is there any statistical difference between in-service and pre-service EFL teachers in terms of the FAL level?

The upcoming discussion will first elaborate on the level of FAL of in-service teachers considering each of the variables and FAL levels. Then, the FAL level of pre-service teachers will be scrutinized based on their grades. For the final part, the difference between the groups of teachers will be illustrated by the quantitative and qualitative data.

### **What Is the FAL Level of In-service EFL Teachers?**

The mean scores, crucial for evaluating the level of Formative Assessment Literacy (FAL) among in-service teachers, are outlined in Table 7.

**Table 7**

*FAL Level of In-service Teachers*

Teachertype	Mean	N	Std. Deviation
In-service	5,1709	75	,59472
Total	4,7672	229	,86015

The mean scores of in-service teachers and the total of in-service and pre-service teachers are respectively calculated as 5,17 and 4,76. It can be concluded that in-service teachers display a notable literacy of FA when compared to the overall mean score.

### ***Does FAL Level Differ by Gender?***

A detailed examination of the impact of the gender variable on FAL levels of in-service teachers is illustrated in Table 8.

**Table 8**

#### *FAL Level of In-service Teachers by Gender*

	Gender	N	Mean	Std. Deviation	Std. Error Mean
FormativeAssessmentLiteracy	Male	16	5,3210	,43264	,10816
	Female	59	5,1302	,62845	,08182

Prior to the analysis of independent samples t-test, the table 8 above presented the frequencies of gender variable of in-service EFL teachers. While there are 59 female teachers, the number of male teachers appears to be only a quarter of them. Independent samples t-test was conducted for a detailed analysis.

**Table 9**

#### *Independent Samples T-test of Gender and FAL*

<b>Independent Samples Test</b>									
				Sig.				95% Confidence Interval of the Difference	
	F	Sig.	t	df	(2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	,746	,391	1,141	73	,258	,19082	,16729	-,14259	,52423
Equal variances not assumed			1,407	34,183	,168	,19082	,13562	-,08474	,46638

As can be inferred from table 9, the results of independent samples t-test suggests that there is no plausible relationship between the FAL level and the gender of in-service teachers. The p-value (0.19) is greater than 0.05, indicating no significant difference between the groups.

### ***Does FAL Level Differ by Age?***

Before the four abovementioned categories of age are compared through the test of one-way ANOVA, it is recommended to conduct the Levene's test of variances to ensure that the variances are equal among the groups.

**Table 10**

*Homogeneity Test of Variances by Age*

<b>Test of Homogeneity of Variances</b>					
		Levene			
		Statistic	df1	df2	Sig.
FormativeAssessmentLiteracy	Based on Mean	2,615	3	71	,058
	Based on Median	1,203	3	71	,315
	Based on Median and with adjusted df	1,203	3	51,559	,318
	Based on trimmed mean	2,045	3	71	,115

The data from table 10 concludes that the homogeneity of variances is achieved as the value of significance is higher than 0.05. Therefore, a post hoc analysis of Tukey anteceding the test of one-way ANOVA could be employed to uncover the relationship between age and FAL levels of in-service teachers.

**Table 11**

*One-way ANOVA Results of Age and FAL*

<b>ANOVA</b>					
FormativeAssessmentLiteracy					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3,557	3	1,186	3,722	,015
Within Groups	22,616	71	,319		
Total	26,173	74			

In table 11, the one-way ANOVA analysis indicates that there might be a significant relationship between the age of in-service teachers and their FAL levels ( $p=0,015$ ). In this case, it is reasonable to conduct a post hoc analysis of Tukey to unveil the exact source of difference among the age groups.



**Table 12***Post Hoc Analysis of Age and FAL*

<b>Multiple Comparisons</b>								
Dependent Variable: FormativeAssessmentLiteracy								
Tukey HSD								
				Mean Difference (I-	95% Confidence Interval			
				J)	Std. Error	Sig.	Lower Bound	Upper Bound
(I) Age 21-30	(J) Age 31-40			,28057	,17177	,367	-,1714	,7325
				-,01727	,16932	1,000	-,4627	,4282
				,58810*	,20420	,026	,0509	1,1253
31-40	(J) Age 21-30			-,28057	,17177	,367	-,7325	,1714
				-,29785	,18081	,359	-,7735	,1779
				,30753	,21383	,480	-,2550	,8701
41-50	(J) Age 31-40			,01727	,16932	1,000	-,4282	,4627
				,29785	,18081	,359	-,1779	,7735
				,60537*	,21186	,028	,0480	1,1628
51+	(J) Age 21-30			-,58810*	,20420	,026	-,1,1253	-,0509
				-,30753	,21383	,480	-,8701	,2550
				-,60537*	,21186	,028	-,1,1628	-,0480

\*. The mean difference is significant at the 0.05 level.

In table 12, the clarification of the mean deviation of age groups regarding FAL levels profoundly demonstrated by the post hoc analysis of Tukey. It may safely be stated that the in-service teachers under the age group 51+ demonstrated a meaningful declination of FAL when compared to the groups of the teachers between 21 and 30 as well as the ones aged between 41 and 50. There might be no detection of a relationship between the age group 31-40 and 51+.

### ***Does FAL Level Differ by Work Experience?***

Just as the abovementioned variable of age, it is reasonable to conduct the Levene's test of variances to confirm that the variances are equal among the groups since the work experience of in-service teachers includes 5 distinct groups.

**Table 13***Homogeneity Test of Variances by Work Experience*

<b>Test of Homogeneity of Variances</b>					
		Levene			
		Statistic	df1	df2	Sig.
FormativeAssessmentLiteracy	Based on Mean	1,763	4	70	,146
	Based on Median	1,436	4	70	,231
	Based on Median and with adjusted df	1,436	4	53,351	,235
	Based on trimmed mean	1,644	4	70	,173

The data from table 13 pinpoints that the homogeneity of variances is assured as the value of significance is higher than 0.05. Therefore, a post hoc analysis of Tukey following the test of one-way ANOVA could be utilized to uncover the relationship between work experience and FAL levels of in-service teachers.

**Table 14***One-way ANOVA Results of Work Experience and FAL*

<b>ANOVA</b>					
FormativeAssessmentLiteracy					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4,843	4	1,211	3,974	,006
Within Groups	21,329	70	,305		
Total	26,173	74			

The results, as shown in Table 14, indicate that there might be a significant relationship between the work experience of in-service teachers and their FAL levels ( $p=0,006$ ). Further statistical test of Tukey might seem reasonable to be conducted for a post hoc analysis to reveal the precise foundation of alteration among the groups of work experience.

**Table 15***Post Hoc Analysis of Work Experience and FAL***Multiple Comparisons**

Dependent Variable: FormativeAssessmentLiteracy

Tukey HSD

(I) TeachingExperience	(J) TeachingExperience	Mean		Sig.	95% Confidence Interval	
		Difference (I- J)	Std. Error		Lower Bound	Upper Bound
less than 3 years	3-10	,39091	,24119	,489	-,2845	1,0663
	11-20	,21658	,19147	,790	-,3196	,7527
	21-30	-,02652	,23042	1,000	-,6717	,6187
	31+	,86364*	,25649	,011	,1454	1,5819
3-10	less than 3 years	-,39091	,24119	,489	-1,0663	,2845
	11-20	-,17433	,19858	,904	-,7304	,3817
	21-30	-,41742	,23635	,401	-1,0792	,2444
	31+	,47273	,26184	,379	-,2605	1,2059
11-20	less than 3 years	-,21658	,19147	,790	-,7527	,3196
	3-10	,17433	,19858	,904	-,3817	,7304
	21-30	-,24309	,18535	,685	-,7621	,2759
	31+	,64706*	,21691	,031	,0397	1,2544
21-30	less than 3 years	,02652	,23042	1,000	-,6187	,6717
	3-10	,41742	,23635	,401	-,2444	1,0792
	11-20	,24309	,18535	,685	-,2759	,7621
	31+	,89015*	,25195	,006	,1846	1,5957
31+	less than 3 years	-,86364*	,25649	,011	-1,5819	-,1454
	3-10	-,47273	,26184	,379	-1,2059	,2605
	11-20	-,64706*	,21691	,031	-1,2544	-,0397
	21-30	-,89015*	,25195	,006	-1,5957	-,1846

\*. The mean difference is significant at the 0.05 level.

From the data in table 15, it is apparent that the in-service teachers with a work experience of over 31 years are inclined to have a lower level of FAL contrary to the other 3 groups of the teachers with less than 3 years of experience, 11 to 20 years of experience and 21 to 30 years of experience. No evidence was found for the relationship between the groups of teachers with 31 or more experience with the ones having 3 to 10 years of experience.

### ***Does FAL Level Differ by Department of Graduation?***

The frequencies of in-service teachers' bachelor departments are presented with the mean scores of each group in the table 16 below.

**Table 16**

*FAL Level of In-service Teachers by Department of Graduation*

<b>Group Statistics</b>					
	Bachelordepartment	N	Mean	Std. Deviation	Std. Error Mean
FormativeAssessmentLiteracy	English Language Teaching (ELT)	61	5,1520	,62412	,07991
	Other	14	5,2532	,45445	,12146

The second group "other" are constituted by the combination of graduates from various departments such as English Language and Literature, Translation studies and Linguistics. The reason behind the merge of those groups is that only a small number of respondents selected the aforementioned categories. As can be seen from the table, 61 of the respondents graduated from English Language Teaching department while only 14 of the teachers selected other departments.

**Table 17**

*Independent Samples T-test of Department of Graduation and FAL*

<b>Independent Samples Test</b>									
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	,445	,507	-.572	73	,569	-,10123	,17705	-,45409	,25163
Equal variances not assumed			-.696	25,650	,492	-,10123	,14539	-,40028	,19781

As can be inferred from table 17, the results of independent samples t-test suggests that there is no plausible relationship between the FAL level and the department of

graduation of in-service teachers. The p-values of 0,57 and 0,50 are both greater than 0.05, indicating no significant difference between the groups.

### ***Does FAL Level Differ by Postgraduate Education?***

The variable of postgraduate education included three categories: No postgraduate education, Master, and PhD. The tests are conducted in accordance with those three categories.

**Table 18**

#### *Homogeneity of Variances by Postgraduate Education*

<b>Test of Homogeneity of Variances</b>					
		Levene			
		Statistic	df1	df2	Sig.
FormativeAssessmentLiteracy	Based on Mean	,692	2	72	,504
	Based on Median	,598	2	72	,553
	Based on Median and with adjusted df	,598	2	69,845	,553
	Based on trimmed mean	,752	2	72	,475

Closer inspection of table 18 shows that the homogeneity of variances is ensured as the value of significance is higher than 0.05 from all calculations.

**Table 19**

#### *One-way ANOVA Results of Postgraduate Education and FAL*

<b>ANOVA</b>					
FormativeAssessmentLiteracy					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,001	2	,500	1,431	,246
Within Groups	25,172	72	,350		
Total	26,173	74			

It can be seen from the data in table 19 that there was no evidence on the differentiation of FAL levels across the postgraduate education of in-service teachers ( $p=0,246$ ).

### **What is the FAL Level of Pre-service EFL Teachers?**

The mean scores, crucial for evaluating the level of Formative Assessment Literacy (FAL) of pre-service teachers, are described in Table 20.

**Table 20**

#### *FAL Level of Pre-service Teachers*

FormativeAssessmentLiteracy			
Teachertype	Mean	N	Std. Deviation
Pre-service	4,5705	154	,90147
Total	4,7672	229	,86015

The mean scores of pre-service teachers and the total of in-service and pre-service teachers are respectively calculated as 4,57 and 4,76 as shown in table 20. It can be presumed from the table that in-service teachers display a slightly lower literacy of FA when compared to the overall mean score.

### ***What is the FAL Level of 3rd-grade Students?***

To evaluate the level of Formative Assessment Literacy (FAL) of 3<sup>rd</sup> grade pre-service teachers, the mean scores are described in Table 21.

**Table 21**

#### *FAL Level of 3rd Grade Students*

FormativeAssessmentLiteracy			
Grade	Mean	N	Std. Deviation
3rd Grade	4,5368	63	,91562
Total	4,5705	154	,90147

Table 21 shows that 3<sup>rd</sup> grade students have a mean score of 4.53 on a 6-point scale standing below the average of 3<sup>rd</sup> and 4<sup>th</sup> grade students. Nevertheless, 4.53 is a strong indication of adequacy in terms of FAL level.

### **What is the FAL Level of 4th-grade Students?**

To evaluate the level of Formative Assessment Literacy (FAL) of 4<sup>th</sup> grade pre-service teachers, the mean scores are described in Table 22.

**Table 22**

#### *FAL Level of 4th-grade Students*

##### *FormativeAssessmentLiteracy*

Grade	Mean	N	Std. Deviation
4th Grade	4,5939	91	,89588
Total	4,5705	154	,90147

As illustrated by table 22, 4<sup>th</sup> grade students demonstrated a mean score of 4.59 which is slightly above the average of both groups of students.

### **Is There any Significant Difference between 3rd and 4th-grade Students in Terms of the FAL Level?**

To ascertain the presence of a notable distinction in the Formative Assessment Literacy (FAL) levels between pre-service teachers in the 3rd and 4th grades, an independent samples t-test was employed, and the findings are presented in the tabulated results in Table 23.

**Table 23**

#### *Independent Samples T-test of 3<sup>rd</sup> Grade and 4<sup>th</sup> Grade Students*

<b>Independent Samples Test</b>								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	,045	,833	-385	152	,700	-,05711	,14816	-,34983	,23561
Equal variances not assumed			-384	131,597	,702	-,05711	,14875	-,35136	,23715

Independent samples t-test shown in table 23 was conducted to gauge the difference between the FAL levels of 3<sup>rd</sup> grade and 4<sup>th</sup> grade students. The results indicated

no significant difference between the groups of students as the mean scores are quite convergent to each other.

***Is There Any Statistical Difference between In-Service and Pre-Service EFL Teachers in Terms of the FAL Level?***

Utilizing an independent samples t-test again, the investigation aimed to determine any significant difference in Formative Assessment Literacy (FAL) levels among pre-service and in-service teachers. The outcomes of this analysis are outlined in the results table 24 below.

**Table 24**

*Mean Scores of Pre-service and In-service Teachers*

Group Statistics					
	Teachertype	N	Mean	Std. Deviation	Std. Error Mean
FormativeAssessmentLiteracy	In-service	75	5,1709	,59472	,06867
	Pre-service	154	4,5705	,90147	,07264

The mean scores of In-service and pre-service teachers are displayed by table 24 as 5,17 and 4,57 respectively. Independent samples t-test was again utilized to further examine the statistical difference between the groups.

**Table 25**

*Independent Samples T-test of Pre-service and In-service Teachers*

Independent Samples Test										
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Equal variances assumed		13,457	,000	5,236	227	,000	,60037	,11466	,37444	,82629
Equal variances not assumed				6,006	206,942	,000	,60037	,09996	,40329	,79744

The results from Table 25 indicate a significant difference between in-service and pre-service EFL teachers in terms of their level of formative assessment literacy (FAL)



( $p < 0.05$ ). The mean difference between the two groups is calculated as 0.60, suggesting that in-service teachers exhibit a higher level of FAL compared to pre-service teachers.

### **Semi-structured Interviews**

In the second phase of the study, thematic analysis was employed to examine qualitative data collected from semi-structured interviews. Thematic analysis, recognized for its adaptability to diverse research inquiries, data types, and sample sizes, was chosen due to its flexibility in identifying patterns in qualitative data. The study adhered to a six-step guideline for thematic analysis outlined by Braun and Clarke (2006). MaxQDA, a versatile qualitative data analysis software, was utilized for the analysis process, which included familiarization with the data, coding important features, identifying themes, reviewing and defining themes, and finally integrating findings into a narrative with connections to existing literature. Results will be presented according to the respective questions in subsequent sections to elucidate not only the perspectives of pre-service and in-service teachers on the three dimensions of FAL but also to provide a clearer understanding of the differentiation in their FAL levels.

#### ***How Do You Define Formative Assessment in Your Own Words?***

The definition of FA plays a crucial role in displaying the difference in FAL between the groups pre-service and in-service teachers in terms of the conceptual dimension. The specific reason for posing this question is to unearth the knowledge of the participant about FA and association of FA in their mind. After the analysis of the responses the following codes shown in table 26 and table 27.

**Table 26***In-service Teachers' Definition of FA*

Code	Frequency (Number of N)
Regulate Teaching	4
Remedying Deficiencies	3
Ongoing Process	2
Regulate Learning	1

As can be seen from table 26, In-service Teachers (IT) emphasized mostly the importance of the regulation of learning and alleviation of the lacks in the definition of FA.

IT1 mentioned that:

*“This is what I understand from formative assessment. You regulate your new type of teaching, Exactly, and it should be constant. It should be given at intervals, so that it really forms the teaching. And I think there is an organic bond between teaching and testing...”*

IT3 also stated that:

*“First, we do some sort of assessment, whose aim is to modify the way we teach, in order to fill the gaps of our previous teaching. It is sort of remedying what went wrong. You identify what has not been learned well.”*

**Table 27***Pre-service Teachers' Definition of FA*

Code	Frequency (Number of N)
Exams	3
During the Process	2
Giving Feedback	2

Pre-service teachers (PT) considered that the definition of FA associated with to the exams, during the process, and giving feedback. PT2 stated that:

*“When I hear formative assessment, exams that we suddenly do without the student knowing or exams that we do with the student knowing came to my mind.”*

In order to emphasize the process, PT1 mentioned:

*“Formative assessment is what the student thinks about what is going on at that moment. In other words, it is a type of assessment that helps us to see how much knowledge they have.”*

The instance of association with feedback revealed by PT3:

*“The first thing that comes to my mind when I think of formative assessment (...) I think of the feedback received from the student. The feedback you give to the student.”*

### ***In What Way Do You Think Formative Assessment Is Effective in Students’ Learning?***

The question primarily attempted to investigate what the pre-service and in-service teachers think about the upsides of using FA in learning process. The question embraces all three dimensions of FA (conceptual, practical, and socioemotional) providing a comprehensive account of FAL.

**Table 28**

*In-service Teachers’ Views on Effectiveness of FA*

<b>Code</b>	<b>Frequency (Number of N)</b>
Monitoring the Process	3
Noticing Errors	2
Preventing Fossilization	2
Giving Feedback	2
Observing self-improvement	1
Learner autonomy	1

The most frequently uttered responses concerning the effectiveness of FA can be listed as monitoring the process, noticing the errors, preventing fossilization, and giving

feedback. Even though the IT did not mention observing self-improvement and learner autonomy often, they might be considered remarkable to be underlined.

IT1 underlined that FA is effective since it enables students and teachers to monitor their progress.

*“You see how a student improves his or her skills and also at that time you can monitor what you have done as a teacher in this process and also what your students as a whole as an individual and as a whole as a group have done.”*

IT3 stated that FA is effective since it eases noticing errors:

*“Well, it is effective in their learning, as long as they notice what is going wrong with them. And as long as they can make a habit of changing what went wrong before.”*

IT2 indicated the role of FA in avoiding fossilization:

*“Well, for the time being, they recognize the problem, but then they still go on making the same mistake, which means the mistake, or the error has been fossilized. So, although you do things to get the student in the right track of using the correct language, or the thing that is being tried, or the thing that is being tried to teach the student, still, there may be some problems. it makes the students realize maybe some of their mistakes.”*

**Table 29**

*Pre-service Teachers’ Views on Effectiveness of FA*

Code	Frequency (Number of N)
Teacher Reflection	2
Better Comprehension	1

The views of pre-service teachers on the effectiveness of FA revolves around teacher reflection and better comprehension. In this sense PT4 highlighted that:

*“It is also effective for the teacher. The teacher sees what he/she can and cannot give. And for the students, they see what they can and cannot get at that point.”*

To bridge the gap between student comprehension and the use of FA, PT3 maintained that:

“It is effective because I think it helps the student to understand the subject better.”

### ***What Types of Formative Assessment Tasks Do You Utilize?***

By asking teachers to delineate the specific types of formative assessment tasks they employ, the question aims to uncover the depth of their understanding and application of formative assessment principles. Responses to this question provide insights into teachers' knowledge of diverse formative assessment methods, their ability to align these tasks with learning objectives, and their awareness of the formative assessment's conceptual, practical, and socioemotional dimensions.

**Table 30**

#### *In-service Teachers' Task Types*

<b>Code</b>	<b>Frequency (Number of N)</b>
Quizzes	5
Portfolio	5
Self-assessment	5
Peer-assessment	3
Web Tools	3
Presentations	2

The main goal of asking this question is to measure the FAL of the teachers in terms of practical dimension. In-service teachers indicated quizzes, portfolio, and self-assessment the most followed by the peer-assessment, web tools and presentations. A good instance of using quizzes exemplified by IT4:

*“When you say formative assessment, the quizzes we conduct here are the first things coming to my mind as we regularly do them. I mean, as we do not run a quiz*

*just at the end of the semester or at the end of the year. As we prepare and run them regularly on some periods. They are the first things which come to my mind.”*

In parallel with this, IT2 expressed an immense and multifaceted use of portfolios:

*“We have four writing tasks. We call them writing portfolio one, and then we are continuing with giving another four tasks and it is called writing portfolio two. We also have speaking portfolios. We are giving some speaking tasks and presentations tasks to our students, and we are waiting for them to show their findings from the lessons.”*

IT1 stated a useful version of self-assessment:

*“You can ask students to write journals of their learning, which could be considered as self-assessment. This could be done after exams, after quizzes, after classroom activities. Hey, go home and think about how you did in today's quiz. Maybe they can say I did not use time correctly. This is self-assessment.”*

IT3 claimed an aspect of peer-assessment:

*“If a student can get feedback from her or his peer, it means that it can be more permanent. Because we are, as teachers, we are telling so many things in a day. And they can lose their focus or anything else toward us.”*

Additionally, the use of web tools is also pointed out recursively by in-service teachers. For instance, IT5 asserted that:

*“Generally, I use some web tools and some applications, like Kahoot, Quizlet, and some websites. Websites are offering really good visual aids and visual games. I usually use them. Like some local activities and etc.*

**Table 31***Pre-service Teachers' Task Types*

Code	Frequency (Number of N)
Assignments	2
Quizzes	2
Web Tools	2

When it comes to the pre-service teachers, assignments, quizzes, and web tools are oftentimes mentioned as FA task types. PT2 mentioned that:

*“It (an FA task) can be any assignments that we give to students. Or it could be presentations that we ask students to do. These can also fall into this thing.”*

PT1 also mentioned quizzes as a means of getting feedback:

*“For example, quizzes are the feedback we get from students at certain time intervals.”*

In addition, PT3 emphasized the use of web tools:

*“I can have students do an activity before the exams to prepare them for the questions generally through web tools on the internet.”*

***What Do You Think about the English Teachers' Use of Formative Assessment?***

The question serves as a tool to gauge perspectives on the practices and effectiveness of English teachers in implementing formative assessment. It aims to assess awareness, evaluation, and critical reflections on formative assessment practices, contributing to an understanding of formative assessment literacy levels especially socioemotional dimension.

**Table 32***Socioemotional Dimension of FA of In-service Teachers*

Code	Frequency (Number of N)
Depending on Teachers' Competency	3
Teachers' Resourcefulness	2
Teacher Training	2
Teachers' Personality	2

IT1 expressed that teachers' competency can serve as a salient component of effective FA use:

*"Depends on the teacher, you know, how equipped the teacher is. There are lots of teachers who lip service. They say something and do something else."*

Moreover, IT2 stressed the significance of teacher's resources in various aspects:

*"It (FA use) is dependent on the teacher, the teacher's background, the teacher's creative mind, the teacher's resources. What do I say by resources? It does not have to be a computer, a laptop, or I do not know, technological resources. It could be anything. The teacher can use, especially the teacher's creative mind."*

Furthermore, a substantial judgement on the relation between the teacher training program and FA use claimed by IT 4:

*"I will not say that we use formative assessment tools very effectively because during my undergraduate education, we just had one testing class and, in that lesson, we only learned how to write a few items. And we did this as a group. So, I did not prepare a lot of questions. And we mostly learned the theoretical base of testing. I know some basic terms like formative assessment or alternative assessments. But in terms of practice, how to apply this in the real, in real world, in real classroom context, I do not think we know enough of how to do this. And that can be the case for other English teachers."*



Lastly, IT5 believes that teachers' personality may be a factor in the effectiveness of FA use:

*"I think this is very much dependent on the teacher's personality. It is not always, you know, learning by heart the techniques in the book, in teaching books. It is not always, you know, using technology, being very text heavy. It is not always being so acute with things like that. It is sometimes your personality, your warmth. It is sometimes your tactfulness, your smiling face, the way you treat your students."*

**Table 33**

*Socioemotional Dimension of FA of Pre-service Teachers*

Code	Frequency (Number of N)
In Need of Improvement	2
Avoiding Extra Work	2
Overdependence on Coursebook	1

Finally, the responses from pre-service teachers indicated that English teachers may need improvement in terms of FA as well as the avoidance of extra work and overdependence of coursebook.

PT3 expressed that the need of improvement of FA use:

*"If we look at it from the university context, it is the case at the university in this (FA) context. Because, you know, it is very much practiced at the university, we witness it. But, whether high school or middle school. If I look from my time, from the past, it was at an average level."*

PT4 claimed that:

*"They (EFL teachers) do not use formative assessment unless it is compulsory. If it is compulsory, if there is an obligation to make a quiz, they do it for that lesson or their curriculum. But I do not think they do it as an extra."*

Lastly, PT6 highlighted that teachers strictly constrain themselves with coursebooks:

*“The teacher usually always proceeds from the book, but we organize activities ourselves in our practicum sessions. Can we not go from the book? In this regard, I have seen a lot of teachers, especially those in the MoNE, always proceeding from the book because they are bound to the curriculum.”*

## **Discussion**

On the whole, in this study, an explanatory sequential mixed method design was employed to examine the Formative Assessment Literacy (FAL) of both pre-service and in-service English as a Foreign Language (EFL) teachers. Initially, quantitative data were gathered from 154 pre-service and 75 in-service teachers using the Teacher Formative Assessment Literacy Scale (TFALS). Subsequently, qualitative data were collected through semi-structured interviews with 6 pre-service and 5 in-service teachers to provide further insights and complement the quantitative findings. In this section of the chapter, the findings regarding the FAL of both in-service and pre-service teachers, as well as the differences between the two groups, will be discussed. These discussions will be supported by references to relevant literature.

### **The Interpretation of FAL of In-service Teachers**

This study aimed at not only investigating the FAL of in-service teachers but also examining whether the in-service teachers differ in terms of FAL levels regarding their gender, age, work experience, department of graduation, and postgraduate education.

#### ***Age, Work Experience and FAL levels***

Conducting an examination of various demographic variables, including gender, age, work experience, department of graduation, and postgraduate education, the quantitative analysis yielded noteworthy differences in the FAL levels. Intriguingly, only age

and work experience emerged as pivotal factors, demonstrating a statistically significant impact on FAL levels.

The research findings suggest a substantive relationship between the age of in-service teachers and their FAL proficiency. Delving deeper into the data, it was discovered that in-service teachers aged 51 and above exhibited a slight decline in FAL levels when compared with their counterparts in other age brackets. This salient distinction underscores the importance of considering age as a variable in understanding and addressing FAL levels among in-service educators.

Similarly, a noticeable connection was identified between the work experience of teachers and their FAL levels. Notably, teachers with an extensive work experience exceeding 31 years demonstrated a propensity towards lower FAL levels compared to their counterparts with less experience. This finding prompts reflection on the potential influence of work experience on pedagogical practices, potentially impacting assessment methods and, consequently, FAL levels.

One plausible explanation for this discrepancy could be rooted in the assessment preferences of experienced teachers, who might shift towards traditional evaluation methods for various reasons. Additionally, the findings suggest that teachers with prolonged work experience might face a deficit in in-service training opportunities, particularly in the realm of formative assessment practices, potentially contributing to variations in FAL levels.

Drawing implications from this detailed analysis, it becomes evident that targeted in-service training initiatives for teachers hold potential in fostering FAL development, irrespective of age and work experience. These findings align with existing literature, where multiple studies underscore the efficacy of formative assessment training in enhancing the FAL and formative assessment utilization among in-service teachers (Wylie, 2020; Li & Yongqi GU, 2023; Li et al., 2023).

In conclusion, the detailed examination of demographic variables has yielded valuable insights into the complex relationship among age, work experience, and Formative Assessment Literacy (FAL) levels among in-service teachers. These findings not only expand our understanding of this dynamic but also emphasize the significance of customized professional development initiatives for educators to improve their assessment literacy practices. By recognizing the diverse needs and experiences of teachers, tailored interventions can effectively enhance their ability to implement formative assessment strategies in the classroom, ultimately benefiting student learning outcomes.

### ***In-service Teachers' FAL levels***

Overall, in-service teachers demonstrated a remarkable level of FAL according to both qualitative and quantitative data. Considering the data from TFALS, the mean score was 5.17 out of 6-point Likert scale which showcases a good literacy of FA when compared to the total mean. From the literature, Yan and Pastore (2022a), the developers of TFALS, came up with a similar result with an extensive sample size of teachers in Hong Kong. They concluded not only TFALS could be a validated scale but also the teachers have a satisfactory level of FAL. Another study by Yan and King (2023) examined 1837 teachers using a similar scale called TFAPS (Teacher Formative Assessment Practice Scale) and discovered that teachers pose a decent level of FA. Moreover, Arrafii and Sumarni (2018) investigated secondary school English teachers' comprehension of formative assessment. According to the study, formative assessment was poorly recognized by teachers. In the setting of Turkish EFL teachers, Arda Özkan (2020) studied the attitudes, intentions, and practices of EFL preparatory school instructors in Turkey regarding formative assessment and found out that instructors with theoretical knowledge of FA construct positive attitudes towards FA. From the results of qualitative data, it might be notable to state that in-service teachers are quite capable of demonstrating knowledge on definition, effectiveness, and socioemotional dimension of FA. The qualitative findings support the quantitative data in this sense.

### **The interpretation of FAL of Pre-service Teachers**

Another aim of the study was to examine the FAL levels of pre-service teachers. To this end, 3<sup>rd</sup>, and 4<sup>th</sup> grade students from the department of English Language Teaching were invited to participate in the study. Out of 154 pre-service teachers, the quantitative data shows that the mean score for this group was 4.57 on a 6-point Likert scale which is slightly below the total mean. When the combination of two types of data examined, it might be reasonable to affirm that pre-service teachers may not demonstrate their actual FAL level in the questionnaire since the qualitative data shows their level to be more inferior. The codes created by the qualitative data by pre-service teachers might be considered scarce not only owing to the small number of participants (N=6), but also, they might not be capable of reflecting an adequate account of knowledge because of their insufficient training.

These results are in line with those of previous studies. As mentioned in literature review, Aydeniz and Doğan (2016) investigated the ability of pre-service teachers to utilize formative assessment effectively and discovered that they may not exhibit sufficient proficiency in its implementation. In another study, Somuncu (2021) stressed the importance of teacher education to cultivate pre-service teachers with a higher capability of conducting formative assessment. To exemplify a problem, it is reasonable to review a complaint of an in-service teacher expressing the number and quality of courses related to testing and evaluation may not include to-the-point content for the development of FAL of pre-service teachers. Also, the pre-service teachers stated that they took at least one testing and assessment course throughout their study. Besides, the 4<sup>th</sup> grade students even mentioned that they took 2 courses and 1 elective for assessment and evaluation. However, they may only gain a basic understanding of formative assessment from these courses, which might not be sufficient to demonstrate a prominent level of formative assessment literacy. These findings align with the conclusions drawn by Hatipoğlu (2010), Hatipoğlu &

Erçetin (2016), and Şahin (2019), all of whom proclaimed concerns regarding the content and quantity of courses offered in teacher training programs.

Additionally, another noteworthy aspect could be the methods employed and the practical dimension of assessment courses. Sarıyıldız (2018) concluded that the ELTE course in English Language Teaching (ELT) was inadequate, as it did not provide pre-service teachers with opportunities to translate theoretical knowledge into practical application within the course syllabus or during their practicum experiences.

### **The Interpretation of the Difference Between Pre-service and In-service Teachers**

In conclusion, the results indicated a notable distinction in the levels of formative assessment literacy (FAL) between in-service and pre-service teachers. This discrepancy is unsurprising, given that in-service teachers regularly have opportunities to apply formative assessment techniques in their classrooms. While there may be exceptions, from a practical standpoint, it might be challenging for pre-service teachers to consistently implement formative assessment tasks within a limited timeframe as mentioned above. This potential explanation, along with the previously mentioned concerns regarding the teacher education aspect for pre-service teachers, could contribute to this differentiation.

## Chapter 5

### Conclusion and Suggestions

#### Conclusion

Firstly, a concise overview of the research will be presented, including the research aim, the methodology employed, methods of data collection, and the findings. Subsequently, attention will be devoted to exploring the pedagogical implications, acknowledging any limitations encountered during the research process, and culminating with suggestions for future research endeavors.

#### Summary of the study

The study aims to investigate the FAL levels among pre-service and in-service EFL teachers in Turkey. Using a mixed-methods approach, the research utilizes the TFALS questionnaire and semi-structured interviews to gather data. The findings, encompassing descriptive statistics and inferential analyses, aim to contribute to the current understanding of FAL among Turkish EFL teachers. In-service teachers demonstrated high FAL, validated by TFALS with a mean score of 5.17. Quantitative analysis revealed significant differences only in age and experience for in-service teachers. Pre-service teachers, however, scored lower (4.57) with qualitative data suggesting inadequate training content. The study concludes a significant FAL difference between in-service and pre-service teachers, attributing it to practical experience opportunities in classrooms. The need for enhanced pre-service training in FAL is emphasized for improved implementation as well as in-service training programs supported by the literature.

#### Pedagogical Implications

Moreover, the research seeks to provide valuable insights for educational policymakers, ELT program developers, and in-service teacher training programs to

enhance FAL levels, thereby fostering more informed and effective language instruction practices in Turkey.

Firstly, the study underscores the need for more comprehensive and focused pre-service training programs for future EFL teachers. English Language Teaching programs should revisit and enhance their curriculum, ensuring it covers in-depth content on formative assessment. Incorporating practical, firsthand experiences in assessment and evaluation within these courses can better equip pre-service teachers with the necessary skills. Besides, a specific focus on FA in the practicum sessions will also help bridge the gap between theoretical knowledge and practical implementation.

Furthermore, in-service teachers demonstrated commendable FAL, highlighting the effectiveness of ongoing professional development. Education authorities and institutions should invest in regular workshops, seminars, and training sessions for in-service teachers to stay updated on the latest trends and innovations in formative assessment. This continuous learning approach can enhance their FAL and improve classroom practices. Joint initiatives can lead to the development of standardized guidelines and frameworks for formative assessment literacy, ensuring a cohesive approach to teacher training and professional development.

In addition, encouraging teachers, both pre-service and in-service, to engage in research activities related to formative assessment can foster a culture of continuous improvement. Providing support and resources for teachers to conduct action research within their classrooms can lead to the development and dissemination of effective formative assessment practices.

### **Limitations and Suggestions for Further Research**

The study acknowledges a limitation in its scope due to the exclusion of EFL teachers from private schools. This restriction may limit the generalizability of the findings to the entire population of EFL teachers in Turkey, as private schools often have unique



contexts and resources that may influence formative assessment practices differently. Future research should aim to include a more diverse sample, encompassing both public and private educational settings.

Besides, the study's focus on a partial representation of EFL teachers from public universities introduces a potential limitation. The findings may not fully capture the variations in formative assessment literacy across diverse types of universities or institutions like MoNE. Expanding the sample to include a more comprehensive representation of public universities, private universities, and other educational institutions would contribute to a more nuanced understanding of the broader EFL teaching landscape.

As another limitation, the quantitative aspect of the study involved a sample of 154 pre-service teachers and 75 in-service teachers. While the data provided valuable insights, the relatively low sample size and potential homogeneity of the participants may impact the generalizability of the quantitative findings. Future research could benefit from a larger and more diverse participant pool, considering variables such as geographical location, institutional characteristics, and teaching experience to enhance the study's external validity.

In parallel with quantitative aspect, the qualitative component of the study involved semi-structured interviews with six pre-service and five in-service teachers. The low sample size, although providing rich insights, may limit the breadth of perspectives and experiences represented. Including a more extensive and varied group of participants in qualitative data collection would strengthen the robustness and depth of the qualitative findings, offering a more comprehensive understanding of formative assessment literacy in the Turkish EFL context.

In addition, it is worth considering the inclusion of additional data collection methods, such as classroom observations or the use of reflective journals, to provide a more comprehensive exploration of the deficiencies in teachers' levels of formative assessment literacy (FAL). Incorporating these supplementary tools could offer richer insights and

deeper understanding into the challenges faced by educators in effectively implementing formative assessment practices. By broadening the scope of data collection, researchers can gather diverse perspectives and gather a more robust understanding of the factors influencing FAL levels among teachers.

Last but not least, it is noteworthy that the understanding of educators regarding the informal dimension of formative assessment may be lacking, given that neither in-service nor pre-service teachers acknowledged formative assessment as an ongoing practice of evaluating students through elicitation and spontaneous interpretation of learning evidence in the qualitative part of this study. There is a need for future research to explore the methodologies employed by these teachers when engaging in informal formative assessment.

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## APPENDIX-A: Teacher Formative Assessment Literacy Scale (In-service Teachers)

### PART I: Demographic Information (for In-service Teachers)

1. Gender: Male <input type="checkbox"/> Female <input type="checkbox"/>	
2. Age: 21 – 30 <input type="checkbox"/> 31 – 40 <input type="checkbox"/> 41 – 50 <input type="checkbox"/> 51+ <input type="checkbox"/>	
3. Teaching Experience:	
Less than 3 years <input type="checkbox"/> 21 – 30 years <input type="checkbox"/> 3 - 10 years <input type="checkbox"/> 31 or more <input type="checkbox"/> 11- 20 years <input type="checkbox"/>	
4. Which university are you currently working at?	
5. Educational background	
Degree	Department
BA	
MA (if any)	
PHD (if any)	
Notes:	

### PART II: Teacher Formative Assessment Literacy Scale

**EXPLANATIONS:**

1: Strongly disagree	4: Slightly agree
2: Disagree	5: Agree
3: Slightly disagree	6: Strongly agree

Conceptual Dimension	1	2	3	4	5	6
<b>Item 1</b> I can explain the rationale for formative assessment						
<b>Item 2</b> I know that students' learning needs can be identified through formative assessment.						
<b>Item 3</b> I think assessment activities should be aligned with learning goals.						
<b>Item 4</b> I understand that formative assessment tasks should elicit evidence about students' learning.						
<b>Item 5</b> I know that formative assessment results are useful for teachers to cater for student learning needs.						
<b>Item 6</b> I think students should be engaged in the formative assessment in order to promote learning						



<b>Item 7</b>	know diverse assessment methods that allow students to demonstrate their learning							
<b>Practical Dimension</b>								
<b>Item 8</b>	I use a variety of assessment methods that allow students to demonstrate their learning.							
<b>Item 9</b>	I teach students to engage in peer feedback processes.							
<b>Item 10</b>	I help students to develop self-assessment skills.							
<b>Item 11</b>	I engage students in using feedback information in subsequent tasks.							
<b>Item 12</b>	Based on assessment results, I show students what they need to do in order to improve their learning.							
<b>Item 13</b>	I train students to act on assessment feedback information to improve their learning.							
<b>Item 14</b>	I clarify assessment purposes to students.							
<b>Item 15</b>	I share assessment criteria with students.							
<b>Socio-emotional Dimension</b>								
<b>Item 16</b>	I am aware of the need to create a common understanding of formative assessment among teachers and students.							
<b>Item 17</b>	I attend to students' emotional responses to assessments.							
<b>Item 18</b>	I recognize that students' values, beliefs, and attitudes impact how they experience the process of formative assessment.							
<b>Item 19</b>	I am aware of the impact that assessment feedback information might have on students' learning motivation.							
<b>Item 20</b>	I am sensitive to the ethical aspects of formative assessment, such as fairness and student privacy.							
<b>Item 21</b>	I am aware of my responsibilities to cater for students' well-being during the formative assessment process.							
<b>Item 22</b>	I am conscious of the fact that students have the right to benefit from formative assessment practices.							

## APPENDIX-B: Teacher Formative Assessment Literacy Scale (Pre-service Teachers)

### PART I: Demographic Information (for Pre-service Teachers)

1. Gender: Male  Female

2. Age:

3. Which university are you studying at?

4. Your grade: 3<sup>rd</sup> grade  4<sup>th</sup> grade

### PART II: Teacher Formative Assessment Literacy Scale

**EXPLANATIONS:**

	<i>1: Strongly disagree</i>	<i>4. Slightly agree</i>
	<i>2: Disagree</i>	<i>5: Agree</i>
	<i>3: Slightly disagree</i>	<i>6: Strongly agree</i>

Conceptual Dimension		1	2	3	4	5	6
<b>Item 1</b>	I can explain the rationale for formative assessment						
<b>Item 2</b>	I know that students' learning needs can be identified through formative assessment.						
<b>Item 3</b>	I think assessment activities should be aligned with learning goals.						
<b>Item 4</b>	I understand that formative assessment tasks should elicit evidence about students' learning.						
<b>Item 5</b>	I know that formative assessment results are useful for teachers to cater for student learning needs.						
<b>Item 6</b>	I think students should be engaged in the formative assessment in order to promote learning						
<b>Item 7</b>	I know diverse assessment methods that allow students to demonstrate their learning						
Practical Dimension							
<b>Item 8</b>	I use a variety of assessment methods that allow students to demonstrate their learning.						
<b>Item 9</b>	I teach students to engage in peer feedback processes.						
<b>Item 10</b>	I help students to develop self-assessment skills.						
<b>Item 11</b>	I engage students in using feedback information in subsequent tasks.						
<b>Item 12</b>	Based on assessment results, I show students what they need to do in order to improve their learning.						
<b>Item 13</b>	I train students to act on assessment feedback information to improve their learning.						
<b>Item 14</b>	I clarify assessment purposes to students.						
<b>Item 15</b>	I share assessment criteria with students.						
Socio-emotional Dimension							
<b>Item 16</b>	I am aware of the need to create a common understanding of formative assessment among teachers and students.						
<b>Item 17</b>	I attend to students' emotional responses to assessments.						

<b>Item 18</b>	I recognize that students' values, beliefs, and attitudes impact how they experience the process of formative assessment.						
<b>Item 19</b>	I am aware of the impact that assessment feedback information might have on students' learning motivation.						
<b>Item 20</b>	I am sensitive to the ethical aspects of formative assessment, such as fairness and student privacy.						
<b>Item 21</b>	I am aware of my responsibilities to cater for students' well-being during the formative assessment process.						
<b>Item 22</b>	I am conscious of the fact that students have the right to benefit from formative assessment practices.						

## APPENDIX-C: Consent of the Scale Developers for the Use of TFALS

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### Formative Assessment Literacy Scale

2 messages

Dear Prof. Yan and Assoc. Prof. Pastore

I am Mustafa SIRAKAYA from Tokat Gaziosmanpaşa University in Turkey. I am pursuing my Master's Degree in English Language Education department and my research topic is formative assessment literacy of English Language Teachers. I enjoyed reading your up-to-date article on the development of the Formative assessment scale and I would be very grateful if I could use it for my master's thesis. Thus, I would like to ask for your consent to use both scales in my study.

I am looking forward to hearing from you at your earliest convenience.

Best regards,

Mustafa

--

Res. Asst. Mustafa Sirakaya

Hi Mustafa,

You are welcome to use the captioned instrument for your own research as long as proper citations are provided.

Good luck!

Best,

Yanzi

---

Yan Zi (PhD) | Professor

Department of Curriculum and Instruction, The Education University of Hong Kong

**APPENDIX-D: Interview Questions (In-service Teachers)**

1. Which university did you graduate from?
2. Are you currently studying MA or PhD?
3. How long have you been teaching English?
4. Which university are you working at? For how long?
5. How do you define Formative Assessment in your own words?
6. Do you think Formative Assessment is effective in students' learning? If so, in what way?
7. What kind of Formative Assessment tasks are implemented in your school?
8. Based on your own teaching, what types of Formative Assessment tasks do you personally prefer?
9. Do you utilize self-assessment and peer-assessment?
10. What do you think about English teachers' use of Formative assessment?

**APPENDIX-E: Interview Questions (In-service Teachers)**

1. Do you remember any course that you have taken related to testing and assessment?
2. What comes to your mind when you hear the term Formative Assessment?
3. Can you define Formative Assessment in your own words? (optional)
4. Can you name some Formative Assessment tasks?
5. What do you think are the most effective Formative Assessment tasks?
6. Based on your microteaching or practicum experience, what types of Formative Assessment tasks do you utilize?
7. Based on your microteaching or practicum experience, what can be the benefits of using diverse Formative Assessment tasks?
8. What do you think about English teachers' use of formative assessment?

## APPENDIX-F: Ethics Committee Exemption Form / Ethics Committee Approval



T.C.  
HACETTEPE ÜNİVERSİTESİ REKTÖRLÜĞÜ  
Sosyal ve Beşeri Bilimler Araştırma Etik Kurulu

Tarih: 16/11/2023 11:00  
Sayı: E-66777842-300-00003203059



00003203059

Sayı : E-66777842-300-00003203059  
Konu : Etik Kurulu İzni (Mustafa SIRAKAYA)

16/11/2023

EĞİTİM BİLİMLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜNE

İlgi : 25.10.2023 tarihli ve E-51944218-300-00003163201 sayılı yazımız.

Enstitünüz Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Bilim Dalı yüksek lisans programı öğrencilerinden **Mustafa SIRAKAYA'nın Dr. Öğr. Üyesi İsmail Fırat ALTAY** danışmanlığında yürüttüğü "**İngilizce Öğretmenlerinin ve Öğretmen Adaylarının Biçimlendirici Değerlendirme Okuryazarlıklarının İncelenmesi**" başlıklı tez çalışması Üniversitemiz Sosyal ve Beşeri Bilimler Araştırma Etik Kurulunun **14 Kasım 2023** tarihinde yapmış olduğu toplantıda incelenmiş olup, etik açıdan uygun bulunmuştur.

Bilgilerinizi ve gereğini rica ederim.

Prof. Dr. İsmet KOÇ  
Kurul Başkanı

Bu belge güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Kodu: F50A7CC8-961C-40EB-9900-4E8AB258BFFA

Belge Doğrulama Adresi: <https://www.turkiye.gov.tr/ta-cbys>

Adres:

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Telefon: Faks:

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### APPENDIX-G: Declaration of Ethical Conduct

I hereby declare that...

- I have prepared this thesis in accordance with the thesis writing guidelines of the Graduate School of Educational Sciences of Hacettepe University;
- all information and documents in the thesis/dissertation have been obtained in accordance with academic regulations;
- all audio visual and written information and results have been presented in compliance with scientific and ethical standards;
- in case of using other people's work, related studies have been cited in accordance with scientific and ethical standards;
- all cited studies have been fully and decently referenced and included in the list of References;
- I did not do any distortion and/or manipulation on the data set,
- and **NO** part of this work was presented as a part of any other thesis study at this or any other university.

20/02/2024

Mustafa SIRAKAYA



## APPENDIX-H: Thesis/Dissertation Originality Report

20/02/2024

HACETTEPE UNIVERSITY  
Graduate School of Educational Sciences  
To The Department of Foreign Language Education

Thesis Title: An Investigation into Formative Assessment Literacy of Pre-service and In-service EFL Teachers

The whole thesis that includes the *title page, introduction, main chapters, conclusions and bibliography section* is checked by using **Turnitin** plagiarism detection software take into the consideration requested filtering options. According to the originality report obtained data are as below.

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I respectfully submit this for approval.

**Name Lastname:** Mustafa SIRAKAYA

**Student No.:** N21134120

**Department:** Foreign Language Education

**Program:** English Language Teaching

**Status:**  Masters  Ph.D.  Integrated Ph.D.

Signature

### ADVISOR APPROVAL

APPROVED  
(Asst. Prof. Dr. İsmail Firat ALTAY)

## APPENDIX-I: Yayınlama ve Fikrî Mülkiyet Hakları Beyanı

Enstitü tarafından onaylanan lisansüstü tezimin/raporumun tamamını veya herhangi bir kısmını, basılı (kâğıt) ve elektronik formatta arşivleme ve aşağıda verilen koşullarla kullanıma açma iznini Hacettepe Üniversitesine verdiğimi bildiririm. Bu izinle Üniversiteye verilen kullanım hakları dışındaki tüm fikri mülkiyet haklarım bende kalacak, tezimin tamamının ya da bir bölümünün gelecekteki çalışmalarda (makale, kitap, lisans ve patent vb.) kullanım hakları bana ait olacaktır.

Tezin kendi orijinal çalışmam olduğunu, başkalarının haklarını ihlal etmediğimi ve tezimin tek yetkili sahibi olduğumu beyan ve taahhüt ederim. Tezimde yer alan telif hakkı bulunan ve sahiplerinden yazılı izin alınarak kullanılması zorunlu metinlerin yazılı izin alınarak kullandığımı ve istenildiğinde suretlerini Üniversiteye teslim etmeyi taahhüt ederim.

Yükseköğretim Kurulu tarafından yayınlanan "**Lisansüstü Tezlerin Elektronik Ortamda Toplanması, Düzenlenmesi ve Erişime Açılmasına İlişkin Yönerge**" kapsamında tezim aşağıda belirtilen koşullar haricince YÖK Ulusal Tez Merkezi / H.Ü. Kütüphaneleri Açık Erişim Sisteminde erişime açılır.

- Enstitü/Fakülte yönetim kurulu kararı ile tezimin erişime açılması mezuniyet tarihinden itibaren 2 yıl ertelenmiştir. <sup>(1)</sup>
- Enstitü/Fakülte yönetim kurulunun gerekçeli kararı ile tezimin erişime açılması mezuniyet tarihimden itibaren ... ay ertelenmiştir. <sup>(2)</sup>
- Tezimle ilgili gizlilik kararı verilmiştir. <sup>(3)</sup>

20/02/2024

Mustafa SIRAKAYA

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"Lisansüstü Tezlerin Elektronik Ortamda Toplanması, Düzenlenmesi ve Erişime Açılmasına İlişkin Yönerge"

- (1) Madde 6. 1. Lisansüstü teze ilgili patent başvurusu yapılması veya patent alma sürecinin devam etmesi durumunda, tez danışmanının önerisi ve enstitü anabilim dalının uygun görüşü üzerine enstitü veya fakülte yönetim kurulu iki yıl süre ile tezinerişime açılmasının ertelenmesine karar verebilir.
- (2) Madde 6.2. Yeni teknik, materyal ve metotların kullanıldığı, henüz makaleye dönüşmemiş veya patent gibi yöntemlerle korunmamış ve internetten paylaşılması durumunda 3 şahıslara veya kurumlara haksız kazanç; imkânı oluşturabilecek bilgi ve bulguları içeren tezler hakkında tez danışmanının önerisi ve enstitü anabilim dalının uygun görüşü üzerine enstitü veya fakülte yönetim kurulunun gerekçeli kararı ile altı ayı aşmamak üzere tezin erişime açılması engellenebilir.
- (3) Madde 7. 1. Ulusal çıkarları veya güvenliği ilgilendiren, emniyet, istihbarat, savunma ve güvenlik, sağlık vb. konulara ilişkin lisansüstü tezlerle ilgili gizlilik kararı, tezin yapıldığı kurum tarafından verilir\*. Kurum ve kuruluşlarla yapılan işbirliği protokolü çerçevesinde hazırlanan lisansüstü tezlere ilişkin gizlilik kararı ise, ilgili kurum ve kuruluşun önerisi ile enstitü veya fakültenin uygun görüşü üzerine üniversite yönetim kurulu tarafından verilir. Gizlilik kararı verilen tezler Yükseköğretim Kuruluna bildirilir.  
Madde 7.2. Gizlilik kararı verilen tezler gizlilik süresince enstitü veya fakülte tarafından gizlilik kuralları çerçevesinde muhafaza edilir, gizlilik kararının kaldırılması halinde Tez Otomasyon Sistemine yüklenir  
\*Tez danışmanının önerisi ve enstitü anabilim dalının uygun görüşü üzerine enstitü veya fakülte yönetim kurulu tarafından karar verilir.

