



**HACETTEPE ÜNİVERSİTESİ**  
**EĞİTİM BİLİMLERİ ENSTİTÜSÜ**

Department of Foreign Language Education

Program of English Language Teaching

AN INVESTIGATION OF MINDFULNESS AND CREATIVE TEACHING METHODS TO  
REDUCE EFL LEARNERS' TEST ANXIETY

Şewal İZGÜT

Master's Thesis

Ankara, 2026

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

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



Department of Foreign Language Education

Program of English Language Teaching

AN INVESTIGATION OF MINDFULNESS AND CREATIVE TEACHING METHODS TO  
REDUCE EFL LEARNERS' TEST ANXIETY

EFL ÖĞRENCİLERİNİN SINAV KAYGISINI AZALTMADA BİLİNÇLİ FARKINDALIKLARININ  
VE YARATICI ÖĞRETİM YÖNTEMLERİNİN İNCELENMESİ

Şevval İZGÜT

Master's Thesis

Ankara, 2026

### Acceptance and Approval

To the Graduate School of Educational Sciences,

This thesis, prepared by **ŞEVVAL İZGÜT** and entitled “An Investigation of Mindfulness and Creative Teaching Methods to Reduce EFL Learners’ Test Anxiety” has been approved as a thesis for the Degree of **Master’s** in the **Program of English Language Teaching** in the **Department of Foreign Language Education** by the members of the Examining Committee.

	Assoc. Prof. Dr. İsmail Fırat	
Chair	Altay	Signature
Member (Supervisor)	Prof. Dr. İsmail Hakkı Mirici	Signature
	Assoc. Prof. Dr. Ceyhan	
Member	Karabiyik	Signature

Decision of the Board of  
Directors of the Graduate  
School, issued on  
.../.../...with the number  
of .....

This is to certify that this thesis has been approved by the aforementioned examining committee members on 02/03/2026 in accordance with the relevant articles of the Rules and Regulations of Hacettepe University Graduate School of Educational Sciences, and was accepted as a **Master’s Thesis** in the **Program of English Language Teaching** by the Board of Directors of the Graduate School of Educational Sciences from ..../..../.....

Prof. Dr. İsmail Hakkı MİRİCİ

Director of Graduate School of Educational Sciences

### **Abstract**

Test anxiety is a challenge that hinders stress management and coping mechanisms for students learning English as a foreign language (EFL) and requires effective solutions. This thesis investigates the integration of mindfulness practices and creative teaching methods as potential solutions to reduce EFL students' test anxiety, provide insight to teachers, and evaluate the effectiveness of interventions. In line with these aims, a mixed-method research design was adopted by using a quasi-experimental pre-test–post-test control group design and thematic analysis through reflective journals during the intervention process. The study was carried out in a middle school in the Meram district of Konya province, Turkey, in the 2024–2025 academic year. In the sample selection, 142 6th-grade EFL students from similar educational environments were selected through purposive sampling; 71 in two experimental groups, and 71 in two control groups. While the intervention, including mindfulness and creative teaching activities, was applied to the former, ordinary teaching methods and activities were presented to the latter. Before and after the intervention, the Cognitive Test Anxiety Scale (CTAS) and the Mindful Attention Awareness Scale-A (MAAS-A) were administered to measure the test anxiety and mindfulness levels of the 142 participants. The quantitative data were analyzed using one-way multivariate analysis of covariance (MANCOVA). For the qualitative data, 71 students in the experimental groups were asked to keep reflective journals after each intervention session. The results obtained with the mixed method are multifaceted and reflect the psychological and educational effects of these methods. In the conducted analyses, it was observed that there was a statistically significant increase in mindfulness and a statistically significant decrease in test anxiety levels of the experimental groups, while there was no significant change in the control groups.

**Keywords:** teaching english as a foreign language, test anxiety, mindfulness, creative teaching methods, adolescents

## Öz

Sınav kaygısı, İngilizce'yi yabancı dil olarak öğrenen öğrenciler (EFL) için stres yönetimini ve başa çıkma mekanizmalarını engelleyen ve etkili çözümler gerektiren bir zorluktur. Bu tez, EFL öğrencilerinin sınav kaygısını azaltmak, öğretmenlere içgörü sağlamak ve müdahalelerin etkililiğini değerlendirmek için bilinçli farkındalık uygulamaları ile yaratıcı öğretim yöntemlerinin entegrasyonunu potansiyel çözümler olarak araştırmaktadır. Bu amaçlar doğrultusunda, müdahale sürecinde yarı deneysel ön test-son test kontrol gruplu desen ve yansıtıcı günlükler aracılığıyla tematik analiz kullanılarak karma yöntemli bir araştırma deseni benimsenmiştir. Çalışma, 2024–2025 eğitim-öğretim yılında Türkiye'nin Konya ili Meram ilçesindeki bir ortaokulda yürütülmüştür. Örnekleme seçiminde, benzer eğitim ortamlarından 142 6. sınıf EFL öğrencisi, amaçlı örnekleme yoluyla seçilmiştir; bunların 71'i iki deney grubunda, 71'i ise iki kontrol grubundadır. Deney gruplarına bilinçli farkındalık ve yaratıcı öğretim etkinliklerini içeren müdahale uygulanırken, kontrol gruplarına olağan öğretim yöntemleri ve etkinlikleri sunulmuştur. Müdahale öncesinde ve sonrasında 142 katılımcının sınav kaygısını ve bilinçli farkındalık düzeylerini ölçmek amacıyla Bilişsel Sınav Kaygısı Ölçeği (CTAS) ve Bilinçli Farkındalık Ölçeği-A (MAAS-A) uygulanmıştır. Nicel veriler, tek yönlü çok değişkenli kovaryans analizi (MANCOVA) kullanılarak analiz edilmiştir. Nitel veriler için deney gruplarındaki 71 öğrenciden her müdahale oturumundan sonra yansıtıcı günlük tutmaları istenmiştir. Karma yöntemle elde edilen sonuçlar çok yönlü olup bu yöntemlerin psikolojik ve eğitsel etkilerini yansıtmaktadır. Yapılan analizlerde, kontrol gruplarında anlamlı bir değişim gözlenmezken, deney gruplarının farkındalık düzeylerinde istatistiksel olarak anlamlı bir artış, sınav kaygısı düzeylerinde ise istatistiksel olarak anlamlı bir düşüş olduğu görülmüştür.

**Anahtar sözcükler:** yabancı dil olarak İngilizce öğretimi, sınav kaygısı, bilinçli farkındalık, yaratıcı öğretim yöntemleri, ergenler

## Acknowledgements

I would like to express my sincere gratitude to my esteemed supervisor, Prof. Dr. İsmail Hakkı Mirici, for taking on my mentorship during this Master's thesis process and for illuminating my path with his extensive knowledge and experience. I am grateful for his guidance and dedication.

I offer my deepest thanks with all my heart to my twin and life companion Dilara İzgüt, my precious mother Zühal İzgüt, and my dear father Hulusi İzgüt, who have believed in me, stood by me, and made every moment of my life meaningful since the day I was born.

I would like to extend my sincerest thanks to Onur Evcen, one of the most precious gifts my journey in Ankara has bestowed upon me, for his dedicated efforts and unwavering patience.

I also thank Nadire Dağ for the most beautiful friendship Hacettepe University has brought into my life.

Above all, I wish to express my deepest gratitude to our Great Leader, Mustafa Kemal Atatürk. It is thanks to him that today, as an independent Turkish woman, I owe the freedom of receiving an education and writing these lines. I consider it my duty to follow in the footsteps of Atatürk.

## Table of Contents

Acceptance and Approval.....	ii
Abstract .....	iii
Öz.....	iv
Acknowledgements .....	v
List of Tables .....	ix
List of Figures.....	x
Symbols and Abbreviations .....	xii
Chapter 1 Introduction.....	1
Statement of the Problem .....	3
Aim and Significance of the Study.....	4
Research Questions.....	8
Assumptions.....	8
Limitations.....	9
Definitions .....	10
Chapter 2 Theoretical Basis of Research and Literature Review .....	12
Test Anxiety .....	12
Mindfulness.....	14
Negative Effects of Test Anxiety on English as a Foreign Language Learners..	15
Mindfulness and Anxiety Relationship in the English as a Foreign Language Context.....	21
Pedagogical Implications: Teaching Methods and Mindfulness Practices to Reduce the EFL Learners' Test Anxiety.....	27
Chapter 3 Methodology .....	31
Type of Research.....	38
Research Population and Sample.....	39
Data Collection.....	40
Instruments .....	52

Data Analysis .....	59
Chapter 4 Findings, Comments and Discussion.....	62
Chapter 5 Conclusion, Suggestions and Pedagogical Implications for Teachers, Researchers, Educators, Teacher Trainers, Curriculum Designers, and Policy Makers.....	93
References .....	98
APPENDIX-A: Milli Eğitim Bakanlığı (MEB) İzni .....	112
APPENDIX-B: Data Collection Plan .....	113
APPENDIX-C: Data Collection Instruments.....	118
APPENDIX-D: Cognitive Test Anxiety Scale (CTAS) .....	119
APPENDIX-E: Mindful Attention Awareness Scale-A (MAAS-A).....	121
APPENDIX-F: Reflective Journal Template – Session 1 .....	123
APPENDIX-G: Reflective Journal Template – Session 2 .....	124
APPENDIX-H: Reflective Journal Template – Session 3 .....	125
APPENDIX-I: Reflective Journal Template – Session 4 .....	126
APPENDIX-J: Reflective Journal Template – Session 5 .....	127
APPENDIX-K: Reflective Journal Template – Session 6.....	128
APPENDIX-L: Reflective Journal Template – Session 7 .....	129
APPENDIX-M: Reflective Journal Template – Session 8 .....	130
APPENDIX-N: Consent Form for Teachers and Administrators .....	131
APPENDIX-O: Consent Form for Parents .....	133
APPENDIX-P: Consent Form for Participants .....	135
APPENDIX-Q: Participant Numbers per Session .....	137
APPENDIX-R: Descriptive Statistics for Pre-Test and Post-Test Scores of Treatment and Control Groups for Both Scales: Mean (standard deviation) .....	138
APPENDIX-S: Results of the Paired Sample T-test Comparing Pre-Test and Post- Test Scores of the Treatment and Control Groups .....	139

APPENDIX-T: Multivariate and Univariate Analysis of Covariance for Mindfulness and Test Anxiety.....	140
APPENDIX-U: Adjusted Post-Test Mindfulness Scores by Group .....	141
APPENDIX-V: Adjusted Post-Test Test Anxiety Scores by Group .....	142
APPENDIX-W: Theme 1 – Sources of Test Anxiety .....	143
APPENDIX-X: Theme 2 – Symptoms and Responses of Test Anxiety .....	144
APPENDIX-Y: Theme 3 – Coping Mechanisms and Mindfulness Strategies .....	145
APPENDIX-Z: Theme 4 – Emotional Regulation.....	146
APPENDIX-AA: Theme 5 – Intervention Outcomes .....	147
APPENDIX-AB: Participant Gender Distribution by Group.....	148
APPENDIX-AC: Eğitim Bilimleri Enstitüsü Araştırma Etik Kurulu Onay Bildirimi .	149
APPENDIX-AD: Declaration of Ethical Conduct .....	150
APPENDIX-AE: Thesis Originality Report .....	151
APPENDIX-AF: Yayımlama ve Fikrî Mülkiyet Hakları Beyanı .....	152

### List of Tables

<b>Table 1</b> <i>Participant Gender Distribution by Group</i> .....	40
<b>Table 2</b> <i>Data Collection Plan</i> .....	47
<b>Table 3</b> <i>Data Collection Instruments</i> .....	53
<b>Table 4</b> <i>Data Collection Instruments: Cognitive Test Anxiety Scale</i> .....	54
<b>Table 5</b> <i>Data Collection Instruments: Mindful Attention Awareness Scale-A</i> .....	57
<b>Table 6</b> <i>Participants Numbers per Session</i> .....	63
<b>Table 7</b> <i>Descriptive Statistics for Pre-Test and Post-Test Scores of Treatment and Control Groups for Both Scales: Mean (standard deviation)</i> .....	64
<b>Table 8</b> <i>Results of the Paired Samples T-test Comparing Pre-Test and Post-Test Scores of the Treatment and Control Groups</i> .....	65
<b>Table 9</b> <i>Multivariate and Univariate Analysis of Covariance for Mindfulness and Test Anxiety</i> .....	66
<b>Table 10</b> <i>Theme 1. Sources of Test Anxiety</i> .....	70
<b>Table 11</b> <i>Theme 2. Symptoms and Responses of Test Anxiety</i> .....	72
<b>Table 12</b> <i>Theme 3. Coping Mechanisms and Mindfulness Strategies</i> .....	74
<b>Table 13</b> <i>Theme 4. Emotional Regulation</i> .....	77
<b>Table 14</b> <i>Theme 5. Intervention Outcomes</i> .....	79

**List of Figures**

<b>Figure 1</b> <i>Adjusted Post-Test Mindfulness Scores by Group</i> .....	67
<b>Figure 2</b> <i>Adjusted Post-Test Test Anxiety Scores by Group</i> .....	67

## **Symbols and Abbreviations**

**BMI:** Brief Meditation Intervention

**CTAS:** Cognitive Test Anxiety Scale

**EFL:** English as a Foreign Language

**ELT:** English Language Teaching

**ESL:** English as a Second Language

**FLA:** Foreign Language Anxiety

**FLCA:** Foreign Language Classroom Anxiety

**FLLA:** Foreign Language Learning Anxiety

**L1:** First Language

**L2:** Second/Foreign Language

**MAAS-A:** Mindful Attention Awareness Scale – A

**MANCOVA:** One-Way Multivariate Analysis of Covariance

**MBIs:** Mindfulness-Based Interventions

**MBSR:** Mindfulness-Based Stress Reduction

**OECD:** Organization for Economic Cooperation and Development

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

**TA:** Test Anxiety

## Chapter 1 Introduction

Tests are a universally accepted way for selecting talent in many nations (Ning et al., 2024). Thus, it can build a test-conscious culture that can deeply affect people's lives. This culture could intensify test anxiety for middle-school students who study English as a foreign language (EFL), with anxiety becoming the prominent barrier that obstructs not only cognitive functioning but also motivation (Yang & Li, 2025). As Hughes (2005) stated, since test anxiety triggers a wide range of negative results like academic failure, low self-esteem, social isolation, performance anxiety, and dropout, test anxiety could pose a critical challenge both in the educational context and psychological setting. According to the Organization for Economic Cooperation and Development (OECD) (2017), nearly half of the students in OECD nations report test anxiety related to exam difficulty, even though they are well-prepared for the exam, which is linked to a lower academic success rate and life satisfaction. Test anxiety acts as a major obstacle to achievement, bringing a level of psychological distress into existence that can affect the students' test scores, performance, and long-term educational attainment in a negative way (Priebe & Kurtz-Costes, 2022). This matter involves both emotional and cognitive impediments, often resulting in negative consequences such as low self-esteem and poor academic performance (Hughes, 2005, as cited in Yilmazer et al., 2024). It is a multifaceted phenomenon as it not only involves physical reactions like sweating and rapid heart rate, but also cognitive symptoms such as intrusive negative self-talk and poor concentration (Stoyanova, 2023). While scholars debate the exact definition of test anxiety, it is widely identified as an excessive overreaction to academic evaluation settings. This response is rooted in the fear of failing and the results that may follow (Balogun et al., 2017; Putwain & Symes, 2018, as cited in Torrano et al., 2020). Linked to both low test scores and severe stress, research on this type of anxiety emphasizes its deep influence on the students' academic success and psychological well-being (Gellisch et al., 2024). As some scholars have stated, test anxiety is a notorious issue that influences students across diverse age groups (Krispenz et al., 2019). Research

highlights the prevalence of test anxiety, with Putwain and Daly (2014) identifying it in 16.4% of secondary students in England. In higher education settings, up to 20% of college students suffer from test anxiety, while nearly a quarter of undergraduates have high levels of test-related stress (Ergene, 2003; Thomas et al., 2018, as cited in Krispenz et al., 2019). According to Gerwig et al. (2015), Naveh-Benjamin et al. (1997), and Zeidner (1998) (as cited in Minihan et al., 2021), at the university level, an estimated 20-40% of college students experience such severe test anxiety that it can hinder their academic performance. This form of test anxiety involves both cognitive elements, like worrying about the consequences of failing, and physical symptoms, like tension and autonomic nervous system activation (Putwain et al., 2021). The students experiencing severe test anxiety could demonstrate other symptoms, such as cognitive doubts regarding information retrieval, besides physiological responses like sweating and a racing heart, often leading to a need to escape the classroom (Cassady & Johnson, 2002). According to Liebert and Morris (1967) (as cited in Concannon et al., 2020), these factors could provoke task-irrelevant cognitions that obstruct attentional focus while taking a test, which in turn lower cognitive and intellectual results. Extreme levels of test anxiety may cause the students to avoid the situations that necessitate evaluation because they fear feeling humiliated and might develop social phobia (Gamer et al., 2008).

In order to manage the multifaceted nature of test anxiety, educational institutions ought to embrace behavioral interventions into their system. Therefore, the negative impact of test anxiety can be reduced, whilst the students' well-being and academic performance could be improved (Williamson et al., 2024). As cognitive, behavioral, and physiological signs of test anxiety are linked to each other, the treatments should be comprehensive and multifaceted. Incorporating mindfulness techniques has the potential to reduce the negative impacts of test anxiety on the students (Nwadi et al., 2025; Dundas & Nygård, 2024).

Since mindfulness-based interventions (MBIs) have the potential to enhance students' ability to regulate attention, emotions, and performance in EFL, they can offer a

significant number of strategies for mitigating test anxiety (Skelly & Chichón, 2021; Sun et al., 2025). Recent studies highlight that mindfulness-based activities, such as mindfulness-based stress reduction (MBSR) and brief meditation intervention (BMI), are able to lower test anxiety in adolescent EFL learners, including high school students in diverse cultural settings (Dundas & Nygård, 2024; Fayerberger, 2023; Ning et al., 2024). Accordingly, a meta-analysis demonstrates that mindfulness-based interventions (MBIs) can considerably reduce test anxiety in diverse groups, which makes it appropriate for the middle school EFL students (Yilmazer et al., 2024).

However, the limited availability of customized intervention programs for middle school EFL learners underscores a significant research gap, which this study aims to fill by examining the influence of brief mindfulness practices in regular classroom settings.

### **Statement of the Problem**

Although there is a prominent emphasis on high-stakes tests in Türkiye's education system to strengthen and evaluate the information acquired in the school environment, it brings a pervasive barrier with it, which is test anxiety. The students who are exposed to these exams can develop test anxiety from an early age, which might intensify the states of worry, fear, cognitive interference, and failure. In the Meram district of Konya, as in some contexts in Türkiye, the EFL learners are observed to experience high stress levels during the assessments. This issue is pivotal as there is a risk for the learners who experience high levels of test anxiety to hinder not only their grades but also their psychological well-being and coping mechanisms (Alazemi et al., 2023). Whereas the conventional teaching methods mainly revolve around curriculum delivery, sometimes they overlook the psychological factors, in this case, test anxiety, that keep the students from showing their capacity during the assessments. Recent research has pointed out a strong correlation between mindfulness, resilience, and reduced anxiety levels in language learning (Shen, 2022). Nevertheless, there is a lack of empirical evidence in terms of the combined

application of mindfulness practice, including meditation, guided imagery, body scans, mindful listening, and so on, as well as creative teaching methods, such as storytelling, dramatization, and kinesthetic activities, within the specific demographic of sixth-grade students in Turkish public middle schools. In other words, there is a gap in research investigating the short-term effects of an integrated mindfulness and creative teaching treatment on the Turkish students' cognitive test anxiety and mindful awareness. Unless specific treatments are implemented, the test anxiety cycle could continue to diminish the learners' engagement with English and risk their coping mechanisms and academic success. Thus, it can be said that there is a need to explore the potential pedagogical ways to handle this issue effectively. Therefore, this study addresses the problem of high level of test anxiety among 142 sixth-grade EFL students by implementing an integrated 12-week mindfulness and creative teaching methods intervention to determine whether the treatment is influential for reducing the learners' test anxiety while enhancing their mindfulness. Addressing this issue can be essential for advancing the students' coping mechanisms, anxiety management skills, emotional well-being, and academic performance as well as for providing practical insights for English teachers seeking alternative and integrated approaches to handle test anxiety.

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

Test anxiety has always been a challenge for EFL students, hindering not only their coping mechanisms but also stress management. To eliminate test anxiety, effective solutions are highly required. Thus, this research seeks to explore the integration of mindfulness practices and creative teaching methods as potential solutions to diminish the test anxiety of the 142 EFL learners in a middle school in Konya, Meram district. Also, this study aims to explore the effective implementation of mindfulness practices and creative teaching methods on middle school students' test anxiety in EFL classes to understand the relationship between these pedagogical approaches and students' anxiety levels, performance, and overall well-being. Overall, the study focuses on reducing text anxiety,

improving the mindfulness of the students, promoting positive attitudes towards testing, and managing stress. Therefore, the participants can make use of mindfulness and creative teaching practices and demonstrate their efficiency which can be important for inspiring other teachers in the field and signaling an alternative way to combat test anxiety by integrating mindfulness.

This research aims to investigate the impact of mindfulness practices and creative teaching methods as potential solutions for alleviating test anxiety of 142 EFL students attending a middle school in the Meram district of Konya. Furthermore, this study seeks to explore the effective implementation of mindfulness practices and creative teaching methods within middle school foreign language classrooms to understand the relationship between these pedagogical approaches and students' anxiety and mindfulness levels. Overall, the study focuses on reducing test anxiety, enhancing students' mindfulness, fostering positive attitudes toward examinations, and managing stress. Consequently, participants may benefit from mindfulness and creative teaching practices, demonstrating their efficacy. This is significant for inspiring other educators in the field and signaling an alternative pathway for combating test anxiety through the integration of mindfulness.

In recent studies, test anxiety has emerged as a significant challenge for EFL students, hindering not only their academic performance but also their well-being. A study conducted by Alazemi (2023) examining the EFL students in Iran found that test anxiety negatively affected exam scores and general academic achievements. Furthermore, research by Alazemi (2023) and his team highlighted the impact of test anxiety on EFL students' performance, emphasizing the need for anxiety management and reduction strategies to improve educational outcomes. Additionally, a study involving Chinese EFL students found that mindfulness and resilience together could significantly predict anxiety levels. The research demonstrated that the implementation of mindfulness practices could reduce anxiety in language learners and promote better academic performance and well-being (Shen, 2022). As evidenced by these studies, there is a need for effective solutions

to mitigate the negative effects of test anxiety. Therefore, this thesis aims to explore the integration of mindfulness practices and creative teaching methods as potential solutions to reduce the test anxiety of students learning English as a foreign language in a public middle school. Furthermore, while evaluating the effectiveness and role of interventions related to these methods in reducing students' test anxiety in the short term, it aims to provide insights for teachers on applying these methods to increase students' mindfulness while alleviating their test anxiety. Students' attitudes towards the interventions can be observed through the reflective journals they kept. For this purpose, the quasi-experimental nonequivalent pre-test – post-test control group design is selected, and the study is conducted in Konya during the 2024–2025 academic year. The sample consists of 142 6th-grade middle school students aged 12 to 14, with similar proficiency levels. They are placed into two control and two experimental groups, each consisting of either 35 or 36 students. Mindfulness-based intervention activities, such as breathing exercises, physical exercises, yoga, meditation, body scan, visualization/guided imagery, mindful writing and listening, writing positive affirmations, fight, flight, and freeze technique, 5-4-3-2-1 grounding technique, and creative teaching methods-based intervention activities, such as drawing, storytelling, tales, games, drama, and music-based learning, are presented to the experimental groups by the researcher. Meanwhile, the control groups continue with their usual teaching methods and activities. To measure test anxiety levels and mindfulness before and after the intervention, the Cognitive Test Anxiety Scale (CTAS) is administered (Cassady & Johnson, 2002). In addition, the Mindful Attention Awareness Scale-A (MAAS-A) is applied (Brown & Ryan, 2003). The intervention and data collection process has lasted for eight weeks, with each session lasting one lesson period (forty-five minutes). Including the introduction of the research, obtaining consent forms, and administering the scales at the beginning and end of the process, the entire procedure has taken a total of 12 weeks. Quantitative data obtained from the scales are analyzed using Statistical Package for the Social Sciences (SPSS) One-Way Multivariate Analysis of Covariance (MANCOVA), while qualitative data from reflective journals collected from each participant at the end of each session are

analyzed using thematic analysis. At the end of the study, it has been observed that while participants' mindfulness and test stress management skills have increased, their test anxiety levels have decreased.

It has been observed in various studies that the tests utilized by educational institutions to assess the educational process, student knowledge, and performance contribute to an increase in students' test anxiety. For instance, Shi et al. (2014) reported that test anxiety causes impairment in students' emotional working memory capacity. This finding is negatively correlated with test performance (Ackerman & Heggstad, 1997). Another study conducted by Cassady (2010) revealed that 20% to 40% of the students in the sample experienced test anxiety. Based on these studies, it can be concluded that test anxiety may negatively affect students. Mindfulness is an effective method for reducing test anxiety; indeed, as stated by Williams and Penman (2011), mindfulness is an effective coping skill against the chaos of modern life. As summarized in Taşkın's (2018) research, there is strong evidence regarding the positive effects of mindfulness in adults on psychological well-being (Lykins & Baer, 2009); rumination and self-compassion (Shapiro et al., 2007); concentration and mental clarity (Young, 1997); sustained attention (Chambers et al., 2008); and emotion regulation (Chambers & Allen, 2008). In studies conducted in Türkiye, it is observed by Tuncer (2017) and Demir (2017) that mindfulness practices reduce students' test anxiety. In light of this research, the current study employed mindfulness and creative teaching methods to reduce the test anxiety of EFL students, who constituted the study's population. The sample, selected to represent the population without randomization, consisted of 142 EFL students with similar educational levels and a balanced gender distribution at a middle school in the Meram district of Konya. Regarding the projected results of the study, it is expected that participants' test anxiety would be reduced through the intervention and that progress would be demonstrated by analyzing the responses given to the CTAS and MAAS-A administered before and after the intervention. Finally, it is anticipated as a potential outcome that the integration of

mindfulness and creative teaching practices would indicate whether they are beneficial in reducing test anxiety and inspiring other teachers to create supportive and engaging learning environments that help students manage test anxiety and improve language skills.

### **Main Research Question**

To what extent does an intervention integrating mindfulness practices and creative teaching methods impact the test anxiety levels of the middle school students who learn English as a foreign language?

### ***Sub Research Questions***

Is there a statistically significant difference in test anxiety and mindfulness levels between students exposed to the intervention in the experimental group and those who did not receive any intervention in the control group?

What is the effect of the intervention on students' test anxiety in EFL assessments compared to traditional instruction?

Do the impacts of the intervention on test anxiety vary significantly based on students' gender or proficiency level?

How do the middle school students perceive the mindfulness and creative activities' usage regarding their test anxiety?

Which specific elements of the intervention do students report as most influential in managing their test anxiety?

Based on the students in the experimental groups' journal entries, which specific components of the intervention are reported as most effective in alleviating test anxiety?

### **Assumptions**

In the scope of this study, it is assumed that mindfulness and creative teaching practices are related to test anxiety. Also, it is assumed that the mindfulness and creative

teaching methods-based intervention encompasses strategies, such as coping mechanisms, emotional regulation, student agency, and preference. Additionally, it is supposed that creative teaching methods and mindfulness practices can be integrated into EFL classes. Over and above that, like the participants utilize these methods in combating test anxiety, other participants with different ages, genders, cultural features, languages, and learning backgrounds can be influenced by the interventions. The final assumption is that the study's long-term and short-term contributions and effects are observable.

### **Limitations**

Initially, the research design may limit the scope of the study due to some potential limitations such as sample attrition, dropping out of the study, the Hawthorne effect, and researcher bias. Besides, the quasi-experimental design, although suitable for a real-world educational setting, meant that random assignment to experimental and control groups was not feasible. Also, although One-Way MANCOVA was employed to control for pre-existing differences statistically, unmeasured confounding variables could still potentially influence the outcomes. Moreover, methods used in the intervention, such as mindfulness and creative teaching methods, might be challenging as each requires consistency and detailed preparation. Furthermore, since it is a short-term research, it might not capture the intervention's long-term influence on test anxiety. Additionally, external factors like the participants' relationships with family and friends, as well as other school activities, can affect and limit the study results. What's more, various cultures and language barriers of the EFL students may influence their participation in and benefit from the study. Over and above that, the sample was drawn from sixth-grade students in a public school in Turkey, which limits the generalizability of these findings to other age groups, cultural contexts, or socioeconomic backgrounds. On top of that, while the qualitative data provided rich, in-depth insights, the purposive sample of 24 students, though meticulously selected to represent different anxiety levels, does not allow for direct generalization of individual experiences to the entire experimental group. The reliance on self-report measures for both

quantitative scales and qualitative journals may introduce social desirability bias, where participants report what they believe is expected of them rather than their true experiences. Lastly, future research could benefit from incorporating objective physiological data to corroborate self-reported changes. Thus, these limitations were considered to lessen their impact while contributing to the validity and reliability of the research's findings and results.

## **Definitions**

**EFL Learners:** The students who learn English as a Foreign Language. Educational and cultural background, learning characteristics, and bias can obstruct the learning process.

**Mindfulness:** Mindfulness can be described as the practice of maintaining a purposeful, non-judgmental focus on the continuous flow of experience in the present moment (Kabat-Zinn, 2003).

**Creative Teaching Methods:** Techniques that can involve art-based, drama-based, play-based, tale-based, and music-based activities to teach the learners a phenomenon effectively.

**Test Anxiety:** A blend of emotional, physical, and behavioral reactions triggered by the fear of academic failure (Zeidner, 1998). When a person faces an evaluation, that person's autonomic nervous system becomes overactive, which can be observed as it manifests through some physical symptoms such as sweating and rapid heart rate. These symptoms can strengthen the feeling of incompetence, leading to a negative psychological relationship with testing (Nicaise, 1995).

**Art-based Activities:** Based on art therapy, art-based activities include visual and creative exercises such as role-playing, drawing, descriptive writing, and storytelling to improve the learners' perceptive and productive skills while encouraging them to relax, be creative, and express themselves freely.

**Drama-based Activities:** Being shaped according to the principles of dramatization, these activities are beneficial in preventing test anxiety as they include role-play, storytelling, improvisation, and simulation that require adapting to the changes in the scenario, managing stress, and improving coping mechanisms through repetition.

**Play-based Activities:** Based on play therapy, these activities include a wide variety from sensory play to therapeutic games and they promote learning, manage anxiety, encourage peer interaction, and build test familiarity through play.

**Tale-based Activities:** Based on tale therapy, it reinforces using stories to enhance empathy, create a self of identity or awareness, analyze the situation, and understand the main idea. Since it relies on storytelling, it makes the participants develop coping mechanisms, strengthen their application in real-life exam situations, and eventually manage anxiety.

**Music-based Activities:** Being related to mindful listening, these activities include singing, song composing, and rhythmic activities to provide relaxation due to their calming effect.

**Emotional Regulation:** It stands for the ability to control, monitor, and change emotions and reactions. If regulated properly, it can reduce test anxiety.

## **Chapter 2**

### **Theoretical Basis of Research and Literature Review**

#### **Test Anxiety**

Test anxiety can be defined as a phobic anxiety type in academic contexts; thus, it can trigger emotional reactions and physiological transformations in students who view the testing concept as a threat (Acosta, 2024). Although test anxiety is not categorized as a standalone diagnosis in the DSM-5 or ICD-10, it is clinically recognized as a situational phobia or a specific form of social anxiety centered on the fear of evaluation (Falkai & Wittchen, 2015, as cited in Maier et al., 2020). In spite of the fact that test anxiety lacks a formal status, its influence, like distress and daily impairment, aligns with established anxiety disorders, such as social phobia or generalized anxiety disorder. This can be evident in how test anxiety is triggered by the assessment of performance and the presence of harmful coping strategies (Putwain et al., 2021). Moreover, it centers on an intense level of anxiety that could trigger not only emotional distress but also physical responses (Guo et al., 2023). This condition triggers a complex range of mental and physical responses, including feelings of inferiority, distorted self-perception, and intense autonomic nervous system activation. These physiological reactions, such as nausea, sweating, and increased blood pressure, reflect extreme levels of stress and tension (Lohaus et al., 2007, as cited in Maier et al., 2020). Furthermore, it might impede a person's individual cognition and personality. Besides, test anxiety is hard to define and classify as its close relationship with other anxiety disorders entangle the conceptualization, while its overlap with other conditions signals that it might be a specific expression of a broader anxiety spectrum (Putwain et al., 2021). To give an example, it is demonstrated that test anxiety is related to panic disorder as well as generalized anxiety disorder, as these conditions stem from a common sensitivity to stress and exhibit similar physiological symptoms (Putwain et al., 2021). Notably, on the one hand, test anxiety's physical symptoms resemble those of panic disorder, whilst the mental "worry" aspect is more like generalized anxiety disorder. On the other hand, they remain distinct conditions that are related in spite of the similarities they

have (Putwain et al., 2021). For example, a significant number of studies using latent profile and network analysis confirm that test anxiety is different from generalized anxiety or panic disorders. They remain separate issues, whereas they can share similar symptoms and occur together (Putwain et al., 2021). This connection is of the utmost importance because test anxiety is not just a byproduct of panic or generalized anxiety disorder; it is a distinct condition. Even if a student with a high level of test anxiety might be diagnosed with other anxiety disorders as well as test anxiety (Putwain et al., 2021). In fact, those people who suffer from intense test anxiety often meet the requirements for social phobia, overanxious disorder, or specific phobias, particularly when they are the subjects of an assessment in academic or workplace settings (Putwain et al., 2021). It is pivotal to consider this difference, as even though test anxiety is not classified as a formal disorder, it can trigger or occur alongside other anxiety disorders, which might make it harder to diagnose and treat (Putwain et al., 2021). Such interactions indicate that test anxiety ought to be perceived as a specific manifestation of a wider psychopathology dimension rather than an independent clinical entity (Putwain et al., 2021). What is more, test anxiety can be so severe that it necessitates formal accommodations; as a result, a surrogate diagnosis is generally utilized to secure support until the condition is officially recognized; however, it is not considered a standalone disorder in the DSM-5 (Putwain et al., 2021). This piece of information could emphasize a conflict in psychiatric nosology as test anxiety bears the risk of damaging a student's mental health and grades; the need for help remains immediate, even though the condition lacks its own official and distinct category in diagnostic manuals (Putwain et al., 2021). The issue is intensified by high anxiety rates in youth, many of whom report their mental health being poor or substandard (Journault et al., 2022). Since even mild, subclinical anxiety has the potential to negatively affect the students' life quality, considering academic settings, this issue can be troublesome (Journault et al., 2022). Additionally, long-term data obtained from longitudinal studies and meta-analyses suggest that high levels of test anxiety are linked to lower exam scores, irrespective of a student's past record of academic success (Putwain et al., 2021). Ultimately, the combination of cognitive

impairment and physical distress can severely hinder a student's concentration and motivation, making it difficult to succeed academically or manage daily life (Fehm & Fydrich, 2011, as cited in Maier et al., 2020).

## **Mindfulness**

Mindfulness is defined as an intentional and objective awareness of one's current sensory, cognitive, and emotional states (Pan & Liu, 2022). Mindfulness could be described as a concept of maintaining a purposeful, non-judgmental focus on the continuous flow of experience in the present moment (Kabat-Zinn, 2003). Originating in Eastern traditions, it has been put forward by Kabat-Zinn and developed within Western psychological frameworks by figures like Ellen Langer, bridging Eastern philosophy and Western psychology. The mindfulness concept embraces two major perspectives: the Eastern approach and the Western socio-cognitive approach. The Eastern approach is centered on meditative, non-judgmental awareness and neutral, present-based attention (Moghadam et al., 2020). The Western socio-cognitive approach focuses on viewing mindfulness as the proactive identification of new nuances within one's environment, in other words, active generation of new categories within social, external, and material contexts. In order to integrate mindfulness into foreign language education, a wide range of practical applications is suggested; these practices range from yoga-based physical exercises, breathing exercises, meditation, to the formation of mindful learning experiences via journaling and expressing gratitude (Gönen, 2022). By utilizing primary mindfulness techniques, such as breathing and meditation, the students can reduce stress and adopt a mindful attitude (Gönen, 2022). These techniques are effective to foster a non-reactive and non-judgmental awareness of one's mental states, like thoughts and feelings, as well as physical states like bodily sensations. Incorporating the mindfulness concept into EFL classrooms can be beneficial for converting negative emotional states into positive learning conditions. When it is applied to language education, mindfulness can enable the students to approach linguistic input with enhanced sensitivity, leading to more involvement in communicative

activities and complex communication (Gönen, 2022; Piscayanti et al., 2024). Applying mindfulness principles in the classroom could motivate the students to embrace the language learning process with a tolerance for errors. Also, they could consider the process with a “beginner’s mind” and remain interested in the target language without being afraid of future performance, results, and strict expectations (Al-Rashidi & Aberash, 2024; Gönen, 2022). Due to the fact that mindfulness has its focal point on present-moment acceptance, addressing Foreign Language Anxiety (FLA), an affective barrier that degrades motivation and cognitive performance, some scholars suggest mindfulness-based treatments as promising tactics for improving emotional regulation and motivation (Yang & Li, 2025). As mindfulness can be utilized for mitigating FLA, it can also be practical to ease test anxiety. In the field of EFL instruction, the ability to regulate emotions is crucial, as teachers need to balance a wide array of emotional states, from positive to negative ones, whilst being in charge of the multifaceted spiritual, cultural, and instructional requests of their job (Wang, 2022). As a consequence, a positive teaching experience with deeper student engagement can be created (Gönen, 2022). Ultimately, mindfulness is conceptualized as a developable trait through practice, promoting empowerment and self-worth, while allowing the students to manage their emotions and ideas through unbiased awareness and the ability to redirect focus (Wang, 2022).

### **Negative Effects of Test Anxiety on English as a Foreign Language Learners**

This section reviews the negative effects of test anxiety on EFL students. First and foremost, the anxiety phenomenon in English language learning has been studied across various countries, participants, and academic levels (Desta, 2019). Anxiety related to foreign language constitutes a multifaceted framework of self-perceptions, beliefs, and attitudes related to language learning, and it deeply affects the learners’ test scores and classroom discourse (Song, 2024; Han et al., 2022). This specific anxiety form is described by a sense of concern tied to the process of learning a language (Mahmoud, 2024). This unique manifestation of anxiety encompasses self-perceptions, beliefs, feelings, and

behaviors inherently tied to classroom language learning, often amplified by instructors' evaluative roles (Laachir et al., 2022). A consensus in the literature identifies anxiety as a barrier that hinders foreign language acquisition and performance (Wakuma, 2025; Yu & Zhou, 2022). Defined by pressure and fear, this form of anxiety is established in the literature as a major obstacle to language acquisition (Shen, 2022). This phenomenon highlights the necessity of distinguishing between facilitative and debilitating anxiety, as the latter consistently correlates negatively with academic achievement and foreign language acquisition (Ali & Anwar, 2021; Pourfeiz, 2016). However, the consensus largely supports the debilitating nature of anxiety, particularly when it escalates to higher levels, hindering cognitive processing and reducing effective language output (Farid, 2021). Test anxiety, in particular, manifests as a combination of phenomenological, physiological, and behavioral responses triggered by the apprehension of failure in evaluative situations, such as language examinations (Gao, 2022). Being defined as a common problem, test anxiety manifests through emotional, physical, and mental distress during formal assessments and evaluations (Altamimi & Altamimi, 2025). Basically, this type of anxiety is characterized by a lack of focus, intrusive negative thoughts, and physical stress, which generally results in failing to perform and increased anxiety (Nwadi et al., 2025). This type of performance anxiety is characterized by intrusive thoughts, physiological arousal, and avoidance behaviors, which collectively impair cognitive processing and memory retrieval during assessments (Özdemir & Seçkin, 2025). However, test anxiety remains a common challenge for language learners to this day, obstructing academic success and the well-being of the students by interfering with cognitive focus and emotional regulation during tests (Chancey et al., 2023). These anxieties can severely undermine a student's ability to demonstrate their true linguistic competence, often leading to lower test scores irrespective of their actual knowledge (Zheng & Cheng, 2018). In other words, extensive research points out that anxiety related to a foreign language is a significant factor in student achievement during evaluations (Boltayevich et al., 2025). To give another example, studies show a negative correlation between the students' anxiety levels and English language proficiency

test results (Wakuma, 2025). Also, this anxiety could obscure a student's real linguistic proficiency and ability, resulting in assessment outcomes that fail to reflect the student's underlying competence and knowledge (Ali & Anwar, 2021; Gawi, 2020). As Zhao (2024) explained, this issue is heightened in EFL environments, where cultural and linguistic limitations can intensify the sense of pressure and insecurity during high-stakes tests. Such classroom-specific anxiety can be intensified by both intrinsic learner characteristics, including perceived proficiency levels, and extrinsic factors, such as teaching methodologies and classroom dynamics (Jin et al., 2021). Additionally, the deficits in student self-belief and supportive linguistic environment, learning environment might serve to compound this anxiety (Zhou et al., 2026). In specific contexts, such as the Chinese university system, these variables act together to reinforce a state of high apprehension (Zhou et al., 2026). This multifaceted anxiety often comprises communication apprehension, fear of negative evaluation, and the specific anxiety related to testing scenarios, each capable of hindering linguistic skill development across all modalities (Özdemir & Seçkin, 2025). Moreover, researchers have identified that a limited vocabulary, grammatical inaccuracies, and insufficient practice in writing contribute significantly to heightened anxiety among foreign language learners (Rasool et al., 2023). Indeed, learners frequently experience heightened anxiety concerning their productive skills, such as speaking and writing, compared to their receptive skills, like listening and reading, often attributing this to perceived deficiencies in vocabulary rather than grammar (Medina & Casado, 2024; Özdemir & Seçkin, 2025). Furthermore, this anxiety reaches past simple worries about performance, actively hindering reading proficiency and understanding complex language while taking a test (Tsai, 2012). Another study remarks that learners with high levels of anxiety frequently utilize fruitless study methods, signaling a deficit in the organizational and study skills required to achieve ultimate performance on tests (Bakhtyari & Hafizoah, 2022). These students could frequently worry about the technicalities of the testing process, such as marking answer sheets correctly. When combined with environmental pressures like strict time constraints and perceived difficulty, these factors

might worsen their stress. Furthermore, the fear of achieving poor marks or failing, alongside the struggle to differentiate between similar answer choices, significantly can contribute to their overall anxiety levels. These impacts generally stem from some stressors, such as the fear of making mistakes, social anxiety during interaction, and fear of being judged, which intensify the pressure of anxiety in language classrooms, especially during assessments (Quispe-Sanca et al., 2024; Mahmoud, 2024). Additionally, factors like fear of social judgment and negative evaluation are critical components of test anxiety in EFL learners, often leading to significant distress (Quispe-Sanca et al., 2024). Furthermore, students often compare themselves to peers, which can induce anxiety, particularly when coupled with a fear of negative evaluation or prior negative experiences (Laachir et al., 2022). As a matter of fact, manifesting as social unease, fear of criticism, and test-related stress, these anxieties represent critical issues to learner success (Mahmoud, 2024). In EFL contexts, they are linked to lower achievement levels and cognitive processing during language tasks (Mahmoud, 2024). This intricate relationship generally leads to academic, cognitive, and social drawbacks, which restrain the efficiency of language learning and performance (Song, 2024). Also, it can make it impossible for the students to engage with the target language despite having the cognitive capacity for language acquisition. Such anxiety can serve as a source of demotivation, significantly reducing the students' enthusiasm to participate in pedagogical language exercises and activities (Mahmoud, 2024). Also, it can cause the learners to demonstrate some avoidance behaviors, where the students withdraw from language practice to prevent any potential embarrassment or inconvenience (Mahmoud, 2024). This can be defined as an avoidance behavior. The origin of these behaviors could be embarrassment or distress, retaining important communication skills while triggering challenges faced during the learning process (Journal of Education and Learning, 2021; Mahmoud, 2024). As a result, these avoidance behaviors could reinforce a self-perpetuating cycle, where poor performance trigger high level of anxiety during future assessments (Wakuma, 2025). This obstacle does more than distort test results; it discourages the teachers and students, drawing attention to the urgent necessity

for influential intervention methods (Bensoussan, 2012). Since testing often triggers performance anxiety in students of all ages, resulting in remarkable academic and psychological difficulties, prioritizing a solution is essential (Yilmazer et al., 2024). The buildup of these anxiety responses could severely damage long-term foreign language proficiency, requiring the finding of techniques that alleviate these harmful effects (Jin et al., 2021). Due to the fact that anxiety related to a foreign language can negatively impact the students' performance and willingness to participate, innovative strategies are crucial to build an influential and supportive classroom environment for EFL students (Laachir et al., 2022). To minimize the influence of anxiety, especially test anxiety, its nature and underlying physiological and psychological mechanisms should be investigated, particularly while designing the interventions (Özdemir & Seçkin, 2025). This nuanced understanding is vital for developing targeted interventions that address the specific manifestations of anxiety within language acquisition, rather than applying generalized anxiety reduction techniques (Zheng & Cheng, 2018). Therefore, interventions must be designed to specifically target these different facets of anxiety, moving beyond generic anxiety reduction techniques to address the unique challenges of foreign language acquisition (Medina & Casado, 2024; Haroud et al., 2025). Additionally, this complex issue covers more than communication apprehension and fear of negative judgment; it also includes specific anxieties about unfamiliar foreign language assessments and concerns about grading (Song, 2024; Haroud et al., 2025). The intricate relationship between anxiety and language performance is further complicated by cultural influences and individual differences in anxiety categories, such as trait, situational, and state anxiety, which profoundly impact complex learning processes, including test-taking and critical thinking (Zheng & Cheng, 2018). This perspective acknowledges that language anxiety is not merely a transient emotional state but rather a complex interplay of cognitive appraisals, emotional responses, and behavioral manifestations deeply rooted in individual predispositions and the specific learning environment (Labicane, 2021; Wu et al., 2022). Indeed, studies consistently demonstrate that such anxiety can diminish both linguistic skills and learner enjoyment, ultimately leading

to reduced fluency, accuracy, and complexity in oral and written language production (Özdemir & Seçkin, 2025). Consequently, high levels of debilitating anxiety are often associated with poorer outcomes in both receptive and productive language skills (Özdemir & Seçkin, 2025), demonstrating a clear need for strategies to mitigate its adverse effects. Therefore, further investigation into the intricate relationship between these psychophysiological factors and the efficacy of mindfulness and creativity interventions in reducing test anxiety and improving performance in digitally-mediated language assessments is warranted (Lee et al., 2022). Specifically, this research aims to elucidate how mindfulness practices might ameliorate the detrimental effects of sleep disturbance and social inhibition on test anxiety, while creative approaches could potentially mitigate cognitive load in computer-based writing tasks (Lee et al., 2022). This paper seeks to bridge this gap by examining the interplay of these psychophysiological factors with mindfulness and creativity interventions, particularly within the context of computer-based second language writing assessments. The present study will further explore the impact of specific personality traits, particularly social inhibition, on test anxiety in digital assessment environments and whether mindfulness-based interventions can effectively moderate these effects (Lee et al., 2022). Given the limitations of previous research, which often relied on self-report measures and single-item assessments for cognitive load, this study will endeavor to employ multi-item measures where feasible to enhance the reliability and validity of the findings (Lee et al., 2022). Hence, investigating pedagogical methods to mitigate test anxiety in EFL learners, particularly through mindfulness and creative teaching methods, is vital for creating a supportive classroom environment and enhancing educational outcomes (Wang, 2022; Stoyanova, 2023). Synthesizing the aforementioned evidence in studies, it is evident that test anxiety poses significant risks to EFL learners. These stressors not only cause lower test scores, performance, and engagement but also exacerbate test anxiety and avoidance behaviors. Consequently, the implementation of targeted intervention strategies is pivotal to mitigating these detrimental outcomes.

## **Mindfulness and Anxiety Relationship in the English as a Foreign Language Context**

The following section explains the intersection of mindfulness and test anxiety, highlighting their combined potential to reduce stress-related issues that the students face within the EFL context. Extensive studies identify anxiety as an emotional barrier that prevents language acquisition, frequently presented as a form of fear, pressure, and situational stress in foreign language contexts (Shen, 2022). Apart from test anxiety, recognized as Foreign Language Learning Anxiety (FLLA) and Foreign Language Anxiety (FLA), this construct might obstruct students' achievement and involvement, regardless of whether they have the necessary cognitive skills to succeed (Shen, 2022). This type of anxiety could often trigger cognitive and emotional distress, which correlates with a reduction in academic success, well-being, self-esteem, and the learners' self-concept (Hughes, 2005, as cited in Yilmazer et al., 2024). Furthermore, this anxiety mostly appears as a distinct form of tension and discomfort in second language learning situations, which influence intellectual and academic skills of the students (Wakuma, 2025). Additionally, unlike general anxiety, anxiety experienced in foreign language classes affects the language learning process as it creates a barrier to a student's development because of its unparalleled necessities (Özdemir & Seçkin, 2025). This particular form of anxiety, different from general classroom anxiety, constitutes a distinct and complicated psychological phenomenon built into the experience of learning a foreign language (Özdemir & Seçkin, 2025). FLA is conceptualized as a specialized framework of attitudes, self-perceptions, emotions, and beliefs, and this construct is specifically triggered by the demands of the L2 environment (Rasool et al., 2023). This phenomenon stems from an intricate interaction between a student's self-image, beliefs, manners, and behaviors connected to classroom language learning, originating from a fear of evaluation, communication anxiety, and concern related to unfamiliar examinations about a foreign language (Song, 2024). This specific type of anxiety is frequent in the L2 environment, where the learners frequently experience a lack of readiness and distress when they try to speak without sufficient

rehearsal (Laachir et al., 2022). Especially, no matter how old the students are, what their first languages are, and how skilled they are, FLA could damage the L2 learning process (Wu et al., 2022; Jin et al., 2021). This universal and inevitable form of anxiety exceeds the classroom environment and evolves into a broader linguistic tension (Wu et al., 2022). In other words, such anxiety could act as a cognitive barrier and hinder the acquisition, internalization, long-term storage, retention, and output of the target language (Wu et al., 2022). If this type of anxiety is not dealt with, it could become cumulative and cause severe and adverse influence on a student's foreign language performance in the long run (Jin et al., 2021). This specific distress might present as tension, apprehension, stress, and fear during foreign language interactions, constantly driven by the fear of making mistakes and being criticized (Mahmoud, 2024; Labicane, 2021). In the EFL classrooms, this issue could manifest through increased physiological tension, mental blocks, avoidance behaviors, and disrupted cognitive functioning during linguistic activities, which sabotage learning outcomes (Özdemir & Seçkin, 2025). This anxiety could cause them to perform avoidance behaviors like attempting to stay unnoticed or avoiding eye contact (Wu et al., 2022; Jin et al., 2021). These behavioral displays in a foreign language classroom setting underline how much anxiety can interfere with a student's communicative competence and participation (Jin et al., 2021). Some research specifies that high levels of anxiety in foreign language learning contexts could act as an obstacle to the language acquisition processes while inhibiting the improvement of necessary linguistic skills (Özdemir & Seçkin, 2025). As Özdemir and Seçkin (2025) previously stated, this anxiety has some detrimental effects, as it could obstruct the cultivation of communicative competence and linguistic proficiency since students might retreat from environments and contexts demanding L2 usage. Also, it can be observed that there is a negative correlation between high levels of anxiety and poor performance in terms of productive and receptive language skills (Özdemir & Seçkin, 2025). For instance, the students with moderate academic anxiety might enhance their performances by becoming more motivated, whereas the students with high anxiety levels could experience major declines in learning outcomes (Özdemir & Seçkin, 2025). This

negative impact is especially visible in output tasks such as speaking and writing, where high levels of anxiety could weaken a student's performance regarding accuracy, fluency, and complexity of output (Özdemir & Seçkin, 2025). Besides, FLA might be categorized into skills-based and systems-based dimensions (Medina & Casado, 2024). During these, the students frequently report intense anxiety regarding productive skills, such as speaking and writing (Medina & Casado, 2024). Such anxiety frequently results in communication apprehension, manifesting as a marked disinclination to engage in verbal exchanges or common worries, considering an inability to decode the speech of others (Medina & Casado, 2024). This issue extends to core linguistic elements like grammar, vocabulary, and pronunciation, all of which tend to worsen under the pressure of anxiety (Mahmoud, 2024). Consecutive studies display that FLA acts as a barrier, dragging down academic success in multiple foreign languages and particular linguistic skills (Haroud et al., 2025). This adverse relationship between anxiety and achievement remains a constant across different linguistic settings (Haroud et al., 2025). As a matter of fact, empirical evidence demonstrates that there is a moderate to high inverse relationship between FLCA and students' academic performance, especially considering speaking proficiency (Gao, 2022). This widespread anxiety could result in diminished academic achievement and willingness to take part in classroom activities; thereby, it might construct an obstacle to successful L2 acquisition (Ali & Anwar, 2021). Finally, extensive research conducted by Ali and Anwar (2021) indicates that there is a negative correlation between success and language anxiety among foreign language learners, who demonstrate poor performance because of anxiety. The roots of FLA, encompassing communication apprehension, fear of judgment, and test anxiety, create a barrier that damages the learners' language performance by obstructing cognitive processing, academic success, self-confidence, and social interaction (Mahmoud, 2024). These stressors could impede the learners' engagement with L2 and communicative intent, resulting in deteriorating proficiency as well as unwillingness to take part in communicative tasks (Mahmoud, 2024; Song, 2024). The results of this complex interaction are a major decline in social connections and academic success, as well as cognitive

processing and confidence, thereby keeping the learners away from practicing the target language because of uneasiness and embarrassment (Mahmoud, 2024). Among a wide range of stressors, cognitive test anxiety stands out as a primary barrier to success and an indicator of poor academic performance, as it has a more adverse impact on a student's success than any other anxiety type (Zheng & Cheng, 2018). This heightened vulnerability to testing, especially during exams, hinders a learner's capacity to show linguistic competence (Han et al., 2022; Zheng & Cheng, 2018; Mahmoud, 2024). Test anxiety, despite being related to other forms of anxiety, is a stressor triggered by formal assessments, which affects the student's ability to show acquired knowledge and skills (Wu et al., 2022; Chen, 2025). This specific type of anxiety is characterized by cognitive interference, worry, and emotionality, which leads to preventing the learners from reaching their full potential during the tests (Rochmawati et al., 2023). Meanwhile, test anxiety involves a blend of phenomenological, behavioral, and physiological responses caused by concerns about failing during tests (Gao, 2022). This test anxiety could be categorized into two forms, which are communication apprehension and fear of negative evaluation (Haroud et al., 2025). The former is about the discomfort of speaking a foreign language while other people are watching, whilst the latter is about being judged poorly by teachers or classmates (Haroud et al., 2025). The aforementioned test-related anxiety type is built on evaluation concerns, communicative apprehension, and a fear of the unknown foreign language test, which creates a multifaceted and unique composition that influences how the learners view their own skills (Song, 2024). These various dimensions of language learning anxiety, ranging from communication apprehension, fear of negative assessments, and test anxiety, are linked to the improvement of linguistic skills, while they could stop speaking, listening, reading, and writing skills (Özdemir & Seçkin, 2025). A remarkable number of scholars have refined the study of FLA by creating assessment tools and scales that quantify specific variables and roots of the measure of language learning anxiety, such as performance expectations, social comparisons, and psychophysiological reactions, as well as avoidance behaviors on this matter (Özdemir & Seçkin, 2025). Also, it is important to note that there is

a distinction between general classroom anxiety and skill-specific anxieties, as the former includes the students' overall classroom anxiety, whereas the latter involves their anxieties regarding specific tasks, such as writing anxiety (Cheng et al., 1999). Although both of them are interconnected, they are still distinct issues; thus, they affect the second language acquisition process in their own way (Cheng et al., 1999). This perspective facilitates the improvement of the interventions focusing on reducing particular anxieties that hinder language acquisition, reinforcing the necessity of managing various forms of apprehension within the curriculum (Cheng et al., 1999). As a result, it is essential for educators to understand the various dimensions of anxiety, including trait, situational, and state anxiety, to design and implement effective pedagogical strategies (Zheng & Cheng, 2018; Sa'eed, 2024). As noted by Yu and Zhou (2022), to solve anxiety's detrimental effects on language acquisition and output, a stress-free communicative classroom is necessary, facilitating higher levels of L2 proficiency. The many layers of FLA, including contextual, psychological, interpersonal, and cognitive areas, accentuate the requisite of building up a stress-free classroom environment, in which the learners feel supported and safe (Laachir et al., 2022). Hereby, promoting taking risks and enduring mistakes through constructive feedback and consistent practice (Laachir et al., 2022). Given this, the educators are placing greater emphasis on emotion regulation and mindfulness techniques as targeted methods to ease anxiety in EFL classrooms (Wang, 2022). By fostering staying present and accepting feelings without judgment, mindfulness has gained recognition as a promising concept to help students manage their emotions and lower stress across diverse learning environments (Zhu, 2022). As mindfulness can be utilized for mitigating FLA and FLLA, it can be practical to ease test anxiety. Thus, it can be said that it is a versatile concept, which can be practical in dealing with anxiety types such as FLA, FLLA, and test anxiety. Various implementations of mindfulness, especially as a tool for managing apprehension, demonstrate its potential for boosting students' mental health, well-being, and helping them stay focused (Shen, 2022; Xue, 2023). Furthermore, research points out that mindfulness-based interventions could enhance self-regulation as well as self-efficacy, which are two

phenomena vital for managing the challenges of acquiring a second language (Fan & Cui, 2024). Such interventions are especially relevant considering the psychological difficulties faced by EFL students in learning, where a fear of making mistakes and past negative encounters could trigger a drop in motivation and participation (Mahmoud, 2024). If this type of anxiety is not dealt with, it could become cumulative and cause severe and adverse influence on a student's foreign language performance in the long run (Jin et al., 2021). Historically, a significant number of pedagogical approaches have used curriculum-based treatment to reduce Foreign Language Classroom Anxiety (FLCA); however, they generally require intricate procedures, restricting their broad applicability (Jin et al., 2021). Alternatively, mindfulness-based treatments provide a more flexible and easy-to-use alternative since they necessitate less broad structural curriculum modifications and specialized equipment (He et al., 2023). This feature makes such interventions ideal for a wide range of educational contexts and resource availability, proposing an adaptable and reachable strategy for lessening anxiety's detrimental influence (Quispe-Sanca et al., 2024). In addition, the psychological studies highlight that the intensity of anxiety might differ among the learners and affects various stages of language acquisition differently (Quispe-Sanca et al., 2024). To give an example, the learners with lower anxiety levels are often related to more influential learning outcomes, particularly considering the main linguistic components like grammar, vocabulary, pronunciation, and intonation (Quispe-Sanca et al., 2024). As well as that, mitigating anxiety in foreign language classrooms demands specific tools and interventions that prioritize building emotional strength and practical coping mechanisms rather than conventional pedagogical methods (Xu & Ying, 2025). As there is a remarkable connection between learning and anxiety, particularly when taking tests, incorporating mindfulness-based techniques can allow the EFL students to advance emotional regulation and a resilient mindset, improving performance during tests (Fan & Cui, 2024; Khalid et al., 2023). As Huang stated (2022), incorporating mindfulness into school systems mirrors the change in research, emphasizing positive psychology. This movement seeks a balance between mitigating emotional distress and fostering positive

student attributes, such as optimism, efficacy, and well-being (Huang, 2022). By adopting positive psychology, it can be observed that mindfulness bears the potential to enable more adaptable learning experiences, advancing academic results and mental health of the EFL students (Jin et al., 2021). Thus, integrating mindfulness techniques can empower the EFL learners to develop emotional regulation and a resilient mindset, enhancing performance during tests (Fan & Cui, 2024; Khalid et al., 2023).

### **Pedagogical Implications: Teaching Methods and Mindfulness Practices to Reduce the EFL Learners' Test Anxiety**

This section reviews the studies that combine teaching methodologies with mindfulness-based practices to mitigate test anxiety in EFL contexts. Initially, numerous studies, such as Dahbi (2015), examine how mindfulness and creative practices alleviate test anxiety among EFL students, a group particularly susceptible to high levels of performance anxiety. The urgency of addressing this issue stems from the fact that, in the context of EFL education, such emotional distress responses, especially worry, serve as a barrier to student motivation and cognitive functioning (Shen, 2022; Yang & Li, 2025). This anxiety goes beyond emotional state and surface-level stress; it disrupts the mechanics of acquiring a foreign language. Whether it manifests during lessons or exams and in different forms, such as foreign language classroom anxiety and test anxiety, its presence can be a reliable predictor of diminished student performance (Cantos et al., 2024; Song, 2024). Evidence suggests that learners with high levels of test and trait mindfulness tend to obtain better scores in EFL presentations, a trend that contrasts with the lower performance seen in more anxious or less mindful learners (Skelly & Chichón, 2021). Thus, comprehending the complex layers of anxiety in EFL settings is essential for designing precise pedagogical support and interventions (Cantos et al., 2024). These studies highlight the need to investigate educational strategies and mindfulness-based interventions as potential means of reducing anxiety (Shanmugam & Jeevarathinam, 2023). Another study reviews how specific teaching strategies and mindfulness practices can lower test anxiety for EFL

students, creating a better classroom environment for developing linguistic proficiency (Shen, 2022; Tasan et al., 2021). Various studies have identified anxiety triggers and pedagogical interventions whilst investigating how instructors could help the learners manage their anxiety, highlighting mindfulness as a primary relaxation strategy (Shen, 2022; Tasan et al., 2021). Within educational environments, mindfulness-based interventions, ranging from meditation to coping strategies, have proven effective at lowering anxiety levels while increasing health and well-being (Bajri & Elmahdi, 2024). Nonetheless, while the strong correlation between anxiety and EFL achievement is well-established, there is still a lack of research investigating how mindfulness and resilience-building frameworks could be used to alleviate anxiety in EFL contexts (Shen, 2022). The previously mentioned gap is outstanding, as mindfulness has been shown to bridge the gap between self-efficacy beliefs and emotional regulation (Shen, 2022). This suggests that mindfulness may reduce the tendency for deconstructive rumination linked to anxiety (Shen, 2022). In other words, these findings point out the necessity of exploring mindfulness as a means of building resilience. By acting as a safeguard against anxiety related to foreign language, mindfulness could boost the learners' academic outcomes and mental health (Shen, 2022). Resilience, the capacity for positive adaptation in the face of stress, shares a strong connection with mindfulness; when combined, they play a vital role in lowering stress and advancing emotional health (Shen, 2022). These intertwined phenomena are pivotal for academic achievement, specifically in EFL education, where the ability to regulate emotions plays a decisive role in determining learning outcomes (Alazemi et al., 2023; Skelly & Chichón, 2021). Moreover, incorporating mindfulness-based interventions into an academic setting is an emerging field of study. Within the specific domain of EFL education, there is a demand for more empirical research and practical classroom implementations (Al-Rashidi & Aberash, 2024). Data from numerous studies indicate that the combination of mindfulness and resilience might enhance academic success indirectly by serving as a shield against the foreign language anxiety's negative impacts (Liu et al., 2025). Mindfulness assists individuals in building an internal source that fosters a deeper

sense of life satisfaction and purpose, thereby establishing a psychological defense to navigate challenges with resilience in the future (Shen, 2022). Incorporating mindfulness and resilience into educational models can reduce feelings of anxiety and academic isolation (Shen, 2022; Xu & Ying, 2025). Consequently, this approach fosters a more efficient and supportive school system that places student wellness and achievement at its core (Shen, 2022; Xu & Ying, 2025). Substantial study confirms the positive role of mindfulness in managing academic emotions, specifically test anxiety (Fan & Cui, 2024). By improving attentional control and resilience against classroom disengagement, mindfulness advances student dedication to academic work (Fan & Cui, 2024). This level of commitment and improved well-being results from mindfulness-based programs, which encourage emotional regulation and self-awareness (Shen, 2022). Additionally, these methods nurture a proactive approach to academic difficulties, allowing the learners to confront challenges with optimism and a constructive mindset, effectively turning possible stressors into chances for development (Shen, 2022). Students with a high level of mindfulness generally report lower anxiety levels and employ more constructive coping mechanisms, which is consistent with Self-Determination Theory (Shen, 2022). The Self-Determination Theory explains this by asserting that greater self-awareness allows the learners to be dedicated to their aims while regulating their emotions better (Shen, 2022). Such a shift encourages the learners to participate in demanding assignments more while maintaining motivation, even in the midst of obstacles (Alazemi et al., 2023; Liu et al., 2022). These findings indicate that mindfulness-based intervention could provide EFL students with the skills to manage the stress of language learning and transform the origins of anxiety into opportunities for self-development and involvement (Al-Rashidi & Aberash, 2024; Hedeshi & Ghanizadeh, 2024). Furthermore, mindfulness techniques facilitate personal development by helping the learners to recognize and accept negative emotions rather than suppressing them (Al-Rashidi et al., 2024). Thus, this shift in perspective deepens the students' comprehension of the learning process and strengthens their academic readiness (Al-Rashidi et al., 2024). At the core of mindfulness is a non-judgmental acceptance that

transitions students from an evaluative “doing mode” to a present-centered “being mode,” which is influential in regulating emotional responses, as it replaces problem-solving with mindful awareness (Moghadam et al., 2020). This remarkable transition could alleviate the mental strain linked to test anxiety (Fan & Cui, 2024; Yuan & Hu, 2025). By cultivating a sense of psychological safety and a more stable emotional state, this shift enables the learners to dedicate more cognitive resources to the tasks (Fan & Cui, 2024; Yuan & Hu, 2025). Such acceptance facilitates the construction of autobiographical meaning, allowing the learners to reinterpret negative events with an optimistic attitude while fully experiencing positive ones (Cao & Liu, 2024). This skill is significant for alleviating test anxiety and improving general psychological well-being (Cao & Liu, 2024). Consequently, this pedagogical perspective nurtures a profound comprehension of one’s own identity and learning process whilst facilitating a more comprehensive and resilient commitment to handling academic difficulties (Al-Rashidi & Aberash, 2024).

### **Chapter 3 Methodology**

This study's data collection plan consists of three primary phases: scale administration, intervention, and reflective journals. In this study, a mixed-methods approach is applied, as noted by Guires UK (2019), who states that combining qualitative and quantitative methods yields more detailed research results. In this study, a quasi-experimental research design is adopted, specifically utilizing a nonequivalent pre-test – post-test control group design, which reflects the quantitative aspect, while reflective journals of the students in the experimental group during the intervention reflect the qualitative aspect.

The reason for selecting the quasi-experimental nonequivalent pre-test – post-test control group design for quantitative data analysis is that it is one of the most accurate quantitative methods; it controls for extraneous variables while demonstrating that the observed effect on the dependent variable (test anxiety) stems from the manipulation of the independent variables (mindfulness and creative teaching methods). Furthermore, as indicated by Ebrahimi and Khoshsima's (2016) study on the test anxiety of EFL students, this design can be used to demonstrate the effects of mindfulness and creative teaching methods on EFL students' test anxiety, as it offers scientific evidence in determining cause-and-effect relationships within a group.

Thematic analysis can be useful for analyzing qualitative data, such as students' reflective journals in the experimental groups. Researchers like Roseveare (2023) have effectively used thematic analysis in similar contexts to understand patterns and reflect participants' experiences. The combination of the quasi-experimental nonequivalent pre-test – post-test control group design, including the CTAS and MAAS-A in the quantitative section and thematic analysis of the reflective journals kept by the students in the experimental group for eight weeks during the intervention in the qualitative section characterize this study as mixed-methods research, offering the opportunity to collect both qualitative and quantitative data.

The reason for selecting a middle school for the sample is its greater emphasis on high school entrance exams and activities that can trigger the students' test anxiety. The sample consists of 142 middle school students in the 6th grade, aged between 12 and 14, with similar proficiency levels. They are selected because they are approaching the High School Transition Exam (LGS) and are therefore likely to possess characteristics reflecting test anxiety. It should also be noted that since these students will be taking a nationwide exam for placement in a higher education institution for the first time, this exam experience may be significant and lead to anxiety. Half of the 142 participants are placed in two control groups and the other half in two experimental groups.

In the first phase, after obtaining permission from the Ministry of National Education, school administrators, participants, and their parents, the Cognitive Test Anxiety Scale (CTAS), which takes approximately fifteen minutes to complete, is administered to participants in control and experimental groups. Additionally, the MAAS-A is administered to measure students' test anxiety and mindfulness states before and after the intervention. The CTAS is a 27-item scale with a 4-point Likert-type (1 being "not at all typical of me" and 4 being "very typical of me") designed to measure participants' test anxiety levels (Cassady & Johnson, 2002). The MAAS-A is a 14-item scale with a 6-point Likert-type (1 being "almost always" and 6 being "almost never") designed to measure participants' attention, mindfulness, and awareness levels in daily life (Brown & Ryan, 2003). Özyeşil's team (2011) translated the Mindful Attention Awareness Scales (MAAS and MAAS-A) into Turkish and applied them to measure students' test anxiety and mindfulness levels. In order to support the students' comprehension, the original versions of the tests in English and provided the Turkish translation right next to each item. The translation of the items is made by a sworn translator and approved by a notary public in Meram, Konya. Moreover, to prove that the items are linguistically equivalent to the original English versions, three experts' reviews are considered, and backtranslation is conducted. Furthermore, to ensure validity and reliability in the target language, experts' opinions are taken into account.

Data obtained from the scales is analyzed using SPSS, as suggested by Sen and Yildirim (2022) in their study, as it offers the opportunity to analyze data in greater detail. Usage permissions for all scales have been obtained, and the relevant documents are presented in the appendix.

In the second phase, comprising an intervention that has taken eight weeks in total, mindfulness and creative teaching activities such as breathing and physical exercises, meditation, guided imagery, mindful writing and listening, creative drawing, storytelling, tales, games, drama, and music-based learning are presented to the experimental groups by the researcher. During this time, the control groups continue with their regular instruction. Upon completion of the second phase, participants from two control groups and two experimental groups, forty students in each, once again have completed the CTAS and MAAS-A to observe the effect of the intervention on the experimental groups' test anxiety and mindfulness levels. Furthermore, the control groups also have completed these two scales to compare the experimental groups' test anxiety and mindfulness levels with the control groups and to measure the intervention's impact on these two variables. The data obtained from the scales are analyzed using the SPSS One-Way MANCOVA to examine the combined impact of the interventions. This analysis evaluated the interaction effect of mindfulness training and creative teaching techniques on the combined dependent vector of test anxiety and mindfulness levels, using baseline (pre-test) measurements as covariates to control for initial individual differences.

In the final phase, the reflective journal, it is planned to obtain feedback from each participant in the experimental groups for eight weeks after each session regarding the intervention activities, test anxiety, and mindfulness levels. In this phase, throughout the reflective journals kept by the students, qualitative data is obtained for the research. As Roseveare (2023) suggests in studies, these data is analyzed using thematic analysis, a useful method in qualitative data analysis for identifying concepts, ideologies, and meanings to be transcribed and to facilitate the deciphering of data.

The data to be collected in the scale phase, the first part of the research, is gathered under the researcher's supervision and after obtaining Ethics Committee approval and Ministry of National Education (MEB) permission. The researcher has assisted in explaining scale items that participants do not understand, without engaging in manipulation. In the intervention (second part) and reflective journal (third part) stages of the research, participants are carefully examined and given a chance to explain themselves both in English and Turkish to increase the reliability of the data collection and analysis processes. The information and data obtained from this data collection process are used by the researcher for scientific purposes only; they cannot be shared with third parties, and the data is kept confidential.

The intervention plan is designed according to the test items in both scales. For example, the Pre-Test / Introduction phase is essential for establishing a baseline before the intervention starts. Using the CTAS scale, this phase measures the initial severity of test anxiety by identifying students who "lose sleep," "feel overwhelming pressure to get good grades," or believe they generally "perform poorly" (items 1, 25, and 26). Regarding the MAAS-A scale, the introduction captures the students' existing mental habits, such as finding it "hard to stay in the present," feeling like they are "running on automatic," or "being distracted by the past or future" (items 3, 7, and 12). This assessment highlights the specific autopilot and anxious behaviors that the intervention aims to replace with mindfulness.

Session 1, comprised of breathing exercises, body scans, and yoga, is designed to directly address specific behavioral deficits highlighted by the CTAS and MAAS-A scales. In relation to the CTAS, the session targets the high-arousal symptoms described in items 4, 7, and 24, where students report "freezing up" on exams, being too nervous to "think straight," or "struggling to calm down" upon receiving a test; the session's breathing and body scan components facilitate physiological down-regulation to specifically counteract this initial freezing and nervous arousal. Simultaneously, the session addresses lack of awareness as measured by MAAS-A items 5, 8, and 13, which reflect a tendency to ignore

physical tension, “rush through activities,” or “act without paying attention.” To solve this, body scans are used to heighten interoceptive awareness (item 5), while yoga and coordinated breathing help slow down rushing (item 8) and replace automatic behaviors with deliberate, focused attention (item 13).

Session 2 focuses on mindful listening and guided imagery. This session is structured to address specific cognitive distractions and deficits in awareness identified by the CTAS and MAAS-A scales. In the context of test anxiety (CTAS), the session targets the comparative worry and self-deprecation described in items 2 and 19, such as “wondering if other students are performing better” or feeling one is “doing poorly,” by utilizing mindful listening to train single-pointed focus. Furthermore, the visualization of a “safe space” fosters the cognitive flexibility necessary to reframe unexpected test questions as engaging challenges rather than “panic-inducing threats” (item 21). At the same time, the session addresses MAAS-A indicators of mindless behavior, such as listening with “one ear” (item 11) or “acting carelessly” (item 2), by using listening exercises to directly counter split attention. Finally, the guided imagery component is employed to cultivate early emotional recognition, helping students identify emotions as they occur rather than remaining unconscious of them until later (item 1).

Session 3 combines a storytelling activity named “Tame My Anxiety Monster” with the 5-4-3-2-1 Grounding technique to help students manage pressure and stay present. Addressing the specific problems found in the CTAS scale, this session helps students who feel their “minds go blank” or who “forget facts they actually know” when stressed (items 11 and 14). The grounding exercise gives them a solid anchor to hold onto, preventing panic and memory loss. The storytelling part addresses pre-test “confidence” (item 17) by teaching students that confidence is a skill they can build, not just a personality trait. Regarding the MAAS-A scale, the session helps students who struggle to “focus on the present” or get too “obsessed with the final goal” (items 3 and 9). The 5-4-3-2-1 technique

forces them to pay attention to their immediate senses, which stops them from rushing or acting without thinking (item 14).

Session 4 utilizes the “Thought Changing Glasses” story and affirmation transformation to help students change their internal dialogue. Addressing the CTAS scale, this session targets students who worry about the “consequences of failing,” “doubt their own intelligence,” or feel that their “test scores don’t reflect what they actually know” (items 6, 12, and 22). By turning negative self-talk into positive affirmations, the session directly combats these catastrophic thoughts and the belief that they are poor test-takers. Regarding the MAAS-A scale, the session helps students who feel they are “running on automatic” or are constantly “distracted by the past or future” (items 7, 10, and 12). Writing and practicing positive affirmations interrupts these automatic negative loops and retrains the mind to focus on constructive thoughts in the present moment.

Session 5 uses a “Fight, Flight, or Freeze” role-play activity to help students understand how their bodies react to stress. Addressing the CTAS scale, this session targets students who tend to “freeze up,” get so nervous they “can’t think clearly,” or feel “defeated before a difficult test” even begins (items 4, 7, and 20). By acting out these reactions, students learn to label and separate themselves from their physical stress, which reduces the feeling of being paralyzed or giving up too early. Regarding the MAAS-A scale, the session helps students who “don’t notice physical tension” or who “rush through life on automatic” (items 5, 7, and 8). The role-play teaches them to pay attention to body tension and replace automatic, rushed reactions with a conscious choice to use a coping strategy.

Session 6 revisits imagination and mindful listening exercises to strengthen the skills students have learned. Addressing the CTAS scale, this session targets students who worry about taking tests, feel regret after finishing (“I could have done better”), or “challenged when they see unexpected questions” (items 8, 15, and 21). By practicing these techniques again, students build a habit of calmness, reduce post-test regret, and reinforce the ability to see surprises as challenges rather than threats. Regarding the MAAS-A scale, the

session helps students who rush physically “without paying attention,” “forget names or details instantly,” or “focus too much on the end goal” (items 4, 6, and 9). These exercises help slow down impulsive rushing, improve the ability to listen to and remember instructions, and keep focus on the present moment rather than just the result.

Session 7 combines visualization of a favorite method with a drawing activity to help students recognize and strengthen their own learning strategies. Addressing the CTAS scale, this session focuses on boosting confidence in “understanding instructions” and “learning assigned chapters” (items 3 and 10). By visualizing and drawing the specific techniques that work best for them, students build self-belief (“self-efficacy”) and realize they are capable of mastering the material. Regarding the MAAS-A scale, the session helps students who struggle with “forgetting details like names”, listening with only “one ear,” or “doing things without paying attention” (items 6, 11, and 13). The act of drawing their favorite method, forces them to focus deeply on one task, directly countering the tendency to be forgetful or distracted.

Session 8 uses a recap and mindful test preparation strategy to bring together all the skills students have learned. Addressing the CTAS scale, this session targets students who want to “feel confident and relaxed,” those who suddenly feel like “they are failing during a test,” or those whose “nervousness causes careless errors” (items 18, 19, and 27). By reviewing and integrating all the previous tools, the session helps stabilize confidence and calm the high stress that leads to simple mistakes. Regarding the MAAS-A scale, the session helps students who “struggle to stay focused on the present,” feel like they are on “automatic,” or get “distracted by thoughts of the past or future” (items 3, 7, and 12). By teaching students to take small mindfulness breaks at the beginning, middle, and end of their study sessions it trains them to stay focused on the task at hand and stops their minds from wandering.

The Post-Test / Follow-Up phase is designed to measure exactly how much the intervention helped. By having students retake the full CTAS (items 1-27) and MAAS-A

(items 1-14) surveys, the study captures concrete numbers showing the actual change in anxiety and mindfulness levels. Additionally, the final reflective journals are analyzed to see if students naturally write about the specific issues or skills targeted by the program. This approach combines quantitative data from the CTAS and MAAS-A scores with qualitative data from the reflective journals to provide strong, multi-layered proof (triangulation) that the intervention has been effective.

### **Type of Research**

This thesis employs a mixed-method research design and utilizes triangulation. The study is grounded in the quasi-experimental nonequivalent pre-test – post-test control group design framework, as it measures the test anxiety and mindfulness levels of the participants with the CTAS and MAAS-A, which provide quantitative data. Comparing the pre-test and post-test results can serve as the predominant metric for assessing whether the intervention has been successful in reducing test anxiety and increasing mindfulness levels of the participants. Also, thematic analysis is conducted to analyze the reflective journals that the participants kept after each intervention session to reflect on the internal experiences and changes in their mindfulness and test anxiety levels, which present qualitative data. In light of both quantitative and qualitative data, the study adopts a dual-methodological approach, offering a holistic view of the participants' experiences, thoughts, and feelings on the intervention and its efficacy. Thus, the triangulation of the findings can be enhanced. The qualitative side yields insights into the participants' acquisition of the mindfulness-based coping strategies for test anxiety, whereas the quantitative side produces objective data in terms of the magnitude of alteration in test anxiety and mindfulness levels.

To ensure the trustworthiness, validity, and reliability of the study, a mixed-methods approach is adopted. Quantitative validity and reliability were secured by utilizing established scales, the CTAS and MAAS-A. Also, these scales were professionally translated, approved by a notary, and confirmed for equivalence through back-translation

and reviewed by three experts in the field. Moreover, statistical reliability was supported by using One-Way MANCOVA to control for baseline differences, pre-test scores as covariates, and reduce Type I error. Furthermore, qualitative trustworthiness was ensured through triangulation, correlating statistical reductions in test anxiety scores with student narratives in reflective journals to cross-verify results. To strengthen the thematic analysis's credibility and accuracy, peer debriefing was adopted, where a second researcher analyzed the coding process as well as themes and sub-themes. Lastly, giving the participants a choice to use L1 and L2 in reflective journals minimized the affective filter and cognitive load, resulting in thicker descriptions and higher data validity.

### **Research Population and Sample**

This study was conducted in the 2024-2025 academic year in a public middle school in Meram, Konya, Türkiye. The middle school was a large-scale institution, with the classrooms equipped with smart boards. Moreover, it can be stated that it was a high-stakes environment. This setting was selected because it represents a typical EFL classroom environment where students could experience test anxiety. The research sample consists of 142 6<sup>th</sup>-grade middle school students aged 12 to 14. Approximately 71 students are assigned to the experimental groups, with 35 or 36 students in each, to receive the intervention, while the others are selected for the control groups. The treatment group consisted of 71 students, 41 of whom were male (57.7%) and 30 were female (42.3%). In the control group, there were 71 students. 41 of them were male (57.7%), and 30 of them were female (42.3%). The participants are chosen to make the sample as representative of the population as possible. Also, the students who learn English as a foreign language in the experimental and control groups are selected based on their language proficiency. They have had the same English teacher and an equal number of classes per week; thus, criterion sampling, a subcategory of purposive sampling are used. N = 142; 71 per condition, based on a G power analysis.

**Table 1****Participant Gender Distribution by Group**

Group	Male	Female	Total
Treatment Group 1	20	16	36
Treatment Group 2	21	14	35
Control Group 1	21	15	36
Control Group 2	20	15	35

**Data Collection**

The intervention process has been initiated by introducing the study and requesting permission from the sample middle schools' administrators, English teachers, parents, and students. After the introduction and consent forms, the data collection process began with the pre-test, where 142 participants were assigned to equal control and experimental groups, 35 or 36 participants in each group, to establish baseline data using the data collection instruments such as CTAS and MAAS-A. Later, the intervention sessions have started, each intervention is designed to be equivalent to the scale items. After each session, the 71 participants in the two experimental groups are asked to keep reflective journals. At the end of the eight-week intervention, the CTAS and MAAS-A are applied to the 142 participants in the experimental and control groups for one last time. The detailed explanation of the data collection process is presented below:

**Week 1 - Introduction to the Study**

The rationale for the introductory phase is to create a valid baseline for the research. At this stage, the study is introduced to the principal, English teachers, parents, and students.

## **Week 2 - Consent Forms**

After the meetings held with the administrators, English teachers, parents, and participants, consent forms that include the necessary information about the study are handed out and collected. The complete version of the consent forms is provided in **Appendices N, O, and P.**

## **Week 3 - Pre-test**

The two scales, CTAS and MAAS-A, are administered as a pre-test to both the control and the experimental groups, including 142 students. By administering the CTAS and MAAS-A before the eight-week intervention sessions begin, the research identifies the participants' test anxiety levels and evaluates whether they are familiar with the mindfulness concept and practices. Also, the scales address the initial severity of the participants' pressures for having a high score on the tests, autopilot behaviors, distraction, and attention levels. These may establish a comparative point of reference, ensuring that any post-intervention changes can be attributed to the specific mindfulness techniques learned rather than external factors. The full version of the CTAS and MAAS-A is presented in **Appendices D and E.**

## **Week 4 - Intervention Session 1**

The main objectives of the first intervention session are to inform the students about test anxiety and mindfulness, identify if they have test anxiety, reduce stress, and enhance self-awareness and concentration. Thus, the activities revolve around the goal of being relaxed, staying focused, and being in the moment. Besides, this session is designed to address the physiological symptoms of test anxiety, such as freezing up or feeling too nervous to think straight. As test anxiety is a phenomenon that happens in both cognitive and physical ways, it can be observed and handled to some extent. Also, by starting the process with some ice-breakers, those who show the signs of high test anxiety, mindfulness, and English proficiency are observed while a rapport with the participants is

tried to be established. Foundational activities, such as defining test anxiety and mindfulness, breathing exercises, body scans, guided meditation, and yoga are conducted. By teaching breathing exercises and body scans, the intervention provides an immediate tool for physiological down-regulation, helping students lower their heart rates. Simultaneously, yoga promotes interoceptive awareness, training students to notice and release physical tension rather than ignoring it until it becomes overwhelming. The activities selected for this session, specifically mindful breathing, body scan, yoga, and meditation, were approved by and selected under the supervision of a clinical psychologist specializing in test anxiety and mindfulness. At the end of the session, the reflective journal form is introduced to the students, and they are asked to complete it either in L1 or L2 to facilitate data collection. See **Appendix F** for further details.

### **Week 5 - Intervention Session 2**

In the second intervention session, the focus is on mindful listening, guided imagery of a safe space, and test anxiety, as well as drawing what each participant's safe space and test anxiety are. The main objective is to enhance mindful listening, determine what their biggest test anxiety is, and ease test anxiety by visualizing a safe space. The imagery, mindful listening, and drawing activities selected for this session were approved by and chosen under the supervision of a clinical psychologist and an art therapist specializing in test anxiety and mindfulness. The rationale for the safe space guided imagery is to replace catastrophic visualizations that might cause failure in imagining with a mental template of calmness and success. This can build cognitive flexibility, enabling the participants to view unexpected test questions as interesting challenges rather than threats. A selection of the students' drawings is also analyzed by an art therapist to determine if the visual representations correlate with the anxiety levels reported in the pre-test scales. To finalize the second session, the reflective journal instrument is administered to the participants. To ensure the richness of the data and minimize linguistic barriers, students were permitted to

respond in either their native language (L1) or the target language (L2). See **Appendix G** for the full illustration.

### **Week 6 - Intervention Session 3**

The third intervention session, including mindful storytelling and the 5-4-3-2-1 grounding technique, is designed to analyze narrative themes to develop coping strategies for real-life exam situations, emphasizing emotion regulation. In order to do so, mindful storytelling using the “How to Tame My Anxiety Monster” story is preferred. The anxiety monster presented in the story can allow the students to externalize their test anxiety as they can frame their test anxiety as a character separate from their identity, allowing them to participate without fear. Additionally, by teaching the participants the 5-4-3-2-1 grounding technique, they practice how to manage their test anxiety by forcing attention onto immediate sensory details like sight, touch, smell, taste, and sound. It can be beneficial for the students who experience mind blanking when they are stressed. The story and the 5-4-3-2-1 grounding technique used in this session were approved by and selected under the supervision of a narrative therapist and a clinical psychologist specializing in test anxiety. Upon conclusion of the session, the participants are tasked with completing a reflective journal. To facilitate data collection, the choice of language (L1 or L2) was left to their decision. Details are provided in **Appendix H**.

### **Week 7 - Intervention Session 4**

This session also featured a storytelling intervention named “The Tale of the Thought-Changing Glasses”, followed by an activity related to the story’s main theme, which is transforming negative affirmations about test anxiety into positive affirmations. This story is used to transform negative thoughts into positive affirmations, including a craft activity, where students make sunglasses and write their negative ideas related to the tests, and positive affirmations to solve them and ease their anxiety related to them. The participants with test anxiety often claimed to suffer from negative ideas about themselves, such as

believing they are not bright or feeling failed before they even start solving questions. The logic behind for the “Thought-Changing Glasses” metaphor and the writing of positive affirmations is to get over these negative feelings. By writing and practicing positive statements, students could retrain their brains to shift focus from past failures or future worries to constructive, present-moment confidence. Again, the story and the cognitive restructuring activity were approved by and selected under the supervision of a narrative therapist and a clinical psychologist specializing in test anxiety. As per protocol, the students complete another reflective journal in Turkish or English following the activity. In sum, these activities might help students to calm down by restructuring and enhancing their self-talk, as well as regulating their emotions. The full material is available in **Appendix I**.

#### **Week 8 - Intervention Session 5**

In this session, the participants are aimed to comprehend how people respond to stress. For this reason, the “fight, flight, and freeze” responses are taught via a story. After teaching this concept, various prompts are given to the students to engage in drama and role-play activities with their peers regarding these reactions. Role-playing these responses could allow the students to determine their physiological reactions. When they show the symptoms of stress, by a racing heart, sweaty palms, feeling dizzy, or a blank mind, they could label them as physiological signals of stress. This awareness replaces automatic reactivity with a moment of conscious choice, allowing them to select a coping strategy rather than panicking. The reflective journal form is introduced as a post-session activity again, with participants instructed to complete it in their preferred language (L1 or L2) to facilitate expression and valid data collection. Additional information can be found in **Appendix J**.

#### **Week 9 - Intervention Session 6**

The sixth intervention session revisits mindful listening and guided imagery techniques to reinforce relaxation and the practice of success as behavioral change necessitates repetition and rehearsal to be formed as a habit. This practice is designed to

ease post-test regret and rushing. Additionally, it can ensure that the techniques learned in previous sessions are deeply ingrained and readily available during moments when participants feel anxious. The participants are asked to visualize and draw their test anxiety using imagery techniques, followed by a mindful listening activity to enhance mindfulness. The purpose of repeating this activity was to demonstrate any differences in the students' drawings between the beginning and the end of the process. The imagery, mindful listening, and drawing activities for this session were approved by and selected under the supervision of a clinical psychologist and an art therapist. Upon conclusion of the session, the reflective journal instrument was administered to the participants. To ensure the richness of the data and minimize linguistic barriers, students were permitted to respond in either their native language (L1) or the target language (L2). The complete version is included in **Appendix K**.

#### **Week 10 - Intervention Session 7**

The objective of this session is to solidify personal strategies and create positive associations with testing, centering on visualization and anxiety management. This session is initiated with a summary of all the test anxiety reduction and mindfulness techniques learned to date. Later, they are asked to select one of the techniques practiced to address the test anxiety they mentioned in the previous session. After the selection, they are assigned to discuss how they would apply the mindfulness technique they chose to ease their test anxiety with their peers in English. They are given a chance to illustrate the technique and write a short paragraph regarding its usage. Thus, this session activated listening and speaking skills via discussion, writing skills via paragraph writing, and mindful drawing skills. The reason for having students visualize, talk about, and draw their specific favorite mindfulness method is to build metacognition and self-efficacy. When students actively choose and creatively depict the strategy that works best for them, they can transition from passive recipients of instruction to active agents of their own emotional regulation. This ownership correlates directly with reduced forgetfulness and better

engagement during tests. As stated before, the imagery, discussion, and drawing activities for this session were approved by and selected under the supervision of a clinical psychologist and an art therapist. Following the conclusion of the session, the reflective journal is administered. To ensure the authenticity of the data, participants are permitted to record their entries in either their L1 or L2. Supporting material is presented in **Appendix L**.

### **Week 11 - Intervention Session 8**

The final intervention session is conducted as a recap and feedback session, reviewing the entire process through an English discussion with the students. The theme is reflecting on experience, with the goal of managing test anxiety by using mindfulness strategies and comparing test anxiety levels before and after the course, allowing integration and sustainability. The logic behind this practice is to move mindfulness from a classroom activity to a practical coping strategy. By teaching students to insert short mindfulness breaks at the beginning, middle, and end of their study sessions and exams, the students could ease their test anxiety, handle the stress-related situations such as error-prone hyperarousal that leads to careless mistakes on the actual exam, and reveal their actual potential during the tests. At the end of the session, which were approved by and selected under the supervision of a clinical psychologist, the students reflect on the approach they find the most effective, providing their justifications in English or Turkish, and completing their final reflective journal. For the complete figure, see **Appendix M**.

### **Week 12 - Post-test**

The data collection process is concluded by administering the post-test (CTAS and MAAS-A) to both the control and experimental groups, which includes 142 participants. The logic behind the post-test phase is to provide quantitative and qualitative validation of the intervention's efficacy. Administering the CTAS and MAAS-A again generates the statistical data needed to measure the magnitude of anxiety reduction. Concurrently, analyzing final reflective journals provides triangulation, confirming whether the statistical improvements

correspond to real-world behavioral changes, such as a student reporting they successfully used breathing to calm down during a difficult exam. Throughout the study, techniques such as yoga, meditation, body scans, breathing exercises, mindful listening, mindful drawing, mindful imagination, the 5-4-3-2-1 grounding technique, storytelling, transforming negative affirmations about test anxiety into positive affirmations, and the fight-flight-freeze response are practiced. The students are advised to utilize these methods to reduce their test anxiety and increase their mindfulness while taking tests. These techniques are practiced by the students for eight sessions, during which they documented their experiences in reflective journals. The full version of the CTAS and MAAS-A is presented in **Appendices D and E**.

**Table 2**

**Data Collection Plan**

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 1, 2 and 3	Introduction, Consent Forms, and Pre-Test Sessions	Introduction Consent forms Pre-Test	To assign 71 participants to the control groups and 71 to the experimental groups. To introduce the study. To handout consent forms. To apply pre-tests that are CTAS and MAAS-A.	Introduction Consent forms CTAS and MAAS-A

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 4	Intervention Session 1	Icebreaker Definition of mindfulness and test anxiety  Mindfulness exercises: breathing exercises, physical exercises, body scans, guided meditation, and yoga	To reduce stress and test anxiety, enhance concentration, awareness, emotional regulation, and well-being. To practice mindful breathing exercises before and during tests to eliminate test anxiety while improving concentration. To let them coordinate their breath with body movements and lessen physical tension via yoga and meditation. To let the participants focus on the present moment and the smallest things while raising awareness thanks to mindful movement games such as yoga	Mindfulness, test anxiety, self-awareness, emotional regulation  Staying focused, being in the moment

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 5	Intervention Session 2	Mindful listening and imagination Guided imagery and visualization of test anxiety and a safe space Imagination and drawing test anxiety Imagination and drawing safe space	By listening to sounds and asking them to concentrate on them, they can improve concentration and enhance listening skills that are pivotal for managing test anxiety. To relax, reduce stress, and improve well-being with singing and music-based activities. To create positive bonds with testing and reduce anxiety by asking them to visualize a safe space in which they take the test successfully and rehearse success.	Staying focused, being in the moment Mindful listening, concentration, eliminate stress, increase well-being  Visualization, being calm, managing test anxiety

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 6	Intervention Session 3	Mindful storytelling and tale-based learning (How to Tame My Anxiety Monster story) The 5-4-3-2-1 grounding technique	To share some strategies to ease test anxiety and increase mindfulness. To cover the 5-4-3-2-1 grounding technique to increase awareness and decrease test anxiety. To analyze stories for underlying themes such as managing test anxiety through discussions about how the characters used mindfulness to overcome challenges.  To let them acknowledge mindfulness concepts with engaging narratives, develop coping strategies, and strengthen their application in real-life exam situations.	Emotion regulation ability  The 5-4-3-2-1 grounding technique

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 7	Intervention Session 4	Mindful storytelling and tale-based learning (The Tale of the Thought-Changing Glasses)  Mindful Writing about Positive Affirmations Transforming negative thoughts to positive affirmations  Preparing sunglasses and writing positive affirmations	To transform negative affirmations to positive affirmations. To let the students stay calm and lessen anxiety. To analyze stories for underlying themes such as managing anxiety and becoming motivated through discussions about how the characters used mindfulness to overcome challenges.  To let them acknowledge mindfulness concepts with engaging narratives, develop coping strategies, and strengthen their application in real-life exam situations.	Transforming negative affirmations to positive affirmations Emotion regulation ability

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 8	Intervention Session 5	Mindful storytelling Fight, flight, freeze technique and role-play	To analyze stories for underlying themes such as managing anxiety and becoming motivated through discussions about how the characters used mindfulness to overcome challenges. To let them acknowledge mindfulness concepts with engaging narratives, develop coping strategies, and strengthen their application in real-life exam situations.  To let them learn how to handle their test anxiety by learning the fight, flight, and freeze technique.	Enhancing coping strategies Managing test anxiety

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 9	Intervention Session 6	Imagination Mindful listening Guided imagery and visualization of test anxiety Imagination and drawing test anxiety	By listening to sounds and asking them to concentrate on them, they can improve concentration and enhance listening skills that are pivotal for managing test anxiety. To relax, reduce stress, and improve well-being with singing and music-based activities.  To create an opportunity for them to realize what their test anxieties are.	Staying focused, being in the moment Mindful listening, concentration, eliminate stress, increase well-being  Visualization, being calm, managing test anxiety

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 10	Intervention Session 7	Mindful listening Discussion Guided imagery and visualization of their favorite method  Imagination and drawing favorite mindfulness technique and activity	By listening to sounds and asking them to concentrate on them, they can improve concentration and enhance listening skills that are pivotal for managing test anxiety. To relax, reduce stress, and improve well-being with music-based activities. To create positive bonds with testing and reduce anxiety by asking them to visualize their favorite method in which they take the test successfully and rehearse success.	Staying focused, being in the moment Mindful listening, concentration, eliminate stress, increase well-being  Visualization, being calm, managing test anxiety

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 11	Intervention Session 8	Recap and mindful test preparation Feedback Session about talking about their favorite strategy to manage test anxiety and mindfulness technique	To involve mindfulness in their study routines by taking a short mindfulness break at the beginning, middle, and end of the exam. To eliminate the fear of making mistakes and other negative emotions To reinforce concentration while reducing test anxiety. To reflect on the mindfulness practices and creative teaching methods and compare their test anxiety level before the intervention to the end of it.	Not focusing on mistakes  Reflecting on experience

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 12	Feedback and Post-Test Session	Summary Feedback Post-Test	To apply the CTAS and MAAS-A to the 71 participants in the control groups and 71 in the experimental groups.	Feedback CTAS and MAAS-A

## Instruments

From the quantitative framework, this study encompasses two instruments for analyzing the participants' test anxiety and mindfulness levels; thus, obtaining quantitative data. In other words, the quantitative dimension of the study is designed to measure statistical changes in symptom severity over time. The former instrument is the CTAS, while the latter is the MAAS-A. When applied together as the pre-test and post-test before and after the intervention to two control groups and two experimental groups, they provide complementary quantitative indicators of test anxiety and mindfulness levels of 142 students. Therefore, they can signal the intervention's effect on the experimental groups and the difference between the control and experimental groups. To support the students' comprehension, the original English versions of the scales were administered with Turkish translations provided alongside each item. The translation of the test items was conducted by a sworn translator and approved by a notary public in Meram, Konya. Moreover, to verify that the test items are semantically equivalent, three experts in the field reviewed the Turkish translations to ensure the original meaning was preserved. Furthermore, to verify the linguistic equivalence of the items with the original English versions, a back-translation method was employed alongside reviews by three field experts. Additionally, these expert consultations were utilized to establish the validity and reliability of the instrument in the target language

From the qualitative side, to complement the quantitative data and ensure the triangulation, reflective journals, which are maintained by the 71 participants in the experimental groups to reflect on the intervention process and explain their feelings, ideas, and experiences about the intervention process after each session. Considering the participants' age and proficiency levels, they were permitted to articulate their experiences, thoughts, and emotions in either their native language (Turkish) or in the target language (English). Adopting such a flexible approach in reflective journals can lower the students' affective filter and minimize cognitive load, thereby allowing them to focus on generating

insights rather than struggling with formal L2 production. Therefore, thick description can be obtained while increasing data validity. Throughout the process, participants have responded to prompts designed to elicit introspection in terms of their test anxiety and associated behaviors. Finally, these reflective journal entries are analyzed for references to cognitive shifts or behaviors that corresponded to the scale items, ensuring the qualitative data (reflective journals) are structurally aligned with the quantitative data (CTAS and MAAS-A) rather than remaining anecdotal.

**Table 3**

**Data Collection Instruments**

Research Questions	Data Collection Instruments
To what extent does an intervention integrating mindfulness practices and creative teaching methods impact test anxiety levels of the middle school students who learn English as a foreign language?	Cognitive Test Anxiety Scale (CTAS)
To what extent does an intervention integrating mindfulness practices and creative teaching methods impact test anxiety levels of the middle school students who learn English as a foreign language?	Mindful Attention Awareness Scale-A (MAAS-A)
To what extent does an intervention integrating mindfulness practices and creative teaching methods impact test anxiety levels of the middle school students who learn English as a foreign language?	Reflective Journals

## Instrument 1

### Cognitive Test Anxiety Scale (CTAS)

The Cognitive Test Anxiety Scale (CTAS) is a scale that was developed by Cassady and Johnson in 2002 to measure the participants' test anxiety level as well as determine the frequency of anxiety, anxiety-related ideas, and behaviors that the participants have on a daily basis. It has 27 items answered on a four-point Likert scale. The participants are expected to read them carefully and decide to what extent they agree (1 = Not at all typical of me, 2 = Somewhat typical of me, 3 = Quite typical of me, 4 = Very typical of me). Also, it includes reversed-scored items to not only balance response bias but also enhance reliability. Total scores are summed across all items after reverse-scoring. It has a possible range of 27-108, which means that the higher the score is, the greater the test anxiety (Cassady & Johnson, 2002).

#### Table 4

#### Data Collection Instruments

#### Cognitive Test Anxiety Scale (CTAS) (Bilişsel Sınav Kaygısı Ölçeği)

Please complete the following items using the four-point scale below.

(Lütfen aşağıdaki maddeleri aşağıdaki dört puanlık ölçeği kullanarak doldurunuz.)

1	2	3	4
<b>Not at all typical of me</b> (Bana hiç uygun değil)	<b>Somewhat typical of me</b> (Bana biraz uygun)	<b>Quite typical of me</b> (Bana oldukça uygun)	<b>Very typical of me</b> (Bana çok uygun)

1.	<b>I lose sleep over worrying about examinations.</b> (Sınav kaygısı yüzünden uykularım kaçır.)	1	2	3	4
2.	<b>While taking an important examination, I find myself wondering whether the other students are doing better than I am.</b> (Önemli bir sınava girerken, kendimi diğer öğrencilerin benden daha iyi performans gösterip göstermediğini merak ederken bulurum.)	1	2	3	4
3.	<b>I have less difficulty than the average student in getting test instructions straight.*</b> (Sınav talimatlarını doğru anlama konusunda, ortalama bir öğrenciden daha az zorluk çekerim.)	1	2	3	4
4.	<b>I tend to freeze up on things like intelligence tests and final exams.</b>	1	2	3	4

(Zeka testleri ve dönem sonu sınavları gibi konularda, donup kalma eğilimindeyim.)

5.	<b>I am less nervous about tests than the average student.*</b> (Sınavlar konusunda, ortalama bir öğrenciye göre daha az gerginim.)	1	2	3	4
6.	<b>During tests, I find myself thinking of the consequences of failing.</b> (Sınavlar sırasında, kendimi başarısız olmanın sonuçlarını düşünürken buluyorum.)	1	2	3	4
7.	<b>At the beginning of a test, I am so nervous that I often can't think straight.</b> (Bir sınavın başlangıcında, o kadar gergin olurum ki çoğu zaman doğru düzgün düşünemem.)	1	2	3	4
8.	<b>The prospect of taking a test in one of my courses would not cause me to worry.*</b> (Derslerimden birinde sınava girme ihtimali beni endişelendirmez.)	1	2	3	4
9.	<b>I am more calm in test situations than the average student.*</b> (Sınav durumlarında, ortalama bir öğrenciden daha sakinim.)	1	2	3	4
10.	<b>I have less difficulty than the average student in learning assigned chapters in textbooks.*</b> (Kitapta verilen bölümleri öğrenmede, ortalama bir öğrenciden daha az zorluk çekerim.)	1	2	3	4
11.	<b>My mind goes black when I am pressured for an answer on a test.</b> (Bir sınavda, cevap vermem için baskı yapıldığında, zihnim boşalır.)	1	2	3	4
12.	<b>During tests, the thought frequently occurs to me that I may not be too bright.</b> (Sınavlar sırasında, sık sık aklıma pek zeki olmayabileceğim düşüncesi gelir.)	1	2	3	4
13.	<b>I do well in speed tests in which there are time limits.*</b> (Zaman sınırlarının olduğu hız testlerinde başarılıyım.)	1	2	3	4
14.	<b>During a course examination, I get so nervous that I forget facts I really know.</b> (Bir dersin sınavı esnasında, o kadar heyecanlanırım ki gerçekten bildiğim şeyleri unuturum.)	1	2	3	4
15.	<b>After taking a test, I feel I could have done better than I actually did.</b> (Bir sınava girdikten sonra, aslında yaptığımdan daha iyisini yapabileceğimi hissederim.)	1	2	3	4
16.	<b>I worry more about doing well on tests than I should.</b> (Sınavlarda iyi performans gösterme konusunda, yapmam gerekenden daha fazla endişelenirim.)	1	2	3	4
17.	<b>Before taking a test, I feel confident and relaxed.*</b> (Sınava girmeden önce, kendimi özgüvenli ve rahat hissederim.)	1	2	3	4
18.	<b>While taking a test, I feel confident and relaxed.*</b> (Sınava girerken, kendimi özgüvenli ve rahat hissederim.)	1	2	3	4
19.	<b>During the tests, I have the feeling that I am not doing well.</b> (Sınavlar esnasında, iyi performans göstermediğim hissine kapılıyorum.)	1	2	3	4
20.	<b>When I take a test that is difficult, I feel defeated before I even start.</b> (Zor bir sınava girdiğimde, daha başlamadan kendimi mağlup hissederim.)	1	2	3	4
21.	<b>Finding unexpected questions on a test causes me to feel challenged rather than panicky.*</b>	1	2	3	4

---

*(Bir sınavda beklenmedik sorularla karşılaşmak, kendimi panik hali yerine zorlanmış hissetmeme neden olur.)*

---

**22. I am a poor test taker in the sense that my performance on a test does not show how much I really know about a topic.** 1 2 3 4

*(Bir sınavda gösterdiğim performans, o konu hakkında ne kadar bilgi sahibi olduğumu göstermiyor; bu anlamda sınav performansı zayıf biriyim.)*

---

**23. I am not good at taking tests.** 1 2 3 4

*(Sınavlara girmekte iyi değildir.)*

---

**24. When I first get my copy of a test, it takes me a while to calm down to the point where I can begin to think straight.** 1 2 3 4

*(Sınav kağıdımı ilk elime aldığımda, düzgün düşünmeye başlayabilecek noktaya gelene kadar sakinleşmem biraz zaman alır.)*

---

**25. I feel under a lot of pressure to get good grades on tests.** 1 2 3 4

*(Sınavlarda iyi not almak için çok fazla baskı altında hissederim.)*

---

**26. I do not perform well on tests.** 1 2 3 4

*(Sınavlarda iyi performans göstermem.)*

---

**27. When I take a test, my nervousness causes me to make careless errors.** 1 2 3 4

*(Sınav girdiğimde, gerginliğim, dikkatsizce hatalar yapmama neden olur.)*

---

Item was recorded to produce consistency in scale so that high values always reflect high-cognitive test.

---

## **Instrument 2**

### **Mindful Attention Awareness Scale-A (MAAS-A)**

The Mindful Attention Awareness Scale-A (MAAS-A) is a 14-item self-report scale that measures deficits in present-moment awareness and automatic, inattentive processing. Respondents rate each statement (e.g., “I could be experiencing some emotion and not be conscious of it until some time later,” “I rush through activities without being really attentive to them,” “I snack without being aware that I am eating”) on a frequency scale ranging from “almost never” to “almost always.” Overall, the MAAS-A is a reliable, unidimensional self-report tool with strong internal consistency, adequate test-retest stability, and robust convergent, discriminant, and predictive validity across cultures and age groups (Brown & Ryan, 2003).

Table 5

## Data Collection Instruments

## Mindful Attention Awareness Scale-A (MAAS-A) (Bilinçli Farkındalık Ölçeği)

Please complete the following items using the six-point scale below.

(Lütfen aşağıdaki maddeleri aşağıdaki altı puanlık ölçeği kullanarak doldurunuz.)

1	2	3	4	5	6
<b>Almost always</b> (Neredeyse her zaman)	<b>Very frequently</b> (Çok sık)	<b>Somewhat frequently</b> (Biraz sık)	<b>Somewhat infrequently</b> (Biraz nadir)	<b>Very infrequently</b> (Çok nadir)	<b>Almost never</b> (Neredeyse hiç)

1.	<b>I could be experiencing some emotion and not be conscious of it until some time later.</b> (Bir duygu yaşıyor olabilirim ve bunun farkına ancak bir süre sonra varabilirim.)	1	2	3	4	5	6
2.	<b>I break or spill things because of carelessness, not paying attention, or thinking of something else.</b> (Dikkatsizlikten, dikkat etmemekten ya da başka bir şey düşünmekten dolayı, eşyaları kırıyorum ya da döküyorum.)	1	2	3	4	5	6
3.	<b>I find it difficult to stay focused on what is happening in the present.</b> (Şu anda olup bitenlere odaklanmayı zor buluyorum.)	1	2	3	4	5	6
4.	<b>I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.</b> (Yol boyunca yaşadıklarım dikkat etmeden, gideceğim yere ulaşmak için hızlı yürüme eğilimindeyim.)	1	2	3	4	5	6
5.	<b>I tend not to notice feelings of physical tension or discomfort until they really grab my attention.</b> (Fiziksel gerginlik veya rahatsızlık hislerini, gerçekten dikkatimi çekene kadar fark etme eğiliminde değilim.)	1	2	3	4	5	6
6.	<b>I forget a person's name almost as soon as I have been told it for the first time.</b> (Bir kişinin adını, ilk kez söylendiği anda neredeyse hemen unuturum.)	1	2	3	4	5	6
7.	<b>It seems I am "running on automatic," without much awareness of what I am doing.</b> (Ne yaptığımın pek farkında olmadan, "otomatik olarak" çalışıyormuşum gibi görünüyor.)	1	2	3	4	5	6

8.	<b>I rush through activities without being really attentive to them.</b> (Etkinlikleri, onlara pek dikkat etmeden, aceleyle yapıyorum.)	1	2	3	4	5	6
9.	<b>I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.</b> (Ulaşmak istediğim hedefe o kadar odaklanıyorum ki o hedefe ulaşmak için şu anda yapmakta olduğum şeyle bağlantımı kaybediyorum.)	1	2	3	4	5	6
10.	<b>I do jobs or tasks automatically, without being aware of what I am doing.</b> (İşleri veya görevleri, ne yaptığının farkında olmadan, otomatik olarak yapıyorum.)	1	2	3	4	5	6
11.	<b>I find myself listening to someone with 1 ear, doing something else at the same time.</b> (Kendimi, bir kulağımla birini dinlerken, aynı anda başka bir şey yaparken buluyorum.)	1	2	3	4	5	6
12.	<b>I find myself preoccupied with the future or the past.</b> (Kendimi, gelecek ya da geçmişle meşgul buluyorum.)	1	2	3	4	5	6
13.	<b>I find myself doing things without paying attention.</b> (Kendimi, dikkat etmeden bir şeyler yaparken buluyorum.)	1	2	3	4	5	6
14.	<b>I snack without being aware that I am eating.</b> (Yediğimin farkında olmadan atıştırıyorum.)	1	2	3	4	5	6

### **Instrument 3**

#### **Reflective Journals**

With the aim of complementing the statistical data obtained from the scales, qualitative data is collected via reflective journals that the 71 participants in the experimental groups kept after every session. As they are young and do not have an advanced English level, they have been given an option to express their experiences, thoughts, and feelings, whether in Turkish or in English. The main reason behind giving the option of using both L1 and L2 is to lower the affective filter of the students, ensure data validity, and thick description, as well as reducing the cognitive load, which enables the participants to focus on explaining their insights rather than the loss of time and anxiety caused by trying to use

formal English. Throughout this part of the data collection process, the participants are asked to respond to prompts designed to elicit introspection, considering their experiences with taking tests and responses they give when they are anxious. The final journal entries are analyzed for spontaneous references to specific behaviors or cognitive shifts that correspond to the scale items. This ensures that the qualitative data is not anecdotal but structurally mapped to the quantitative instruments such as CTAS and MAAS-A. The reflective journal templates for every session can be found in **Appendices F, G, H, I, J, K, L, and M**. Please check them for further details.

## **Data Analysis**

### **1. Quantitative Data Analysis**

The data collected for this study were analyzed using the SPSS. The analysis was conducted in three primary stages: descriptive analysis, within-group comparisons, and between-group comparisons while controlling for baseline differences. The data analysis is performed using the unique ID codes, which ensures that no personal identifiers are attached to the results.

#### **1.1. Descriptive Statistics**

Initial analysis involved calculating the means and standard deviations for both the treatment and control groups. The treatment group ( $n = 71$ ) and control group ( $n = 71$ ) were assessed for their mindfulness (MAAS-A) and test anxiety (CTAS) levels at two time points: pre-test and post-test.

#### **1.2. Within-Group Comparisons**

To examine the change within each group over time, Paired Samples t-tests were conducted. This analysis compared pre-test and post-test scores for both variables to determine if any observed changes were statistically significant within the respective groups. Cohen's  $d$  was also calculated to determine the effect size of these changes.

### **1.3. Between-Group Comparisons**

A One-Way MANCOVA was employed to determine the effectiveness of the mindfulness intervention by comparing the post-test scores of the treatment and control groups while controlling for pre-test scores as covariates. Preliminary testing via Box's M confirmed the equality of covariance matrices across groups ( $p = .055$ ).

### **1.4. One-Way MANCOVA**

A One-Way MANCOVA was employed to test the primary hypotheses of the study. The reasons behind choosing this method are its nature, enabling the control of baseline differences, which makes it a fit for this quasi-experimental design. Furthermore, since the pre-test scores were included as covariates to enhance the model's sensitivity and reduce unexplained variance, One-Way MANCOVA stands out as a better design. Moreover, as there were multiple dependent variables (mindfulness and test anxiety) that are theoretically and statistically related, this method was preferred as it reduces the likelihood of Type I error and accounts for the intercorrelations between the dependent variables. Prior to a One-Way MANCOVA, Box's M test was performed to ensure the equality of covariance matrices across groups (Box's M = 7.71,  $p = .055$ ), confirming that the assumption for multivariate analysis was met. Wilks' Lambda ( $\Lambda$ ) was used to evaluate the overall multivariate effect, followed by univariate ANCOVAs to determine the specific impact of the intervention on each dependent variable individually. Effect sizes were reported using partial eta squared ( $\eta^2$ ), where .01 is considered small, .06 medium, and .14 large.

## **2. Qualitative Data Analysis**

To analyze the qualitative data of the study, criterion sampling, which is a type of purposive sampling, was employed to select participants from the 71 students in the experimental groups. In mixed methods research, analyzing the entire qualitative universe, 568 reflective journals from 71 students in total, is generally discouraged once data saturation is reached, as it leads to thematic redundancy and hinders in-depth analysis

(Braun & Clarke, 2021). Accordingly, the pre-test and post-test the CTAS scores obtained from the quantitative data were used as the primary criteria. To ensure representation of the entire student profile within the experimental group, 24 students were selected based on their CTAS mean scores: 8 high test anxiety, 8 moderate test anxiety, and 8 low test anxiety students, representing those whose test anxiety significantly decreased, remained stable, or stayed high. The reflective journals of these 24 students across 8 sessions were subjected to thematic analysis. The rationale for choosing this method, as opposed to random sampling, was to focus on participants who could provide the most information-rich responses to the research question and treatment (Patton, 2015). Consequently, the impact of the implemented mindfulness and creative teaching methods on students' test anxiety levels could be explained through an in-depth perspective based on the experiences of diverse anxiety profiles, rather than through superficial generalization. For these reasons, 192 reflective journal entries, 8 sessions for each of the 24 students, were analyzed via criterion sampling. As the sampling consists of middle-school levels, whose English level ranges from A1 to A2+, they are given reflective journal templates after each session. Hence, the reflective journal templates, which include emojis, open-ended and yes/no questions, could make the feedback process for the experimental group easier. Additionally, the emoji-based self-report items in the reflective journals suggested a general shift from stressed or neutral emotional states before the sessions toward more neutral or calm states after the activities. These descriptive indicators provided contextual support for themes derived from students' written reflections. While conducting thematic analysis, six steps are followed that are familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report (Braun & Clarke, 2006). To safeguard the credibility, consistency, and accuracy of the themes, sub-themes, and codes, peer debriefing was integrated into the thematic analysis process.

## Chapter 4 Findings, Comments, and Discussion

### Findings

The quantitative data encompassed the CTAS and MAAS-A as pre-tests and post-tests, which were analyzed by utilizing a three-stage statistical approach in SPSS. Initial descriptive statistics established baseline profiles for the experimental and control groups ( $n = 71$  each), followed by Paired Samples t-tests and Cohen's  $d$  to measure within-group progress. To assess the treatment's overall effectiveness, a One-Way MANCOVA was employed, allowing for the control of baseline differences whilst accounting for the statistical relationship between mindfulness and test anxiety. After confirming the assumption of equal covariance through Box's  $M$  ( $p = .055$ ), the analysis utilized Wilks' Lambda ( $\Lambda$ ) and univariate ANCOVAs with partial eta squared ( $\eta^2$ ) to determine the specific significance and magnitude of the treatment's impact.

The qualitative data obtained from the reflective journals were analyzed by conducting Braun and Clarke's (2006) method of thematic analysis on 24 participants' reflective journals in 8 intervention sessions. This process involved familiarizing oneself with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report (Braun & Clarke, 2006). Consequently, a thematic analysis was performed on 192 reflective journals, representing 8 sessions per participant. The cohort comprised 24 students with varying levels of test anxiety: eight high, eight moderate, and eight low. The analysis followed five established themes, which were sources of test anxiety, symptoms and responses of test anxiety, coping mechanisms and mindfulness strategies, emotional regulation, and intervention outcomes. To ensure credibility and confirmability of the thematic analysis, a peer debriefing process was employed.

**Table 6****Participant Numbers per Session**

<b>Sessions</b>	<b>Participants of Experimental Group 1</b>	<b>Participants of Experimental Group 2</b>	<b>Participants of Control Group 1</b>	<b>Participants of Control Group 2</b>
<b>Consent Forms</b>	37	38	37	38
<b>Pre-Tests</b>	35	36	35	36
<b>Intervention Session 1</b>	35	36	-	-
<b>Intervention Session 2</b>	32	33	-	-
<b>Intervention Session 3</b>	30	32	-	-
<b>Intervention Session 4</b>	35	34	-	-
<b>Intervention Session 5</b>	31	32	-	-
<b>Intervention Session 6</b>	30	36	-	-
<b>Intervention Session 7</b>	33	31	-	-
<b>Intervention Session 8</b>	35	36	-	-
<b>Post-Tests</b>	35	36	35	36

**1. Quantitative Findings****1.1 Descriptive Statistics**

142 sixth-grade students in a public school in Türkiye were recruited to take part in the study, and they responded to the CTAS and MAAS-A scales at both pre-test and post-test measurement points. The treatment group consisted of 71 students, 41 of whom were male (57.7%) and 30 were female (42.3%). In the control group, there were 71 students. 41 of them were male (57.7%), and 30 of them were female (42.3%). Table 7 presents the

descriptive statistics for both groups' mean scores for the CTAS and MAAS-A scales at pre-test and post-test times.

**Table 7**

*Descriptive Statistics for Pre-Test and Post-Test Scores of Treatment and Control Groups for Both Scales: Mean (standard deviation)*

	MAAS-A		CTAS	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Treatment	3.93 (0.84)	4.20 (0.79)	2.21 (0.49)	2.11 (0.45)
Control	3.51 (0.87)	3.52 (0.75)	2.49 (0.50)	2.45 (0.51)

*Note:*  $n = 142$ , with 71 participants in the treatment group and 71 participants in the control group

As shown in Table 7, the treatment group increased their mindfulness scores from pre-test ( $M = 3.93$ ,  $SD = 0.84$ ) to post-test ( $M = 4.20$ ,  $SD = 0.79$ ). In contrast, the control group showed only a minimal change in MAAS-A scores, with a pre-test mean of  $M = 3.51$  ( $SD = 0.87$ ) and a post-test mean of  $M = 3.52$  ( $SD = 0.75$ ). With respect to test anxiety, the treatment group exhibited a decrease in CTAS scores from pre-test ( $M = 2.21$ ,  $SD = 0.49$ ) to post-test ( $M = 2.11$ ,  $SD = 0.45$ ). Conversely, the control group displayed a slight reduction in CTAS scores, decreasing from a pre-test mean of  $M = 2.49$  ( $SD = 0.50$ ) to a post-test mean of  $M = 2.45$  ( $SD = 0.51$ ). Overall, the descriptive results suggest an increase in mindful attention and a decrease in test anxiety from pre-test to post-test, whereas changes observed in the control group were relatively small.

### 1.2. Paired Samples T-test

A paired-samples  $t$ -test was conducted to examine pre-test to post-test changes in mindfulness (MAAS-A) and test anxiety (CTAS) scores for both the treatment and control groups. For the treatment group, the results indicated a statistically significant increase in mindfulness scores from pre-test to post-test ( $t = -3.21$ ,  $p = 0.002$ ,  $df = 70$ , 95% CI [-0.42, -0.10]). In addition, there was also a significant decrease in test anxiety for the treatment group ( $t = 2.53$ ,  $p = .014$ ,  $df = 70$ , 95% CI [0.02, 0.17]). In contrast, no statistically significant differences were found for the control group. The change in MAAS-A scores from pre-test

to post-test was not significant,  $t(70) = -0.17$ ,  $p = .865$ . Similarly, the difference in CTAS scores for the control group was not statistically significant,  $t(70) = 1.04$ ,  $p = .302$ .

**Table 8**

*Results of the Paired Samples T-test Comparing Pre-Test and Post-Test Scores of the Treatment and Control Groups*

	<i>t</i>		<i>p</i>		Cohen's <i>d</i>	
	MAAS-A	CTAS	MAAS-A	CTAS	MAAS-A	CTAS
Treatment	-3.21	2.53	<b>0.002**</b>	<b>0.014**</b>	-0.382	-0.300
Control	-0.17	1.04	0.865	0.302	-0.020	0.123

Note: \*\* indicates  $p < 0.05$

### 1.3. One-Way Multivariate Analysis of Covariance (MANCOVA)

To test the effects of the mindfulness training on test anxiety and mindfulness scores of the students, a One-Way MANCOVA was carried out to analyze the multiple dependent variables measured. Due to the quasi-experimental nonequivalent pre-test – post-test control group design of the study, pre-test measures were added as covariates to account for the baseline differences. In addition, pre-test measures were controlled for as covariates due to their significant correlation with post-intervention outcomes. Thus, the model's sensitivity was enhanced, and unexplained variance was significantly reduced. Box's M Test was performed to assess the equality of covariance matrices across groups (Box's  $M = 7.71$ ,  $p = .055$ ). Using Wilks' Lambda, a statistically significant multivariate effect was found for group type on the combined dependent variables,  $\Lambda = .853$ ,  $F(2, 137) = 11.78$ ,  $p < .001$ . The partial eta squared ( $\eta^2 = .147$ ) indicates a large effect size, with group membership explaining 14.7% of the variance in the combined post-test scores. Following the significant multivariate result, univariate ANCOVAs (see Table 8.) were examined to determine the impact on each variable individually. For mindfulness (MAAS-A), there was a highly significant difference between the groups on adjusted post-test mindfulness scores,  $F(1, 138) = 19.69$ ,  $p < .001$ ,  $\eta^2 = .125$ . A significant difference was also found for test anxiety (CTAS),  $F(1, 138) = 5.36$ ,  $p = .022$ ,  $\eta^2 = .037$ . These results provide evidence that the

mindfulness intervention successfully increased students' mindful attention and led to a statistically greater reduction in test anxiety compared to the control group.

**Table 9**

Multivariate and Univariate Analysis of Covariance for Mindfulness and Test Anxiety

Level of Analysis	Variable/Effect	Wilks' $\Lambda$	$F$	$df$	$p$	$\eta^2$
Multivariate	Group Type	.853	11.78	(2, 137)	< .001**	.147
Univariate	MAAS-A		19.70	(1, 138)	< .001**	.125
	CTAS		5.37	(1, 138)	.022**	.037

Note: \*\* indicates  $p < 0.05$

Profile plots (see Figures 1 and 2) show the estimated marginal means for both dependent variables. These plots represent the post-test scores after statistically adjusting for initial differences in pre-test scores, with covariates evaluated at a mean of 3.72 for mindfulness and 2.36 for test anxiety. As shown in Figure 1, the treatment group displayed a higher adjusted mean for mindfulness compared to the control group. Error bars showing the 95% confidence intervals for the two groups do not overlap which shows a significant univariate effect ( $p < .001$ ). Conversely, Figure 2 illustrates the results for test anxiety, where the experimental group maintained a lower adjusted mean score than the control group. This demonstrates that students who participated in the mindfulness training experienced a statistically greater reduction in anxiety levels relative to those in the control condition ( $p = 0.022$ ).

Figure 1

## Adjusted Post-Test Mindfulness Scores by Group

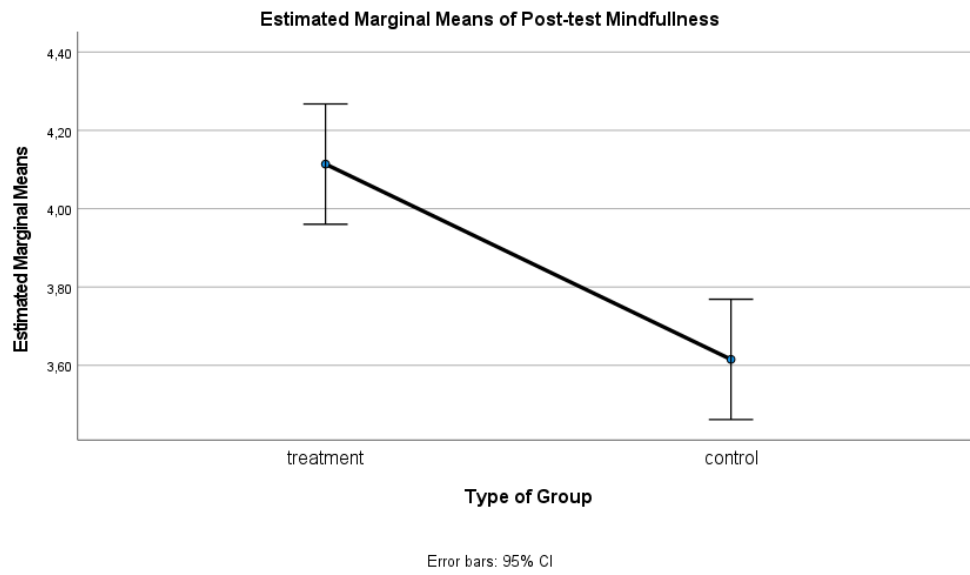
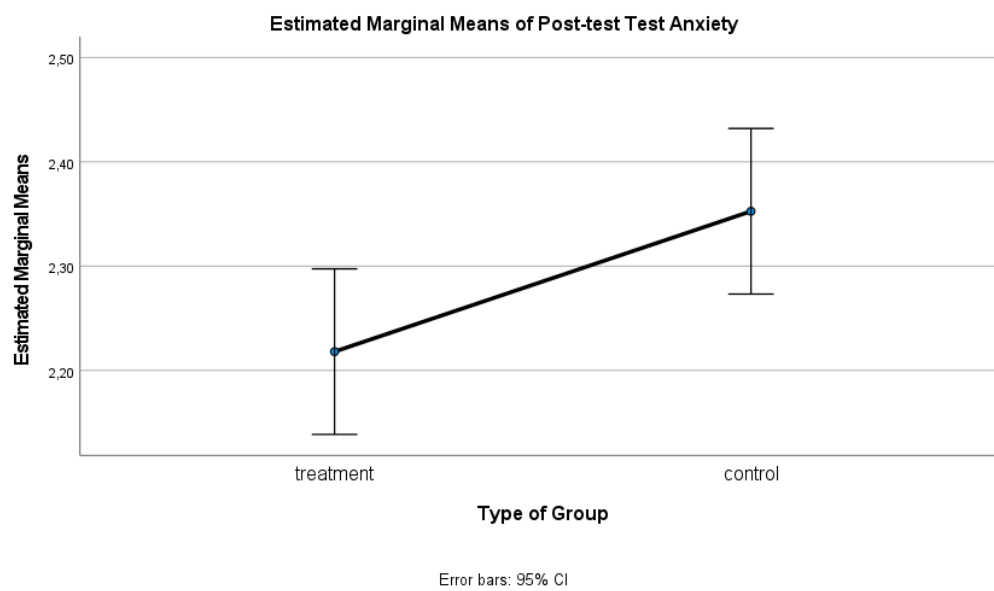


Figure 2

## Adjusted Post-Test Test Anxiety Scores by Group



## **2. Qualitative Findings**

### **2.1. Thematic Analysis of the Reflective Journals**

While 568 reflective journals were collected from the experimental groups ( $n = 71$ ), the findings presented in this section are derived from a purposive sample of 24 students. The criterion sampling, a subcategory of purposive sampling, was preferred to not only ensure representation of all of the participants in the experimental groups but also to provide an in-depth perspective on the impact of mindfulness and creative teaching methods on test anxiety across three distinct test anxiety profiles: 8 participants with a high level of test anxiety, 8 with a moderate level of test anxiety, and 8 with a low level of test anxiety. Due to the participants' A1-A2+ English language proficiency levels, emoji-based templates were utilized to capture immediate emotional responses whilst enabling the participants to explain their opinion on the treatment sessions, their test anxiety levels, and the mindfulness concept more easily by presenting reflective journal templates. Also, they were given an option to write their thoughts, feelings, and insights on mindfulness and test anxiety either in English and Turkish to enable the participants to explain themselves better and prevent the participants from underperforming because of the language barrier. Hence, a thematic analysis of these 192 reflective journal entries, 8 sessions per student, was conducted. The thematic analysis process included six steps that are familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report (Braun & Clarke, 2006). To validate the analysis, a second researcher reviewed the coding process and thematic structure. Thus, it was aimed to maintain high standards of credibility and objectivity. The analysis followed the established framework of 5 primary themes: sources of test anxiety, symptoms and responses of test anxiety, coping mechanisms and mindfulness strategies, emotional regulation, and intervention outcomes.

### **2.2. Theme 1 – Sources of Test Anxiety**

The origins of test anxiety among participants are multifaceted, ranging from technical concerns to social pressures. A primary concern involves technical and procedural

anxiety, which includes the fear that optical readers might misread the answer sheets or the test-takers might mis-mark the optical forms. For example, P01 defined that making optical errors, like mis-marking the answers on the optical form as the primary stressor. Also, some students, like P22, expressed distress over the repetition of the same option appearing repeatedly on the optical form.

These concerns are related to time-induced and task demands-based stress, which encompasses not having enough time, facing unfamiliar topics, or hard questions. The participants, P04 and P06, frequently reported throughout the intervention sessions that not having enough time or facing difficult questions in the exam triggered their test anxiety.

Also, performance evaluation, which is related to getting a low score, failing the test, and being stuck between two choices, is one of the reasons for test anxiety, according to some of the participants, like P03 and P10. For instance, P03 stated that failing the class with an exam score of 40 out of 100 is one of the concerns. To give another example, P10 explained that having many wrong answers during the test is one of the major fears.

These aforementioned fears are sometimes exacerbated by external and evaluative pressure. In other words, the anxiety is caused by factors such as getting scolded by the parents for getting a low score, being compared to the siblings or classmates, and feeling unsuccessful for failing an exam. In this context, P03 and P11 noted that their parents often get angry about low grades, which was the primary source of their test anxiety. Lastly, P23 mentioned the apprehension caused by being compared to a sibling.

**Table 10**

## Theme 1. Sources of Test Anxiety

Theme	Sub-Themes	Codes	Frequency	Representative Reflective Journal Prompts
Sources of Test Anxiety	Technical and Procedural Anxiety	Optical reader misreads, Fear of mis-marking answer sheets, Fear of mis-marking optical form, Running out of time,	20 out of 24 participants	#P01, #P22
Sources of Test Anxiety	Time-Induced Stress and Task Demands	Having little time left for difficult questions, Running out of time, Facing unfamiliar topics, Facing hard questions.	24 out of 24 participants	#P04, #P06
Sources of Test Anxiety	Performance Evaluation	Getting a low score, Failing the test, Being stuck between two choices.	20 out of 24 participants	#P03, #P10
Sources of Test Anxiety	External and Evaluative Pressures	Parents getting angry or shouting, Comparison to siblings, Performing worse than peers, Fearing failure, Feeling "stupid."	13 out of 24 participants	#P03, #P11, #P23

### 2.3. Theme 2 – Symptoms and Responses of Test Anxiety

When it comes to the symptoms and responses of test anxiety, it can be said that the students identified a wide spectrum of physiological, behavioral, cognitive, and emotional/affective stress responses to the evaluative situations. Firstly, physiological stress responses are involuntary, somatic reactions regulated by the autonomic nervous system and observed in tense situations, such as rapid heartbeats, hand tremors, sweating, and heavy breathing. As an example, P07 and P11 reported their hands shaking and heart beating rapidly during stressful moments in an exam.

Secondly, behavioral stress responses involve observable actions or habits that can be exemplified as staring blankly at the exam sheet, fidgeting, nail-biting, avoidance, or

trembling hands. These reactions can be the branches of the fight, flight, and freeze technique. Namely, fight responses include aggressive reactions like tearing up the exam papers (P01, P13, and P16), throwing and screaming at pens (P04, P05, P08, and P11), and hitting desks (P17). Flight responses are characterized by avoidance behaviors, such as pretending to be sick or constantly going to the bathroom, which are common reactions among students like P01, P05, P06, P08, and P12. Finally, freeze responses consist of staring blankly at the exam sheet, staying silent, or not moving. P01 and P19 explained that they “stare blankly,” while P04, P08, P10, and P22 claimed to “stay silent,” and P20 “just looks at the wall,” when they panic during the exam.

Thirdly, cognitive stress responses often manifest as memory blockage and “forgetting everything,” a phenomenon noted by P12 and P15 during high-stakes moments. In this situation, the students try to start solving the problems or memorize the specific information required to answer the question, yet they cannot do so because of distress. This issue could lead to some negative intrusive thoughts, such as “what if I fail,” as some of the students, P01, P08, P15, P18, reported.

Last but not least, emotional/affective stress responses represent psychological distress caused by the gap between the student’s ability to cope with the test anxiety and the expectation of the exam. Feeling anxious, stressed, or “stupid” can be some symptoms of them. When faced with emotional/affective stress responses, one can feel incapable, as P08 stated, “I cannot manage my test anxiety because I am stupid.” It is important to consider that this participant has a high level of test anxiety regarding the CTAS pre-test and post-test mean scores.

**Table 11**

## Theme 2. Symptoms and Responses of Test Anxiety

Theme	Sub-Themes	Codes	Frequency	Representative Reflective Journal Prompts
Symptoms and Responses of Test Anxiety	Physiological Stress Responses	Rapid heartbeats, Hand tremors, Sweating, Heavy breathing.	7 out of 24 participants	#P07, #P11
Symptoms and Responses of Test Anxiety	Behavioral Stress Responses	Fight, flight, and freeze responses, Tearing up exam papers, Throwing the pencil away, Screaming at the pens, Hitting the desks, Hand tremors, Shouting, Pretending to be sick to avoid the test, Going to the bathroom, Staring blankly, Staying silent, Looking at the wall.	24 out of 24 participants	#P01, #P04, #P05, #P06, #P08, #P10, #P11, #P12, #P13, #P16, #P17, #P19, #P20, #P22
Symptoms and Responses of Test Anxiety	Cognitive Stress Responses	Forgetting everything, Memory blockage, Intrusive thoughts.	5 out of 24 participants	#P01, #P08, #P12, #P15, #P18
Symptoms and Responses of Test Anxiety	Emotional/Affective Stress Responses	Feeling anxious, Feeling stressed, Feeling "stupid."	24 out of 24 participants	#P08

#### 2.4. Theme 3 – Coping Mechanisms and Mindfulness Strategies

Themes 1 and 2 emphasized sources, symptoms, and responses of test anxiety; however, Theme 3 focused on some coping mechanisms and mindfulness strategies that the students acquired during the intervention sessions and used to relieve test anxiety. These sub-themes are physiological regulation, cognitive restructuring and self-talk, grounding and sensory awareness, guided imagery, and task-oriented actions. To start with, physiological regulation, comprising breathing exercises and physical exercises such as body scans, yoga, and muscle-relaxation activities, can be beneficial for self-regulation. For

instance, breathing exercise was the most cited method among the participants, noting it was their favorite because it was “calming” and “practical” as P01, P04, P07, P10, P15, and P18 stated.

Cognitive restructuring and self-talk, on the other hand, contain effective practices to motivate the participants to transform their negative thoughts, such as “I will fail,” into positive affirmations, such as “If I calm down, I can do it.” Especially, P12 and P16 noted that focusing on being careful would replace their fear of making errors because of getting distracted.

In addition, grounding and sensory awareness, particularly including the 5-4-3-2-1 grounding technique, could enable the students to reconnect with the present moment by noticing five things they see, four things they touch, three things they hear, two things they smell, and one thing they taste. This method is practical to activate sensory awareness and enhance mindfulness, as it requires staying in the moment. As a case in point, P06 described this technique by saying, “This method is the most effective one because I tried it and it worked.”

Besides these sub-themes, visualization/guided imagery is another technique preferred by a significant number of students to “calm down.” To illustrate, P01, P02, P08, P10, P11, P12, P14, P16, and P23 mentioned “imagining a safe space to calm down” in their reflective journals. The safe spaces had a wide variety, ranging from bedrooms (P02, P10, P11, P12, P16, and P23) to pets (P01 and P08) or family and friends (P14).

Ultimately, the last sub-theme, which is task-oriented actions, had a pivotal role in this theme since it was observed that while trying to manage their test anxiety and motivate themselves, some of the students expressed that if they took task-oriented actions, they could get over their test anxiety. One example is that P08 took task-oriented actions such as studying for the test by elucidating, “My test anxiety is not having enough time. When I am stressed, my favorite method to use is studying because I know that if I study, my time will be enough.” Moreover, P19 agreed with this idea by expressing, “My negative thought

is to perform badly in an exam. My positive thought is to study more.” Lastly, P12 elaborated by saying, “If I am careful while marking the answer sheet and don’t panic, it will be fine.” These pieces of evidence can signal that if the participants practice coping mechanisms and mindfulness strategies, such as physical relaxation exercises, self-talk, positive affirmations, grounding technique, imagining a safe space, and take task-based actions, there is a chance of them to manage their test anxiety.

**Table 12**

## Theme 3. Coping Mechanisms and Mindfulness Strategies

Theme	Sub-Themes	Codes	Frequency	Representative Reflective Journal Prompts
Coping Mechanisms and Mindfulness Strategies	Physiological Regulation	Breathing exercises, Physical exercises, Body scans, Yoga, Muscle-relaxation activities.	24 out of 24 participants	#P01, #P04, #P07, #P10, #P15, #P18
Coping Mechanisms and Mindfulness Strategies	Cognitive Restructuring and Self-Talk	Writing positive affirmations such as “I can do it,” Transforming negative thoughts into positive ones. Replacing “what if I fail,” with “if I work hard, I can do it.”	24 out of 24 participants	#P12, #P16
Coping Mechanisms and Mindfulness Strategies	Grounding and Sensory Awareness	The 5-4-3-2-1 grounding technique. Noticing sensory details, such as a pencil, an exam sheet, whispers, and the paper’s scent, to calm down.	24 out of 24 participants	#P06
Coping Mechanisms and Mindfulness Strategies	Visualization/Guided Imagery	Imagining a safe space.	24 out of 24 participants	#P01, #P02, #P08, #P10, #P11, #P12, #P14, #P16, #P23
Coping Mechanisms and Mindfulness Strategies	Task-Oriented Actions	Studying more, Reading fast, Checking the answer sheets and optical forms.	19 out of 24 participants	#P08, #P12, #P19

## 2.5. Theme 4 – Emotional Regulation

Emotional regulation, over and above the previously mentioned themes, has a major role as the output of the treatment since it reflects the internal shifts in the participants' emotional states as they learned to manage their test anxiety. In other words, this theme enables tracking the students' internal state during and after the mindfulness activities and teaching methods. A remarkable number of participants reported using mindfulness practices, especially breathing exercises, grounding techniques, and imagining a safe space to regulate their emotions. These techniques empowered the students to improve relaxation, body awareness, visualization, and present-moment focus. Foremost, most of the students reported feeling "relaxed" or "calm" after the treatment. To give more details, P01 stated that "When I am stressed, my favorite method to use is breathing exercises because it is very calming and works well in exams." To give another example, P07 delved into details by saying, "When I am stressed, my favorite method to use is breathing exercise because it calms me down." In another case, P10 described the beneficial side of the mindfulness-based intervention by saying, "When I am stressed, my favorite method to use is breathing exercise. It is better because it relaxes me and calms me down." By way of illustration, participants P01, P02, P07, P10, P12, and P17 explicitly used the word "calm" to describe their post-intervention state, which made it possible for them to regulate their stress-related emotions.

Building on that, it was observed that yoga, body scan, and meditation exercises could increase body awareness as students pay attention to their physiological stress responses and solve the issues with the mindfulness-based practices. For instance, P13 claimed that "My favorite method to use is yoga because I like this kind of activity. Another reason I like yoga is that I can clear my mind when I do it." What's more, P16 described similar ideas by saying, "When I am stressed, my favorite method to use is yoga and breathing because I like them." Thus, it can be concluded that activities like yoga,

meditation, and body scan bear the potential to calm down the learners while improving their body awareness.

In addition, visualization/guided imagery practices like imagining a safe space is influential for regulating emotions and reducing test anxiety. Hence, the students were able to detach from future fears, such as failing the test, and focus on the current test at hand. As a support, P08 clarified by saying, "Today, I learned imagination activity and drawing my safe space. My test anxiety is time. My safe space is my bed. The place where I feel safest is my bed and next to my cat. I feel relaxed." Furthermore, P12 elaborated, "My favorites are breathing and imagining my safe space because doing these activities during the exam feels easier and more calming for me." Particularly, P14 elucidated by saying, "When I have test anxiety, I like imagining my safe space because I become happy when I think about being next to my friends. The breathing exercise, imagining my safe space, and listening to mindful music activities are all good, but the one that I like the most is imagining a safe space." This evidence could indicate that the visualization technique calms people down and even makes some of them happy; thus, they would regulate their negative emotions, which are test anxiety-related ones in this case.

Concluding, present-moment focus is a phenomenon that permits the participants to redirect their focus to the immediate task at hand, rather than potential future risks, through mindfulness techniques like grounding, meditation, or yoga. As a case in point, P13 mentioned that "Another reason I like yoga is that I can clear my mind when I do it," thereby P16 described the combination of yoga and breathing practices as a favorite by saying, "When I am stressed, my favorite method to use is yoga and breathing because I like them." Considering the aforementioned sub-themes and codes, this theme demonstrated that emotional regulation was a touchstone that reduced test anxiety in some participants.

**Table 13**

## Theme 4. Emotional Regulation

Theme	Sub-Themes	Codes	Frequency	Representative Reflective Journal Prompts
Emotional Regulation	Relaxation	Feeling relaxed, Calming down.	23 out of 24 participants	#P01, #P02, #P07, #P10, #P12, #P17
Emotional Regulation	Body Awareness	The calming effect of yoga, body scan, and meditation	10 out of 24 participants	#P13, #P16
Emotional Regulation	Visualization/Guided Imagery	Imagining a safe space.	24 out of 24 participants	#P08, #P12, #P14
Emotional Regulation	Present-Moment Focus	Grounding with senses (the 5-4-3-2-1 grounding technique).	24 out of 24 participants	#P13, #P16

**2.6. Theme 5 – Intervention Outcomes**

The mindfulness and creative teaching methods-based intervention plan resulted in some observable changes in the participants of the experimental groups. Though the primary goal was to reduce test anxiety, there were additional benefits as well, such as emotional shift, behavioral awareness, student agency and preference, and transferability and practical application. Primarily, there was a remarkable emotional shift with many participants as they moved from a state of feeling “stressed” or “anxious” to “calm,” “happy,” or “neutral.” As can be seen in the cases of P09 and P14, who reported a decrease in their test anxiety levels and an increase in “happiness” after the activities.

Subsequently, behavioral awareness advanced as the participants started to identify their specific stress response, in terms of the fight, flight, and freeze responses. Especially, P07 noted that the sessions “made me raise awareness and mindfulness of my test anxiety.” Meanwhile, P15 learned to identify exactly what kind of freeze reaction it was.

Equally important, student agency and preference improved as the majority of the students were able to identify their favorite methods and described them in the open-ended section of the reflective journals. To exemplify, among the participants, P01, P02, P03, P04,

P05, P07, P09, P10, P11, P12, P15, P16, P18, P19, P20, and P24 stated that their favorite method was the breathing exercise as it was “practical,” “relaxing,” and “calming.” Thereby P06 found the 5-4-3-2-1 grounding technique the most practical, other participants preferred various methods: P08 used studying, P13 practiced yoga, P14 imagined a safe space, P17 used the fight, flight, and freeze technique, P21 remained neutral, P22 used the 5-4-3-2-1 grounding technique, and P23 utilized drawing to reduce test anxiety. These pieces of information demonstrate that the students were able to identify the methods and activities they liked the most.

Ultimately, after picking the favorite methods and activities, some of the participants reported using them during tests, while studying, or in real-life situations. For instance, P06 explained the ideas and feelings about the eight-week intervention sessions by expressing, “I feel calm and happy after the activities. My test anxiety is not being able to manage time. I’m afraid of thinking I did well on the exam, but actually doing badly and getting a low grade. When I am stressed, my favorite method to use is the 5-4-3-2-1 technique because I have tried it and it worked. I can use these methods in the exam.” Also, P07 evaluated the test anxiety, favorite technique, and even the contexts it could be utilized by stating, “My test anxiety is having little time left and facing a difficult question. When I am stressed, my favorite method to use is breathing exercise because it calms me down. I can use these methods in tests, exams, competitions, when about to go on stage.” In addition, P17 gave details about the insights on the intervention sessions by saying, “I feel calm. I like fight, flight, freeze, drama, and mindful listening. My test anxiety is performing worse than I did before in a quiz. When I am stressed, my favorite method to use is fight, flight, and freeze because I think this method makes me feel better. I can use these methods in a stressful moment of the quiz.” To give another example, P09 showed determination to use the breathing technique by saying, “I feel happy after the activities. I like all of the activities. My test anxiety decreased. My favorite method to use is breathing exercise because it motivates me. It makes me feel relaxed. I can use these methods during exams, when I am

anxious, and when I want to feel peaceful.” Considering the statements from the participants, the outcome of the treatment sessions was a tangible improvement, mostly in student agency and emotional shift.

**Table 14**

Theme 5. Intervention Outcomes

Theme	Sub-Themes	Codes	Frequency	Representative Reflective Journal Prompts
Intervention Outcomes	Emotional Shift	Feeling calm, happy, or neutral.	23 out of 24 participants	#P09, #P14
Intervention Outcomes	Behavioral Awareness	Identifying the fight, flight, and freeze reactions, Realizing what their test anxiety is, Realizing where their safe space is.	24 out of 24 participants	#P07, #P15
Intervention Outcomes	Student Agency and Preference	Identifying favorite methods.	23 out of 24 participants	All of the participants
Intervention Outcomes	Transferability and Practical Application	Using methods during tests, while studying, or in real life.	20 out of 24 participants	#P06, #P07, #P09, #P17

### Comments and Discussion

This research aims to explore the impact of creative teaching methods and mindfulness-based intervention on the sixth-grade EFL learners' test anxiety and mindfulness levels. The reason for choosing mindfulness to mitigate test anxiety in this study is that a significant number of studies suggest that mindfulness may reduce the tendency for deconstructive rumination linked to anxiety (Shen, 2022). In other words, these findings point out the necessity of exploring mindfulness as a means of building resilience. By acting as a safeguard against anxiety related to foreign language, mindfulness could boost the learners' academic outcomes and mental health (Shen, 2022). These studies highlight the need to investigate educational strategies and mindfulness-based interventions as potential means of reducing anxiety (Shanmugam & Jeevarathinam, 2023).

Another study reviews how specific teaching strategies and mindfulness practices can lower test anxiety for EFL students, creating a better classroom environment for developing linguistic proficiency (Shen, 2022; Tasan et al., 2021). Within educational environments, mindfulness-based interventions, ranging from meditation to coping strategies, have proven effective at lowering anxiety levels while increasing health and well-being (Bajri & Elmahdi, 2024). Nonetheless, while the strong correlation between anxiety and EFL achievement is well-established, there is still a lack of research investigating how mindfulness and resilience-building frameworks could be used to alleviate anxiety in EFL contexts (Shen, 2022). Therefore, as an effort to close that gap, this paper delves into the implication of teaching methods and mindfulness practices to alleviate test anxiety among EFL students, drawing on both theoretical frameworks and findings to provide a comprehensive overview of influential interventions and strategies. The study's findings provide a multifaceted positive impact of creative teaching methods and mindfulness-based intervention and suggest them as effective and practical pedagogical tools for reducing test anxiety. The synthesis of quantitative metrics with qualitative reflections presents a comprehensive perspective of the measurable outcomes, which are obtained from the scales, and the subjective experience of the participants, which is observed thanks to the reflective journals. The aforementioned findings provide convincing evidence for the effectiveness of mindfulness and creative teaching methods-based interventions in mitigating test anxiety and enhancing mindfulness among sixth-grade students.

The quantitative side of this study consists of a sample of 142 sixth-grade participants, divided into experimental groups ( $n = 71$ , with 30 females and 41 males) and control groups ( $n = 71$ , with 30 females and 41 males). This quasi-experimental nonequivalent pre-test – post-test control group design utilizes the CTAS and MAAS-A as pre-tests and post-tests to measure the changes in both groups over time. The quantitative data are analyzed using a three-stage statistical analysis in SPSS, which involves descriptive statistics, Paired Samples T-tests, and a One-Way MANCOVA. Particularly, the

inclusion of pre-test measures as covariates in the One-Way MANCOVA is a significant methodological step since it is necessary to control the initial baseline differences between the treatment and control groups. Hereby, it enhances the model's sensitivity by reducing unexplained variance. As the first step, descriptive statistics reveal initial trends. On the one hand, the experimental groups show a decline in the CTAS scores from a pre-test mean of  $M = 2.21$  ( $SD = 0.49$ ) to a post-test mean of  $M = 2.11$  ( $SD = 0.45$ ). On the other hand, the control groups demonstrate a slight decrease in the CTAS scores from  $M = 2.49$  ( $SD = 0.50$ ) to  $M = 2.45$  ( $SD = 0.51$ ). These observations point out a greater positive shift within the treatment groups. As the second step, a Paired Samples T-tests explain within-group changes. For the experimental groups, it could be understood that there is a statistically significant increase in mindfulness scores from the pre-tests and post-tests ( $t = -3.21$ ,  $p = 0.002$ ,  $df = 70$ , 95% CI [-0.42, -0.10]). This analysis proves the treatment's success in increasing mindfulness within the experimental groups. As the last step, the One-Way MANCOVA is the touchstone of the quantitative analysis. After verifying the presumptions of equal covariance matrices through Box's M Test ( $p = .055$ ), a statistically significant multivariate effect for group type is identified on the combined dependent variables, which are mindfulness and test anxiety in this context. This is displayed by Wilks' Lambda  $\Lambda = .853$ ,  $F(2, 137) = 11.78$ ,  $p < .001$ . The partial eta squared ( $\eta^2 = .147$ ) is an indication of a large effect size, with group membership that is given an account for 14.7% of the variance in the combined post-test scores, which accentuates the solid influence of the treatment. In other words, this finding suggests that participation in the treatment led to a statistically distinct combined result compared to the control groups. Considering the significant multivariate result, univariate ANCOVAs clarify specific impacts on each dependent variable. When it comes to mindfulness, it can be stated that there is a highly significant difference between the groups on adjusted post-test mindfulness scores,  $F = 19.69$ ,  $p < .001$ , with an effect size of  $\eta^2 = .125$ . The experimental groups demonstrate a higher adjusted mean for mindfulness in comparison to the control groups. Finally, taking test anxiety into account, a significant difference is found,  $F = 5.36$ ,  $p = .022$ , with an effect size

of  $\eta^2 = .037$ . The treatment groups preserve a lower adjusted mean score for test anxiety compared to the control groups, pointing out a statistically greater reduction in test anxiety levels attributable to the treatment. The adjusted post-test means illustrate these impacts, with the experimental groups showing a higher adjusted mean for mindfulness and a lower adjusted mean for test anxiety. These pieces of information confirm the positive effect of the treatment after controlling for baseline differences.

The qualitative side of this study, which provides a rich phenomenological understanding, includes the analysis of 192 reflective journals. Complementing the quantitative statistical findings, these eight intervention sessions focus on reducing the students' test anxiety while increasing their mindfulness level by teaching them some mindfulness techniques with the help of teaching methods. After each intervention session, the participants are asked to document their opinions, feelings, and insights in the reflective journals. To analyze these pieces of data, a purposive sampling of 24 participants, composed of eight students with high, eight with moderate, and eight with low levels of test anxiety, is subjected to thematic analysis. For the analysis, five steps of Braun and Clarke's (2006) method are followed, which encompass familiarization, initial coding, theme generation review, definition, and reporting with a peer check to enhance credibility. Five themes emerge from thematic analysis: sources of test anxiety, symptoms and responses of test anxiety, coping mechanisms and mindfulness strategies, emotional regulation, and intervention outcomes.

The first theme, which is the sources of test anxiety theme, reveals that the origins of test anxiety among students are multifaceted. Being defined as a common problem, test anxiety manifests through emotional, physical, and mental distress during formal assessments and evaluations (Altamimi & Altamimi, 2025). Basically, this type of anxiety is characterized by a lack of focus, intrusive negative thoughts, and physical stress, which generally results in failing to perform and increased anxiety (Nwadi et al., 2025). This type of performance anxiety is characterized by intrusive thoughts, physiological arousal, and

avoidance behaviors, which collectively impair cognitive processing and memory retrieval during assessments (Özdemir & Seçkin, 2025). It is important to consider that understanding the intricate layers of anxiety in EFL settings is essential for designing precise pedagogical support and interventions (Cantos et al., 2024). Various studies have identified anxiety triggers and pedagogical interventions whilst investigating how instructors could help the learners manage their anxiety, highlighting mindfulness as a primary relaxation strategy (Shen, 2022; Tasan et al., 2021). Thus, the participants are asked to identify their stressors, which mainly include technical and procedural anxiety, time-induced stress, task-based demands, performance evaluation, and external and evaluative pressures. Firstly, in the technical and procedural anxiety sub-theme, it is observed that the students identified the mechanics of the assessment process as a main source of their test anxiety. For instance, P01 explained the fear of mis-marking the answer sheet, while P22 addressed the repetition of the same option on the optical form as the main stressor. Considering these reasons, it can be stated that some of the participants' test anxiety stems from a lack of control over the recording of answers. Also, some participants relate the origin of their test anxiety to the time-induced stress and task-based demands, which include facing difficult questions and time constraints. To give an example, P04 and P06 stated that not having sufficient time or coming across difficult questions during a test could trigger their test anxiety. Supportingly, P03 and P10 emphasized that being stuck between two choices would make them feel anxious. In these contexts, it might be interpreted that the time-induced stress and task-based demands would increase some participants' anxiety; thus, they must use some mindfulness-based strategies to handle this stress. Additionally, some participants, such as P03 and P10, reported that performance evaluation-related issues, which were failing the class and having many wrong answers in an exam, were their stressors. In that case, the participants ought to utilize some mindfulness techniques to not only raise awareness but also mitigate their test anxiety. The last source of test anxiety is listed as external and evaluative pressures. To illustrate, P03 and P11 reported that their mothers and fathers would get angry when they got a low score, while P23 claimed that

being compared to brothers, sisters, and classmates led to negative feelings, such as feeling unsuccessful for failing an exam. These pieces of data signal that beyond the test booklet and optical form, social consequences play a big role in having test anxiety. These results suggest that test anxiety could result from many reasons. In order to ease test anxiety, the students must recognize what their anxiety is and prefer an effective technique to mitigate the detrimental effects of these stressors. Some research findings indicate that mindfulness-based intervention could provide EFL students with the skills to manage the stress of language learning and transform the origins of anxiety into opportunities for self-development and involvement (Al-Rashidi & Aberash, 2024; Hedeshi & Ghanizadeh, 2024). Thus, mindfulness-based strategies are pivotal as the participants could address, solve, and even transform their perspectives on these issues to some extent.

The second theme, symptoms and responses of test anxiety, focuses on the negative impacts of test anxiety on the students. Test anxiety triggers a complex range of mental and physical responses, including feelings of inferiority, distorted self-perception, and intense autonomic nervous system activation. The findings in this study reveal that the participants experience a wide spectrum of physiological, behavioral, cognitive, and emotional/affective stress responses during evaluative situations. These responses underscore the multidimensional and complex nature of test anxiety. First reaction type, the physiological stress responses, encompass involuntary and somatic reactions regulated by the autonomic nervous system. They include rapid heartbeats, heavy breathing, hand tremors, and sweating. These physiological reactions, such as nausea, sweating, and increased blood pressure, reflect extreme levels of stress and tension (Lohaus et al., 2007, as cited in Maier et al., 2020). For example, P07 and P11 reported experiencing hand tremors and rapid heartbeats under stressful circumstances in an exam. It could be seen that these participants struggle to focus on the exam because of not in control of these reactions. That is why they should adopt some mindfulness strategies to mitigate the negative effects of these physiological stress responses. The second reaction type, the

behavioral stress responses, consists of observable actions or habits, such as survival mechanisms: the fight, flight, and freeze responses. Some students exhibited aggressive behaviors, which fell under the fight responses. For example, P01, P13, and P16 indicated that they were intended to tear up exam papers when they were stressed. To give another example, P04, P05, P08, and P11 stated that they shouted or threw pens, while P17 noted hitting the desk in frustration. Other students showed avoidance tactics, which were described as flight responses. For instance, P01, P05, P06, P08, and P12 pretended to be sick or took permission from the teachers to go to the bathroom successively to escape tests. Apart from the fight or flight responses, some students demonstrated a state of paralysis, which was related to the freeze responses. In a case, P01 and P19 emphasized “staring blankly,” P20 reported “just looking at the wall,” and P04, P08, P10, and P22 noted “staying silent” and being unable to move. These individualized behavioral stress responses could also hinder the students’ focus on the exam. The third reaction type, the cognitive stress responses, occurs as cognitive distress, impairing mental performance and memorization. While some students like P12 and P15 claimed to “forget everything,” others like P01, P08, P15, and P18 were distracted by the “what if” scenarios, such as “what if I fail?” As they prevent them from accessing particular information and cause memory loss, they have detrimental effects on the students during evaluative situations. The last reaction type, the emotional/affective stress responses, reflects the inner world of the students under stressful conditions. Feeling anxious, stressed, or “stupid” can be some symptoms of these responses. For instance, a student could feel incapable, as P08 stated, “I cannot manage my test anxiety because I am stupid.” It is vital to consider and recognize these physiological, behavioral, cognitive, and emotional/affective stress responses as they are the manifestations of how the students react during assessments. To alleviate their negative influence, the researchers should provide an intervention that includes test anxiety management strategies. The urgency of addressing this issue stems from the fact that, in the context of EFL education, such emotional distress responses, especially worry, serve as a barrier to student motivation and cognitive functioning (Shen, 2022; Yang & Li, 2025).

This anxiety goes beyond emotional state and surface-level stress; it disrupts the mechanics of acquiring a foreign language. Whether it manifests during lessons or exams and in different forms, such as foreign language classroom anxiety and test anxiety, its presence can be a reliable predictor of diminished student performance (Cantos et al., 2024; Song, 2024). Thus, mindfulness-based interventions combined with teaching methods are chosen for this study as these methods nurture a proactive approach to academic difficulties, allowing the learners to confront challenges with optimism and a constructive mindset, effectively turning possible stressors into chances for development (Shen, 2022). By cultivating a sense of psychological safety and a more stable emotional state, this shift enables the learners to dedicate more cognitive resources to the tasks (Fan & Cui, 2024; Yuan & Hu, 2025). This skill is significant for alleviating test anxiety and improving general psychological well-being (Cao & Liu, 2024). Consequently, this pedagogical perspective nurtures a profound comprehension of one's own identity and learning process whilst facilitating a more comprehensive and resilient commitment to handling academic difficulties (Al-Rashidi & Aberash, 2024).

The third theme, coping mechanisms and mindfulness strategies, identifies the specific treatments that facilitate handling test anxiety by utilizing some coping and mindfulness strategies. Students with a high level of mindfulness generally report lower anxiety levels and employ more constructive coping mechanisms, which is consistent with Self-Determination Theory (Shen, 2022). The Self-Determination Theory explains this by asserting that greater self-awareness allows the learners to be dedicated to their aims while regulating their emotions better (Shen, 2022). Such a shift encourages the learners to participate in demanding assignments more while maintaining motivation, even in the midst of obstacles (Alazemi et al., 2023; Liu et al., 2022). Hereby, it is significant to adopt coping mechanisms and mindfulness strategies. In this study, under the theme of coping mechanisms and mindfulness strategies, the results indicate that participants moved from passive distress to active management through physiological regulation, cognitive

restructuring and self-talk, grounding and sensory awareness, visualization, guided imagery, and task-oriented actions. A significant number of students, such as P01, P04, P07, P10, P15, and P18, reported that the breathing exercises were their favorite as they were “calming” and “practical.” The preference for the breathing exercises possibly stemmed from their functional nature. The students could perform them during a test without drawing attention, which makes them a practical tool for immediate anxiety management. Also, cognitive restructuring and self-talk highlighted a shift from a destructive self-talk to a motivational one. For instance, by using this technique, the students were able to transform their negative thoughts, such as “I will fail,” into positive affirmations, such as “If I calm down, I can do it.” To support, P12 and P16 stated that focusing on being careful would replace their fear of making errors due to distraction. This indicates that the treatment assisted the students in reframing test anxiety not as a lack of ability, but as a manageable state of distraction that could be solved through focus. Furthermore, grounding and sensory awareness, especially the 5-4-3-2-1 grounding technique, allowed students to enhance present-moment awareness by focusing on their surroundings. For example, P06 said, “This method is the most effective one because I tried it and it worked.” To comment, grounding is influential in handling dissociative anxiety and blanking out while taking a test because it attaches the cognitive process to the physical environment. Moreover, visualization and guided imagery techniques could be said to be effective as coping strategies for handling stress responses. As a case in point, P01, P02, P08, P10, P11, P12, P14, P16, and P23 hinted at “imagining a safe space to calm down” in their reflective journals. The safe spaces were highly personalized, ranging from bedrooms (P02, P10, P11, P12, P16, and P23) to pets (P01 and P08) or family and friends (P14). The variety in safe spaces indicates that the effectiveness of guided imagery and visualization techniques is related to the participants’ personal associations with security. Thus, encouraging the students to imagine their safe space would enable them to manage their stressful moments, proving its benefits as a coping mechanism. Last but not least, task-oriented actions represented a shift from emotional regulation to cognitive preparation. For instance, P08

and P19 linked their test anxiety directly to their level of preparation while P12 connected it to being careful. For these students, the solution to test anxiety was studying and being careful during exams. P08 stated, "When I am stressed, my favorite method to use is studying because I know that if I study, my time will be enough." P19 supported by indicating, "My negative thought is to perform badly in an exam. My positive thought is to study more." P12 emphasized, "If I am careful while marking the answer sheet and don't panic, it will be fine." This indicates that for some participants, mindfulness is insufficient. In other words, as their test anxiety stemmed from being unprepared or distracted, they must combine mindfulness strategies with solid study habits to manage their test anxiety better. The evidence suggests that the treatment provided multifaceted tools. By practicing a combination of physiological regulation, cognitive restructuring and self-talk, grounding and sensory awareness, visualization, guided imagery, and task-oriented actions, the participants moved from a state of anxiety to a state of active management.

The fourth theme, emotional regulation, represents one of the primary outputs of the intervention. This theme reflects the internal shifts in students' affective states as some of the participants transitioned from high levels of test anxiety to low levels of test anxiety by managing their emotions and controlling stress responses. In some research, mindfulness has been shown to bridge the gap between self-efficacy beliefs and emotional regulation (Shen, 2022). These intertwined phenomena are pivotal for academic achievement, specifically in EFL education, where the ability to regulate emotions plays a decisive role in determining learning outcomes (Alazemi et al., 2023; Skelly & Chichón, 2021). Substantial study confirms the positive role of mindfulness in managing academic emotions, specifically test anxiety (Fan & Cui, 2024). This level of commitment and improved well-being results from mindfulness-based programs, which encourage emotional regulation and self-awareness (Shen, 2022). Thus, it is important for learners to regulate their emotions related to test anxiety. By tracking the participants' internal states before, during, and after the intervention sessions, the obtained data suggest that these practices are effective in

reducing test anxiety and stress responses related to it. To give an example, some participants, such as P01, P02, P07, P10, P12, and P17, reported that they feel “calm” or “relaxed” after the intervention sessions. To give another example, P01 noted, “When I am stressed, my favorite method to use is breathing exercises because it is very calming and works well in exams.” Similarly, P01 pointed out the functional benefit, explaining that the practice was superior as it “relaxes me and calms me down.” Also, the findings demonstrated that other mindfulness-based practices, such as yoga, body scan, and meditation, enhanced the participants’ awareness in identifying stress markers and mitigating tension via mindful movement. For instance, P13 clarified, “My favorite method to use is yoga because I like this kind of activity. Another reason I like yoga is that I can clear my mind when I do it.” Likewise, P16 supported this result by explaining, “When I am stressed, my favorite method to use is yoga and breathing because I like them.” As it can be seen from the aforementioned statements, yoga and breathing exercises provide not only physical but also mental relaxation. Moreover, the guided imagery technique, imagining safe space exercises, proved beneficial in assisting the participants detach from future-thinking, like the fear of failing. This technique enabled them to have an emotional reset by replacing their test anxiety with comfort-associated imagery, like their safe space. To provide an example, P08 indicated, “Today, I learned imagination activity and drawing my safe space. My test anxiety is time. My safe space is my bed. The place where I feel safest is my bed and next to my cat. I feel relaxed.” To give another example, P12 stated, “My favorites are breathing and imagining my safe space because doing these activities during the exam feels easier and more calming for me.” Similarly, P14 explained, “When I have test anxiety, I like imagining my safe space because I become happy when I think about being next to my friends. The breathing exercise, imagining my safe space, and listening to mindful music activities are all good, but the one that I like the most is imagining a safe space.” These statements signal that the visualization technique allowed the students to manage their emotions, particularly worry and anxiety, by imagining their safe space. Hereby, the participants were able to manage their emotions by using mindfulness-based

strategies, such as breathing exercises, yoga, meditation, guided imagery, and ease stress responses.

The final theme, intervention outcomes, which explains the treatment's impact on the experimental group's test anxiety and mindfulness levels, signals profound changes. The intervention outcomes are divided into four sub-themes, which are emotional shift, behavioral awareness, student agency and preference, transferability, and practical application. Firstly, the treatment created an opportunity for the participants to experience an emotional shift. For instance, the participants often reported a remarkable transition from the states of "stressed" or "anxious" to "calm," "happy," or "neutral." To give an example, P09 and P14 noted decreased test anxiety and increased happiness in their reflective journals, especially after the first three sessions. This was exemplified by other students such as P01, P02, P07, P10, P12, and P17, who used the word "calm" to define their regulated psychological and emotional states. Secondly, the behavioral awareness sub-theme enabled the participants to realize their stress responses regarding the fight, flight, freeze technique, identify their test anxiety, and determine where their safe spaces are. To exemplify, P07 remarked that the intervention sessions made the participant "raise awareness and mindfulness of test anxiety," thereby, P15 developed a comprehension of what kind of freeze reaction the participant had. Thirdly, for the student agency and preference sub-theme, it can be said that being exposed to various mindfulness techniques let the participants experience each method and identify their favorite ones. Majority of the participants reported that the breathing exercises were their favorite. In this context, P01 stated, "When I am stressed, my favorite method to use is breathing exercises because it is very calming and works well in exams." Similarly, P07 defined the breathing exercises as calming and applicable during tests, exams, and even competitions. Finally, P17 preferred the fight, flight, and freeze technique for making the participants "feel better in stressful moments." These evidences could point out that the students developed a sense of autonomy and self-efficacy in managing their emotional states. Last but not least, the

intervention's emphasis on the various mindfulness-based stress reduction techniques allowed the participants to show the ability to apply the techniques not only during the exams but also across broader academic and daily life situations, which highlighted the transferability and practical application sub-theme. Examples included methods during tests, while studying, or in other real-life scenarios. To give an example, P09 expressed confidence in utilizing the breathing techniques to feel relaxed and motivated. The aforementioned intervention strategies, combined with mindfulness and teaching methods, enabled the students to experience an emotional shift, raise behavioral awareness, increase student agency, have specific preferences, add transferability, and conduct practical applications to manage their test anxiety during assessments. Mindfulness techniques facilitate even personal development by helping the learners to recognize and accept negative emotions rather than suppressing them (Al-Rashidi et al., 2024). Thus, this shift in perspective deepens the students' comprehension of the learning process and strengthens their academic readiness (Al-Rashidi et al., 2024)

In conclusion, the data, ranging from statistical measures like descriptive statistics, Paired Samples T-tests, and a One-Way MANCOVA to the thematic analysis of the nuanced themes of the participants' reflective journals, directly addresses the primary research question: to what extent does an intervention integrating mindfulness practices and creative teaching methods impact test anxiety levels of the middle school students who learn English as a foreign language? In line with the study's hypothesis, these results provide compelling evidence for the main research question of this study, which investigates the extent to which an intervention integrating mindfulness practices and creative teaching methods impacts test anxiety levels of the middle school students who learn English as a foreign language. The synthesis of quantitative metrics with qualitative reflections presents a comprehensive perspective of the measurable outcomes, which are obtained from the scales, and the subjective experience of the participants, which is observed thanks to the reflective journals. In other words, the alignment of measurable data, displaying decreased

test anxiety and increased mindfulness, with the participants' reflections, creates a compelling argument for implementing these interventions in middle-school EFL classrooms. When statistical evidence and personal narratives highlight the same benefits, it reinforces the idea that the particular methods, exercises, and techniques used in this treatment are influential tools for managing test anxiety while improving mindfulness. The aforementioned findings provide convincing evidence for the effectiveness of mindfulness and creative teaching methods-based interventions in mitigating test anxiety and enhancing mindfulness among sixth-grade students. The study's findings provide a multifaceted positive impact of creative teaching methods and mindfulness-based intervention and suggest them as effective and practical pedagogical tools for reducing test anxiety. The intervention provides a new insight into the relationship between mindfulness and test anxiety.

## Chapter 5 Conclusion and Suggestions

### Conclusion

In light of the aforementioned pieces of information, it can be said that the quantitative findings obtained from the descriptive statistics, Paired Samples T-tests, and a One-Way MANCOVA and the qualitative results derived from the thematic analysis offer tangible evidence to the main research question of this research, which focuses on to what extent does an intervention integrating mindfulness practices and creative teaching methods impact test anxiety levels of the middle school students who learn English as a foreign language.

On the quantitative side, for mindfulness levels, there was a significant difference between the control and experimental groups on adjusted post-test mindfulness scores, with an effect size of  $\eta^2 = .125$ . This result indicates that the treatment's focus on mindfulness effectively advanced the participants' mindful attention awareness levels. Additionally, a significant difference was found for the test anxiety levels, with an effect size of  $\eta^2 = .037$ , which can be interpreted as there was a statistically greater reduction in test anxiety levels. The adjusted post-test means illustrate these impacts, with the experimental groups demonstrating a higher adjusted mean for mindfulness and a lower adjusted mean for test anxiety. These pieces of information confirm the positive effect of the treatment after controlling for baseline differences.

On the qualitative side, the thematic analysis of 192 reflective journals from 24 participants, eight students with high, eight with moderate, and eight with low test anxiety levels, provided rich insights into the results of the intervention. Five themes were identified that are sources of test anxiety, symptoms and responses of test anxiety, coping mechanisms and mindfulness strategies, emotional regulation, and intervention outcomes. Considering the participants' reflective journals, the conclusion that the intervention led to

observable changes in the participants, extending beyond the main aim of test anxiety reduction to encompass broader cognitive, physiological, behavioral, and emotional benefits can be drawn.

The combined quantitative and qualitative evidence presents a strong case for the impact of creative teaching methods and mindfulness-based intervention. The statistical significance of reduced test anxiety and increased mindfulness is supported by the aforementioned profound and detailed experiential accounts from the participants, painting a comprehensive picture of the treatment's positive effects. The fact that the data demonstrates a measurable drop in test anxiety and a rise in mindfulness, paired with the participants' descriptions, makes a remarkable case for using these interventions in the middle-school context for the EFL learners. Especially when the statistics and personal reflections both indicate the same positive outcome, it confirms that the methods, techniques, and activities covered in these creative teaching methods and mindfulness-based interventions are highly effective for the classroom in reducing test anxiety and enhancing mindfulness levels.

### **Suggestions**

This study offers broad theoretical, practical, and educational implications. Specifically, the findings align with theoretical models suggesting that mindfulness mitigates academic stressors, such as test anxiety, by enhancing mindful attention and emotional regulation. This process empowers learners to identify the origins of their anxiety, recognize symptomatic responses, and utilize effective coping mechanisms. Furthermore, the results indicate that interventions targeting younger adolescents yield positive outcomes comparable to those observed in older student populations. The use of a mixed-methods design facilitated a comprehensive linkage between observable physiological, behavioral, and cognitive changes and their underlying psychological processes. Building on these findings, several practical and educational recommendations emerge. The significant positive outcomes advocate for the integration of creative pedagogical approaches and

mindfulness-based interventions within primary and secondary school curricula as a primary strategy for managing test anxiety. The success of such interventions in fostering physiological and cognitive awareness suggests that these programs equip students with valuable, transferable skills. These competencies can be applied across various evaluative contexts, particularly during periods of peak anxiety. Consequently, educators and policymakers should consider incorporating mindfulness practices, such as breathing exercises, body scans, meditation, and grounding techniques, alongside creative activities like dramatization and storytelling into daily routines. Such integration fosters a supportive learning environment, enhances student mindfulness, and serves to reduce the prevalence of test anxiety. Regarding future research, there is a clear necessity for longitudinal studies to assess the long-term effectiveness, impact, and sustainability of mindfulness-based interventions. Such research would provide critical insights into how these skills are internalized over time and integrated into the students' broader academic lives. Longitudinal studies are warranted to assess the long-term sustainability of the observed reductions in test anxiety and increases in mindfulness. Understanding whether these benefits persist over time and generalize to later academic stages, such as high school and university, would provide crucial evidence for the enduring impact of such interventions. Further investigations utilizing larger, more diverse samples across different cultural backgrounds and age groups would enhance the generalizability of the findings. Consequently, comparative studies examining different mindfulness techniques or intervention durations would help optimize future program designs for maximum efficacy and engagement.

### **Pedagogical Implications for Teachers, Researchers, Educators, Teacher Trainers, Curriculum Designers, and Policy Makers**

The findings of this research offer significant theoretical insights into the dynamic relationship between test anxiety and mindfulness. Central to these insights is the reinforcement of the premise that mindfulness serves as a vital protective mechanism against academic stressors. By fostering enhanced attention regulation, emotional stability,

and self-awareness, mindfulness equips students with the internal resilience necessary to navigate high-stakes evaluative environments. Qualitative evidence further elucidates this process, illustrating how the cultivation of present-moment awareness redirects focus away from anticipatory anxiety, ultimately fostering a sense of agency and composure. Furthermore, this study underscores the developmental versatility of mindfulness principles. By demonstrating the efficacy of such practices among sixth-grade students, the research extends the traditional boundaries of mindfulness-based interventions, which are frequently centered on older adolescents or adults. This suggests that the capacity for cognitive and emotional regulation can be nurtured at a much earlier stage of development. Moreover, the integration of creative instructional strategies within a mindfulness framework provides a compelling model for engaging younger learners more authentically than conventional didactic approaches. The practical implications for primary and secondary education are substantial.

For teachers, considering the statistically significant decrease in test anxiety and statistically significant increase in mindfulness levels of the treatment group, it can be suggested that teachers ought to prioritize the integration of diverse mindfulness techniques, such as breathing exercises, body scans, guided imagery/visualization, and grounding techniques, directly into the classrooms. By providing these options, educators could encourage student agency and preference. This could enable students to adopt practices that are more practical and influential for them, fostering autonomy and intrinsic motivation.

For researchers, it could be beneficial to conduct longitudinal studies to determine if the reduction in test anxiety and the increase in mindfulness levels persist as students transition into high school and university. Future investigations should utilize larger, more diverse samples across various cultural backgrounds to enhance the generalizability of these findings. Additionally, comparative studies are needed to examine the efficacy of

different intervention durations and specific mindfulness techniques to optimize program designs for maximum student engagement.

For educators and teacher trainers, to ensure the effective delivery of these interventions, it can be recommended that teacher training programs must evolve to include mindfulness strategies as a core competency. Educators need to be equipped not just with the theory but with the practical skills to facilitate these sessions authentically. Training should emphasize how mindfulness serves as a protective mechanism, fostering the internal resilience, emotional stability, and attention regulation necessary for students to navigate academic stressors.

For curriculum designers, it is advised to move beyond conventional didactic approaches by integrating creative teaching methods within a mindfulness framework. This research demonstrates that mindfulness is effective even for younger learners, such as sixth-grade students, suggesting that the core curriculum should be redesigned to include these practices at an earlier developmental stage. By embedding these tools into the daily academic flow, designers can provide students with lifelong tools for stress management that extend far beyond the classroom.

For policy makers, the evidence provides a compelling case for systemic change within primary and secondary education. Given the statistically significant reduction in test anxiety, which may be a pervasive challenge that undermines both performance and well-being, policy should support the institutionalization of mindfulness practices. Recognizing mindfulness as a proactive measure rather than a reactive one allows for the creation of educational environments that prioritize holistic student health alongside academic achievement.

## References

- Ackerman, P. L., & Heggestad, E. D. (1997). Intelligence, personality, and interests: Evidence for overlapping traits. *Psychological Bulletin*, *121*(2), 219–245.
- Acosta, N. C. C. (2024). Ansiedad frente a exámenes, un tipo de ansiedad fóbica que se presenta en el contexto académico [Test anxiety, a type of phobic anxiety that occurs in the academic context]. *Anales de la Facultad de Ciencias Médicas (Asunción)*, *57*(1), 103–110. <https://doi.org/10.18004/anales/2024.057.01.103>
- Al-Rashidi, A. H., & Aberash, A. (2024). Reflective thinking and self-evaluation in language learning: Mirroring the impacts on Saudi Arabian EFL students' growth mindfulness, resilience, and academic well-being. *Asian-Pacific Journal of Second and Foreign Language Education*, *9*(1). <https://doi.org/10.1186/s40862-024-00265-1>
- Alazemi, A. F. T., Jember, B., & Al-Rashidi, A. H. (2023). How to decrease test anxiety: A focus on academic emotion regulation, L2 grit, resilience, and self-assessment. *Language Testing in Asia*, *13*(1), 28.
- Ali, B. J., & Anwar, G. (2021). Anxiety and foreign language learning: Analysis of students' anxiety towards foreign language learning. *International Journal of English Literature and Social Sciences*, *6*(3), 234–240. <https://doi.org/10.22161/ijels.63.32>
- Altamimi, D. H. F., & Altamimi, A. A. M. (2025). Examining test anxiety and its impact on language performance among university students: A comparative analysis by gender. *Journal of Curriculum and Teaching*, *14*(1), 106. <https://doi.org/10.5430/jct.v14n1p106>
- Bajri, I. A., & Elmahdi, O. E. H. (2024). Addressing language anxiety in the EFL classroom: EFL teachers' perspective. *Theory and Practice in Language Studies*, *14*(7), 2222. <https://doi.org/10.17507/tpls.1407.30>
- Bakhtyari, M. B., & Hafizoah, K. (2022). English language speaking anxiety among Afghan university students. *Journal of Curriculum and Teaching*, *11*(8), 238. <https://doi.org/10.5430/jct.v11n8p238>

- Balogun, A. G., Balogun, S. K., & Onyencho, C. V. (2017). Test anxiety and academic performance among undergraduates: The moderating role of achievement motivation. *The Spanish Journal of Psychology*, *20*, E14.
- Bensoussan, M. (2012). Alleviating test anxiety for students of advanced reading comprehension. *RELC Journal*, *43*(2), 203–216.  
<https://doi.org/10.1177/0033688212449511>
- Boltayevich, E. B., Abdullayeva, I., Raupova, L., Kholikov, A., & Mirkasimova, M. (2025). Speaking exams with less anxiety in Intelligent Computer-Assisted Language Assessment (ICALA): Mirroring EFL learners' foreign language anxiety, shyness, autonomy, and enjoyment. *Language Testing in Asia*, *15*(1).  
<https://doi.org/10.1186/s40468-024-00340-x>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101.
- Braun, V., & Clarke, V. (2021). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative Research in Sport, Exercise and Health*, *13*(2), 201–216.
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*(4), 822–848.
- Cantos, K. F. S., Pintado, J. A. C., Coello, M. B. B., Pintado, J. A. C., & Castillo, L. A. C. (2024). Strategies for reducing anxiety in EFL classroom: An academic review. *Ciencia Latina Revista Científica Multidisciplinar*, *8*(2), 7159.  
[https://doi.org/10.37811/cl\\_rcm.v8i2.11117](https://doi.org/10.37811/cl_rcm.v8i2.11117)
- Cao, J., & Liu, X. (2024). The melody of language learning at intermediate and upper levels: An emphasis on free discussion panels as an indispensable part of language classes and the effects on willingness to communicate, growth mindfulness, and autonomy. *BMC Psychology*, *12*(1). <https://doi.org/10.1186/s40359-024-01645-5>

- Cassady, J. C. (2010). *Anxiety in schools: The causes, consequences, and solutions for academic anxieties* (Vol. 2). Peter Lang.
- Cassady, J. C., & Johnson, R. E. (2002). Cognitive test anxiety and academic performance. *Contemporary Educational Psychology*, 27(2), 270–295. <http://doi.org/10.1006/ceps.2001.1094>
- Chambers, R., Chuen Yee Lo, B., & Allen, N. B. (2008). The impact of intensive mindfulness training on attentional control, cognitive style, and affect. *Cognitive Therapy and Research*, 32, 303–322.
- Chancey, J. B., Heddy, B. C., Lippmann, M., & Abraham, E. (2023). Using an online-based mindfulness intervention to reduce test anxiety in physics students. *Journal of Cognitive Enhancement*, 7, 128. <https://doi.org/10.1007/s41465-023-00261-2>
- Chen, W. (2025). Systematic review and meta-analysis of the relationship between foreign language anxiety and academic achievement in Chinese language learners. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1576224>
- Cheng, Y., Horwitz, E. K., & Schallert, D. L. (1999). Language anxiety: Differentiating writing and speaking components. *Language Learning*, 49(3), 417. <https://doi.org/10.1111/0023-8333.00095>
- Concannon, B. J., Esmail, S., & Roberts, M. R. (2020). Immersive virtual reality for the reduction of state anxiety in clinical interview exams: Prospective cohort study. *JMIR Serious Games*, 8(3), e18313.
- Dahbi, M. (2015). Training EFL students on relaxation techniques to manage test taking anxiety: An action research project. *International Journal of English Language Teaching*, 2(1). <https://doi.org/10.5430/ijelt.v2n1p61>
- Demir, V. (2017). Bilinçli Farkındalık Temelli Bilişsel Terapi Programının Üniversite Öğrencilerinin Kaygı Düzeylerine Etkisi [The effect of mindfulness based cognitive therapy program on the anxiety levels of university students]. *Uluslararası Toplum Araştırmaları Dergisi*, 7(12), 98–118.

- Desta, M. A. (2019). An investigation into English foreign language learning anxiety and English language performance test result: Ethiopian university students in focus. *International Journal of Research in English Education*, 4(4), 83. <https://doi.org/10.29252/ijree.4.4.83>
- Dundas, I., & Nygård, I. (2024). Mindfulness for test anxiety and negative self-evaluation in high school. *Current Psychology*, 43(38), 30027–30037.
- Ebrahimi, M. R., & Khoshsima, I. H. (2016). Impact of emotional intelligence enhancement on test anxiety among EFL learners: An experimental study. *International Journal of English Language & Translation Studies*, 4(1), 136–145.
- Fan, L., & Cui, F. (2024). Mindfulness, self-efficacy, and self-regulation as predictors of psychological well-being in EFL learners. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1332002>
- Farid, R. M. B. B. (2021). Influence of language anxiety and prior knowledge on EFL students' performance in essay writing. *Journal of Arts, Literature, Humanities and Social Sciences*, 599(23), 5. <https://doi.org/10.21608/jasep.2021.200361>
- Fayerberger, S., Felicia, R. A., & Carina, N. (2023). Teaching mindfulness in the English foreign language classroom to high school students. *European Proceedings of Educational Sciences*, 10.
- Gamer, J., Schmukle, S. C., Luka-Krausgrill, U., & Egloff, B. (2008). Examining the dynamics of the implicit and the explicit self-concept in social anxiety: Changes in the Implicit Association Test–Anxiety and the Social Phobia Anxiety Inventory following treatment. *Journal of Personality Assessment*, 90(5), 476–480.
- Gao, J. (2022). [Review of the book *Scales assessing L2 speaking anxiety: Development, validation, and application*]. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.972671>
- Gawi, E. M. K. (2020). The impact of foreign language classroom anxiety on Saudi male students' performance at Albaha University. *Arab World English Journal*, 11(2), 258. <https://doi.org/10.24093/awej/vol11no2.18>

- Gellisch, M., Bablok, M., Morosan-Puopolo, G., Schäfer, T., & Brand-Saberi, B. (2025). Autonomic stress responses in oral examination simulations: Neuroscientific insights from comparing peer-led and lecturer-led approaches. *Trends in Neuroscience and Education*, 100270.
- Gönen, S. İ. K. (2022). Mindfulness-based practices for EFL teachers: Sample tasks and insights to cultivate mindfulness. *Focus on ELT Journal*, 78. <https://doi.org/10.14744/felt.2022.4.3.6>
- Guires UK. (2019). Quasi-experimental study mixed-method design: MMR serves as an umbrella for several sub-questions that address evidence-based policymaking. *Guires News Room*.
- Han, S., Li, Y., & Haider, S. A. (2022). Impact of foreign language classroom anxiety on higher education students academic success: Mediating role of emotional intelligence and moderating influence of classroom environment. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.945062>
- Haroud, S., Ouchauka, L., & Saqri, N. (2025). Investigating the causes of language anxiety among future primary school teachers in foreign language classes. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1510765>
- Hayat, A. A., Soltani, R., Tazangi, T. B., Baradaranfar, F., Zareh, A., Norouzi, A., et al. (2025). Relationship between mindfulness, test anxiety, and academic performance among nursing students. *Journal of Education and Health Promotion*, 14, 93.
- He, J., Iskhar, S., Yan, Y., & Aisuluu, M. (2023). Exploring the relationship between teacher growth mindset, grit, mindfulness, and EFL teachers' well-being. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1241335>
- Hedeshi, E., & Ghanizadeh, A. (2024). Exploring EFL learner resilience and examining its association with L2 buoyancy and language achievement. *Research Square*. <https://doi.org/10.21203/rs.3.rs-3862832/v1>

- Hernández, A. I., & Bellés-Calvera, L. (2022). "Look, ma, no hands!" Writing without typing: Speech-recognition tools for future translators in the English language classroom. *Lengua y Sociedad*, 21(2), 69. <https://doi.org/10.15381/lengsoc.v21i2.22723>
- Huang, J. (2022). [Review of the book *The role of English as a foreign language teachers' mindfulness and compassion in fostering students' foreign language enjoyment*]. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.899298>
- Hughes, B. M. (2005). Study, examinations, and stress: Blood pressure assessments in college students. *Educational Review*, 57(1), 21–36.
- Jin, Y., Dewaele, J., & MacIntyre, P. D. (2021). Reducing anxiety in the foreign language classroom: A positive psychology approach. *System*, 101, 102604. <https://doi.org/10.1016/j.system.2021.102604>
- Journal of Education and Learning (EduLearn). (2021). *Journal of Education and Learning (EduLearn)*.
- Journault, A., Plante, I., Charbonneau, S., Sauvageau, C., Longpré, C., Giguère, C., Labonté, C., Roger, K., Cernik, R., Chaffee, K. E., Dumont, L., Labelle, R., & Lupien, S. (2022). Using latent profile analysis to uncover the combined role of anxiety sensitivity and test anxiety in students' state anxiety. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1035494>
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, 10(2), 144–156.
- Khalid, P. Z. M., Kussin, H. J., Mokhtar, M. M., & Tahir, M. H. M. (2023). *Mindfulness-based classroom intervention: Boon or bane to ESL teachers in Malaysia?* <https://doi.org/10.31235/osf.io/j8g4r>
- Kim, H.-I. (2021). The underlying factors of foreign language reading anxiety: Their effects on strategy use and orientation toward reading. *Studies in Second Language Learning and Teaching*, 11(2), 313. <https://doi.org/10.14746/ssllt.2021.11.2.3>

- Krispenz, A., Gort, C., Schültke, L., & Dickhäuser, O. (2019). How to reduce test anxiety and academic procrastination through inquiry of cognitive appraisals: A pilot study investigating the role of academic self-efficacy. *Frontiers in Psychology, 10*, 1917.
- Laachir, A., Karfa, A. E., & Alaoui, A. I. (2022). Investigating foreign language anxiety among Moroccan EFL university students in face-to-face and distance learning modes. *Arab World English Journal, 13*(4), 196. <https://doi.org/10.24093/awej/vol13no4.13>
- Labicane, G. E. M. (2021). Foreign language anxiety experiences of Filipino students across the four macro skills. *Language Literacy: Journal of Linguistics, Literature and Language Teaching, 5*(1), 254. <https://doi.org/10.30743/ll.v5i1.3761>
- Lee, S.-P., Chang, S. L., Su, H., Cui, Z.-Y., & Lee, S. (2022). Psychophysiological factors as predictors of second language writing achievement in a computer-based test. *Frontiers in Psychology, 13*. <https://doi.org/10.3389/fpsyg.2022.958938>
- Liu, H., Lu, X., Yan, Y., Liu, H., Lu, X., & Yan, Y. (2025). Exploring the mediating role of anxiety between resilience and academic achievement in students' English learning. *Humanities and Social Sciences Communications, 12*(1). <https://doi.org/10.1057/s41599-025-06123-w>
- Liu, W., Gao, Y., Gan, L., & Wu, J. (2022). The role of Chinese language learners' academic resilience and mindfulness in their engagement. *Frontiers in Psychology, 13*. <https://doi.org/10.3389/fpsyg.2022.916306>
- Lykins, E., & Baer, R. A. (2009). Psychological functioning in a sample of long-term practitioners of mindfulness meditation. *Journal of Cognitive Psychotherapy, 23*, 226–241.
- Mahmoud, S. (2024). Understanding the impact of anxiety on students' language proficiency. *Global Journal of Arts, Humanities and Social Sciences, 71*. <https://doi.org/10.37376/glj.vi71.5857>
- Maier, A., Schaitz, C., Kröner, J., Connemann, B., & Sosic-Vasic, Z. (2020). Imagery rescripting: Exploratory evaluation of a short intervention to reduce test anxiety in university students. *Frontiers in Psychiatry, 11*, 84.

- Medina, E. F. L., & Casado, J. (2024). CLIL, a competence-based coping strategy against foreign language anxiety in higher education. *Discover Psychology*, 4(1). <https://doi.org/10.1007/s44202-024-00187-6>
- Minihan, S., Samimi, Z., & Schweizer, S. (2021). The effectiveness of affective compared to neutral working memory training in university students with test anxiety. *Behaviour Research and Therapy*, 147, 103974.
- Moghadam, H. K., Ghanizadeh, A., & Ghonsooly, B. (2020). Differences in EFL learners' burnout levels and receptive language skills with regard to the mindfulness-based instruction. *ExELL*, 8(2), 185. <https://doi.org/10.2478/exell-2021-0004>
- Nicaise, M. (1995). Treating test anxiety: A review of three approaches. *Teacher Education and Practice*, 11, 65–81.
- Nwadi, C. L., Edeh, N. I., Ugwunwoti, E. P., Nwokike, F. O., Nneji, O. S., Anamezie, R. C., Uguru, T. O., Onubueze, F. K., Chukwu, P. N., Eya, G. M., Ikpenwa, J. N., Nsude, A. O., Ozoagu, C. G., Aka, C. P., Nwobodo, P., Animba, I. E., & Okoli, S. N. (2025). Impact of cognitive-behavioral therapy and mindfulness-based stress reduction in mitigating test anxiety and enhancing academic achievement among vocational education students at Nigerian universities. *BMC Medical Education*, 25(1). <https://doi.org/10.1186/s12909-025-07130-w>
- OECD. (2017). Schoolwork-related anxiety. In *PISA 2015 results (volume III): Students' well-being*. OECD Publishing.
- Özdemir, O., & Seçkin, H. (2025). Exploring foreign language anxiety in higher education: Multifaceted insights into causes, impacts, and coping strategies. *Social Sciences & Humanities Open*, 11, 101364. <https://doi.org/10.1016/j.ssaho.2025.101364>
- Özyeşil, Z., Arslan, C., Kesici, Ş., & Deniz, M. E. (2011). Bilinçli farkındalık ölçeği'ni Türkçeye uyarlama çalışması [Self-awareness scale: A study of adaptation into Turkish]. *Eğitim ve Bilim*, 36(160).

- Pan, J., & Lou, L. (2023). Research on the phenomenon of “foreign language anxiety” based on individual differences of learners. *Creative Education*, 14(9), 1759. <https://doi.org/10.4236/ce.2023.149113>
- Pan, M., & Liu, J. (2022). Chinese English as a foreign language teachers' wellbeing and motivation: The role of mindfulness. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.906779>
- Patton, M. Q. (2022). Impact-driven qualitative research and evaluation. In *The SAGE handbook of qualitative research design* (Vol. 2, pp. 1165–1180).
- Piscayanti, K. S., Mujiyanto, J., Yuliasri, I., & Astuti, P. (2024). The voice of identity: The power of mindfulness-based approach in EFL poetry classroom. *Theory and Practice in Language Studies*, 14(2), 376. <https://doi.org/10.1707/tpIs.1402.08>
- Portugal-Toro, A., García-Peñalvo, F. J., Ruiz, L. A., & Esparza, A. V. (2025). Cognitive and affective processes in second language oral communication: A mixed methods research. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1571099>
- Pourfeiz, J. (2016). A cross-sectional study of relationship between attitudes toward foreign language learning and academic motivation. *Procedia - Social and Behavioral Sciences*, 232, 668. <https://doi.org/10.1016/j.sbspro.2016.10.091>
- Priebe, N. P., & Kurtz-Costes, B. E. (2022). The effect of mindfulness programs on collegiate test anxiety. *Mindfulness*, 13(11), 2868–2878.
- Putwain, D., & Daly, A. L. (2014). Test anxiety prevalence and gender differences in a sample of English secondary school students. *Educational Studies*, 40(5), 554–570.
- Putwain, D. W., Stockinger, K., von der Embse, N. P., Suldo, S. M., & Daumiller, M. (2021). Test anxiety, anxiety disorders, and school-related wellbeing: Manifestations of the same or different constructs? *Journal of School Psychology*, 88, 47–67.
- Putwain, D. W., & Symes, W. (2018). Does increased effort compensate for performance debilitating test anxiety? *School Psychology Quarterly*, 33(3), 482.
- Quispe-Sanca, R. V., Arteta-Sandoval, G., Quispe-Sanca, D., & Morales-García, W. C. (2024). Validation of a Spanish version of the Foreign Language Classroom Anxiety

- Scale in Peruvian secondary education students. *Frontiers in Education*, 9. <https://doi.org/10.3389/feduc.2024.1394157>
- Rasool, U., Aslam, M. Z., Mahmood, R., Barzani, S. H. H., & Qian, J. (2023). Pre-service EFL teacher's perceptions of foreign language writing anxiety and some associated factors. *Heliyon*, 9(2). <https://doi.org/10.1016/j.heliyon.2023.e13405>
- Rasool, U., Qian, J., & Aslam, M. Z. (2023). [Review of the book *An investigation of foreign language writing anxiety and its reasons among pre-service EFL teachers in Pakistan*]. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.947867>
- Rochmawati, L., Fatmawati, F., & Sukma, M. M. (2023). Motivation, anxiety, and self-efficacy in learning aviation English: A study of Indonesian aviation cadets. *Asian-Pacific Journal of Second and Foreign Language Education*, 8(1). <https://doi.org/10.1186/s40862-023-00212-6>
- Roseveare, C. (2023). [Review of the book *Thematic analysis: A practical guide* by V. Braun and V. Clarke].
- Sa'eed, M. A. A. A. (2024). Anxiety in learning English as a foreign language: Causes, effects, and coping strategies. *International Journal of Humanities and Education Research*, 6(2), 89. <https://doi.org/10.33545/26649799.2024.v6.i2b.95>
- Sen, S., & Yildirim, I. (2022). A tutorial on how to conduct meta-analysis with IBM SPSS statistics. *Psych*, 4(4), 640–667.
- Shanmugam, K., & Jeevarathinam, S. N. (2023). Unraveling the influence of anxiety on language learning: Examining its implications for student behavior and academic performance. *Journal of Humanities and Education Development*, 5(3), 106. <https://doi.org/10.22161/jhed.5.3.14>
- Shapiro, S. L., Brown, K. W., & Biegel, G. M. (2007). Teaching self-care to caregivers: Effects of mindfulness-based stress reduction on the mental health of therapist in training. *Training and Education in Professional Psychology*, 1, 105–115.

- Shen, Y. (2022). Mitigating students' anxiety: The role of resilience and mindfulness among Chinese EFL learners. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.940443>
- Shi, Z., Gao, X., & Zhou, R. (2014). Emotional working memory capacity in test anxiety. *Learning and Individual Differences*, 32, 178–183.
- Skelly, K. J., & Estrada-Chichón, J. L. (2021). Mindfulness as a coping strategy for EFL learning in education. *International Journal of Instruction*, 14(4), 965–980.
- Song, Z. (2024). [Review of the book *Foreign language anxiety: A review on definition, causes, effects and implication to foreign language teaching*]. *Journal of Education Humanities and Social Sciences*, 26, 795. <https://doi.org/10.54097/4838f411>
- Stoyanova, S. (2023). Test anxiety among secondary school students and university students. *Problems of Psychology in the 21st Century*, 17(1), 35–46. <https://doi.org/10.33225/ppc/23.17.35>
- Sun, Y., Lv, K., Xie, W., & Wang, Y. (2025). The effectiveness of brief mindfulness training in reducing test anxiety among high school students. *BMC Psychology*, 13(1), 1–9.
- Tasan, M., Mede, E., & Sadeghi, K. (2021). The effect of Pranayamic breathing as a positive psychology exercise on foreign language learning anxiety and test anxiety among language learners at tertiary level. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.742060>
- Taşkın, S. Z. (2018). *Assessing mindfulness in school-aged children: Development and validation of BAU Mindfulness Scale (BAU-MS)*.
- Torrano, R., Ortigosa, J. M., Riquelme, A., Méndez, F. J., & López-Pina, J. A. (2020). Test anxiety in adolescent students: Different responses according to the components of anxiety as a function of sociodemographic and academic variables. *Frontiers in Psychology*, 11, 612270.
- Tsai. (2012). Test anxiety and foreign language reading anxiety in a reading-proficiency test. *Journal of Social Sciences*, 8(1), 95. <https://doi.org/10.3844/jssp.2012.95.103>

- Tuncer, N. (2017). *Bir grup üniversite öğrencisinin belirlenen sosyal anksiyete düzeylerine göre bilinçli farkındalık ve yaşam doyumunu düzeylerinin incelenmesi* [Investigation of mindfulness and life satisfaction levels of a group of university students according to determined social anxiety levels] (Master's thesis). Işık University, Turkey.
- Wakuma, O. K. (2025). An investigation into anxiety levels and English learning outcomes of high school students with a particular focus on grade nine. *Discover Education*, 4(1). <https://doi.org/10.1007/s44217-025-00436-3>
- Wang, N. (2022). [Review of the book *EFL teachers' mindfulness and emotion regulation in language context*]. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.877108>
- Williams, M., & Penman, D. (2011). *Mindfulness: A practical guide to finding peace in a frantic world*. Hachette UK.
- Williamson, C., Wright, S. T., & Beck Dallaghan, G. L. (2024). Test anxiety among US medical students: A review of the current literature. *Medical Science Educator*, 34(2), 491–499.
- Wu, X., Yang, H., Liu, J., & Liu, Z. (2022). English use anxiety, motivation, self-efficacy, and their predictive effects on Chinese top university students' English achievements. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.953600>
- Xie, Q., & Junting, Y. (2020). English writing anxiety and preservice teacher's written corrective feedback. *Language Education & Assessment*, 3(2), 58. <https://doi.org/10.29140/lea.v3n2.357>
- Xu, J., & Ying, X. (2025). The impact of self-efficacy on psychological resilience in EFL learners: A serial mediation model. *BMC Psychology*, 13(1). <https://doi.org/10.1186/s40359-025-03236-4>
- Xue, C. (2023). [Review of the book *Mitigating EFL students' academic disengagement: The role of teachers' compassion and mindfulness in China*]. *Heliyon*, 9(2). <https://doi.org/10.1016/j.heliyon.2023.e13150>

- Yan, J. X., & Liang, J. (2022). Foreign language anxiety and dependency distance in English–Chinese interpretation classrooms. *Frontiers in Psychology, 13*. <https://doi.org/10.3389/fpsyg.2022.952664>
- Yang, H., & Li, Y. (2025). The role of mindfulness in foreign language anxiety: A systematic review of correlational and intervention studies. *International Journal of Mental Health Promotion, 27*(9).
- Yilmazer, E., Hamamcı, Z., & Türk, F. (2024). Effects of mindfulness on test anxiety: A meta-analysis. *Frontiers in Psychology, 15*. <https://doi.org/10.3389/fpsyg.2024.1401467>
- Young, S. (1997). *The science of enlightenment*. Sounds True.
- Yu, Y., & Zhou, D. (2022). Understanding Chinese EFL learners' anxiety in second language writing for the sustainable development of writing skills. *Frontiers in Psychology, 13*. <https://doi.org/10.3389/fpsyg.2022.1010010>
- Yuan, M., & Hu, Z. (2025). Enhancing academic resilience through mindfulness training: An experimental study with Chinese undergraduates and the mediating role of psychological flexibility. *Frontiers in Psychology, 16*, 1692295. <https://doi.org/10.3389/fpsyg.2025.1692295>
- Yue, N., Li, C., Si, S., Xu, S., Zhang, Q., & Cui, L. (2024). Brief meditation on test anxiety of eighth grade Chinese students: Chain-mediating roles of mindfulness and self-efficacy. *School Mental Health, 16*(2), 483–499.
- Zeidner, M. (1998). *Test anxiety: The state of the art*. Plenum Press.
- Zhao, X. (2024). Exploring the role of mindfulness meditation in facilitating English learning and optimizing classroom teaching. *Journal of Psychology and Behavior Studies, 4*(1), 81. <https://doi.org/10.32996/jpbs.2024.1.9>
- Zheng, Y., & Cheng, L. (2018). How does anxiety influence language performance? From the perspectives of foreign language classroom anxiety and cognitive test anxiety. *Language Testing in Asia, 8*(1). <https://doi.org/10.1186/s40468-018-0065-4>

- Zhou, L., Zhang, X., Qiang, J., & Xu, C. (2026). Self-compassion and English learning anxiety among college students: A moderated chain mediation model. *Frontiers in Psychology*, 16. <https://doi.org/10.3389/fpsyg.2025.1697291>
- Zhu, D. (2022). [Review of the book *English as a foreign language teachers' identity and motivation: The role of mindfulness*]. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.940372>

**APPENDIX-A: Milli Eğitim Bakanlığı (MEB) İzni**

ÖZEL MERAM [REDACTED] ORTAOKULU Müdürlüğüne



Başvuru No: MEB.TT.2024.013065

Uygulama Yapılacak MEB Teşkilatının Kurum Kodu: 99977739

T.C. Kimlik No: [REDACTED]

Adı Soyadı: ŞEVVAL İZGÜT

Araştırmanın Adı: EFL Öğrencilerinin Sınav Kaygısını Azaltmak İçin Farkındalıkları ve Yaratıcılıkları Üzerine Bir Araştırma

Araştırmanın Niteliği: Yüksek Lisans Tezi

Araştırmanın Örneklem / Çalışma Grubu: Öğrenci

Uygulama Yapılacak MEB Teşkilatı: ÖZEL MERAM [REDACTED] ORTAOKULU

Uygulama Yapılacak Birim: Özel Türk Ortaokulu

Uygulama Yapılacak İl: KONYA

Veri Toplama Aracının Başlığı: Bilişsel Sınav Kaygısı Ölçeği ve Bilinçli Farkındalık Ölçeği

Araştırma Uygulama İzninin Kabul Tarihi: 25.12.2024

Araştırmanın Uygulama İzninin Bitiş Tarihi: 25.12.2025

Yukarıda kimliği yazılı araştırmacı "Araştırma Uygulama İzinleri Genelgesine (2024/41)" göre belirtilen kapsamda araştırmasını yapmayı taahhüt etmiştir. Araştırmacının bilgi ve belgelerinin uygunluğu kontrol edilmiş olup araştırma uygulama izni KONYA İl Milli Eğitim Müdürlüğü tarafından onaylanmıştır.

NOT: Okul/kurum yöneticileri tarafından "Araştırma Uygulama İzni" belgesinin ve veri toplama araçlarının (araçlardaki maddelerinin) modülde yer alan belge ve araçlarla aynı olduğu kontrol edilmelidir. Aynı olmadığı durumda araştırma uygulama izni verilmeyecektir.

\* Başvuru detayını görüntülemek ve belgeyi doğrulamak için '<https://arastirmaizinleri.meb.gov.tr/belge-dogrula>' bağlantısını kullanınız.

## APPENDIX-B: Data Collection Plan

### Data Collection Plan

Weeks	Sessions	Activities	Objectives	Main Themes
Week 1, 2 and 3	Introduction, Consent Forms, and Pre-Test Sessions	Introduction Consent forms Pre-Test	To assign 71 participants to the control groups and 71 to the experimental groups.  To introduce the study.  To handout consent forms.  To apply pre-tests that are CTAS and MAAS-A.	Introduction Consent forms CTAS and MAAS-A

Weeks	Sessions	Activities	Objectives	Main Themes
Week 4	Intervention Session 1	Icebreaker Definition of mindfulness and test anxiety  Mindfulness exercises: breathing exercises, physical exercises, body scans, guided meditation, and yoga	To reduce stress and test anxiety, enhance concentration, self-awareness, emotional regulation, and well-being.  To practice mindful breathing exercises before and during tests to eliminate test anxiety while improving concentration.  To let them coordinate their breath with body movements and lessen physical tension via yoga and meditation.  To let the participants focus on the present moment and the smallest things while raising awareness thanks to mindful movement games such as yoga	Mindfulness, test anxiety, self-awareness, emotional regulation  Staying focused, being in the moment

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 5	Intervention Session 2	Mindful listening and imagination Guided imagery and visualization of test anxiety and a safe space Imagination and drawing test anxiety Imagination and drawing safe space	By listening to sounds and asking them to concentrate on them, they can improve concentration and enhance listening skills that are pivotal for managing test anxiety. To relax, reduce stress, and improve well-being with singing and music-based activities. To create positive bonds with testing and reduce anxiety by asking them to visualize a safe space in which they take the test successfully and rehearse success.	Staying focused, being in the moment Mindful listening, concentration, eliminate stress, increase well-being Visualization, being calm, managing test anxiety

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 6	Intervention Session 3	Mindful storytelling and tale-based learning (How to Tame My Anxiety Monster story) The 5-4-3-2-1 grounding technique	To share some strategies to ease test anxiety and increase mindfulness. To cover the 5-4-3-2-1 grounding technique to increase awareness and decrease test anxiety. To analyze stories for underlying themes such as managing test anxiety through discussions about how the characters used mindfulness to overcome challenges. To let them acknowledge mindfulness concepts with engaging narratives, develop coping strategies, and strengthen their application in real-life exam situations.	Emotion regulation ability The 5-4-3-2-1 grounding technique

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 7	Intervention Session 4	Mindful storytelling and tale-based learning (The Tale of the Thought-Changing Glasses)  Mindful Writing about Positive Affirmations Transforming negative thoughts to positive affirmations  Preparing sunglasses and writing positive affirmations	To transform negative affirmations to positive affirmations. To let the students stay calm and lessen anxiety. To analyze stories for underlying themes such as managing anxiety and becoming motivated through discussions about how the characters used mindfulness to overcome challenges.  To let them acknowledge mindfulness concepts with engaging narratives, develop coping strategies, and strengthen their application in real-life exam situations.	Transforming negative affirmations to positive affirmations Emotion regulation ability

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 8	Intervention Session 5	Mindful storytelling  Fight, flight, freeze technique and role-play	To analyze stories for underlying themes such as managing anxiety and becoming motivated through discussions about how the characters used mindfulness to overcome challenges. To let them acknowledge mindfulness concepts with engaging narratives, develop coping strategies, and strengthen their application in real-life exam situations.  To let them learn how to handle their test anxiety by learning the fight, flight, and freeze technique.	Enhancing coping strategies Managing test anxiety

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 9	Intervention Session 6	Imagination Mindful listening Guided imagery and visualization of test anxiety Imagination and drawing test anxiety	By listening to sounds and asking them to concentrate on them, they can improve concentration and enhance listening skills that are pivotal for managing test anxiety. To relax, reduce stress, and improve well-being with singing and music-based activities.  To create an opportunity for them to realize what their test anxieties are.	Staying focused, being in the moment Mindful listening, concentration, eliminate stress, increase well-being  Visualization, being calm, managing test anxiety

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 10	Intervention Session 7	Mindful listening Discussion Guided imagery and visualization of their favorite method  Imagination and drawing favorite mindfulness technique and activity	By listening to sounds and asking them to concentrate on them, they can improve concentration and enhance listening skills that are pivotal for managing test anxiety. To relax, reduce stress, and improve well-being with music-based activities. To create positive bonds with testing and reduce anxiety by asking them to visualize their favorite method in which they take the test successfully and rehearse success.	Staying focused, being in the moment Mindful listening, concentration, eliminate stress, increase well-being  Visualization, being calm, managing test anxiety

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 11	Intervention Session 8	Recap and mindful test preparation Feedback Session about talking about their favorite strategy to manage test anxiety and mindfulness technique	To involve mindfulness in their study routines by taking a short mindfulness break at the beginning, middle, and end of the exam. To eliminate the fear of making mistakes and other negative emotions To reinforce concentration while reducing test anxiety. To reflect on the mindfulness practices and creative teaching methods and compare their test anxiety level before the intervention to the end of it.	Not focusing on mistakes  Reflecting on experience

<b>Weeks</b>	<b>Sessions</b>	<b>Activities</b>	<b>Objectives</b>	<b>Main Themes</b>
Week 12	Feedback and Post-Test Session	Summary Feedback Post-Test	To apply the CTAS and MAAS-A to the 71 participants in the control groups and 71 in the experimental groups.	Feedback CTAS and MAAS-A

## APPENDIX-C: Data Collection Instruments

### Data Collection Instruments

Research Questions	Data Collection Instruments
<p>To what extent does an intervention integrating mindfulness practices and creative teaching methods impact test anxiety and mindfulness levels of the middle school students who learn English as a foreign language?</p>	<p>Cognitive Test Anxiety Scale (CTAS)</p>
<p>To what extent does an intervention integrating mindfulness practices and creative teaching methods impact test anxiety and mindfulness levels of the middle school students who learn English as a foreign language?</p>	<p>Mindful Attention Awareness Scale-A (MAAS-A)</p>
<p>To what extent does an intervention integrating mindfulness practices and creative teaching methods impact test anxiety and mindfulness levels of the middle school students who learn English as a foreign language?</p>	<p>Reflective Journals</p>

## APPENDIX-D: Cognitive Test Anxiety Scale (CTAS)

### Cognitive Test Anxiety Scale (CTAS) (Bilişsel Sınav Kaygısı Ölçeği)

Please complete the following items using the four-point scale below.

(Lütfen aşağıdaki maddeleri aşağıdaki dört puanlık ölçeği kullanarak doldurunuz.)

1	2	3	4
<b>Not at all typical of me</b> (Bana hiç uygun değil)	<b>Somewhat typical of me</b> (Bana biraz uygun)	<b>Quite typical of me</b> (Bana oldukça uygun)	<b>Very typical of me</b> (Bana çok uygun)

1.	<b>I lose sleep over worrying about examinations.</b> (Sınav kaygısı yüzünden uykularım kaçır.)	1	2	3	4
2.	<b>While taking an important examination, I find myself wondering whether the other students are doing better than I am.</b> (Önemli bir sınava girerken, kendimi diğer öğrencilerin benden daha iyi performans gösterip göstermediğini merak ederken bulurum.)	1	2	3	4
3.	<b>I have less difficulty than the average student in getting test instructions straight.*</b> (Sınav talimatlarını doğru anlama konusunda, ortalama bir öğrenciden daha az zorluk çekerim.)	1	2	3	4
4.	<b>I tend to freeze up on things like intelligence tests and final exams.</b> (Zeka testleri ve dönem sonu sınavları gibi konularda, donup kalma eğilimindeyim.)	1	2	3	4
5.	<b>I am less nervous about tests than the average student.*</b> (Sınavlar konusunda, ortalama bir öğrenciye göre daha az gerginim.)	1	2	3	4
6.	<b>During tests, I find myself thinking of the consequences of failing.</b> (Sınavlar sırasında, kendimi başarısız olmanın sonuçlarını düşünürken buluyorum.)	1	2	3	4
7.	<b>At the beginning of a test, I am so nervous that I often can't think straight.</b> (Bir sınavın başlangıcında, o kadar gergin olurum ki çoğu zaman doğru düzgün düşünemem.)	1	2	3	4
8.	<b>The prospect of taking a test in one of my courses would not cause me to worry.*</b> (Derslerimden birinde sınava girme ihtimali beni endişelendirmez.)	1	2	3	4
9.	<b>I am more calm in test situations than the average student.*</b> (Sınav durumlarında, ortalama bir öğrenciden daha sakinim.)	1	2	3	4
10.	<b>I have less difficulty than the average student in learning assigned chapters in textbooks.*</b> (Kitapta verilen bölümleri öğrenmede, ortalama bir öğrenciden daha az zorluk çekerim.)	1	2	3	4
11.	<b>My mind goes black when I am pressured for an answer on a test.</b> (Bir sınavda, cevap vermem için baskı yapıldığında, zihnim boşalır.)	1	2	3	4
12.	<b>During tests, the thought frequently occurs to me that I may not be too bright.</b> (Sınavlar sırasında, sık sık aklıma pek zeki olmayabileceğim düşüncesi gelir.)	1	2	3	4
13.	<b>I do well in speed tests in which there are time limits.*</b>	1	2	3	4

(Zaman sınırlarının olduğu hız testlerinde başarılıyım.)

14.	<b>During a course examination, I get so nervous that I forget facts I really know.</b> (Bir dersin sınavı esnasında, o kadar heyecanlanırım ki gerçekten bildiğim şeyleri unuturum.)	1	2	3	4
15.	<b>After taking a test, I feel I could have done better than I actually did.</b> (Bir sınava girdikten sonra, aslında yaptığımdan daha iyisini yapabileceğimi hissederim.)	1	2	3	4
16.	<b>I worry more about doing well on tests than I should.</b> (Sınavlarda iyi performans gösterme konusunda, yapmam gerekenden daha fazla endişelenirim.)	1	2	3	4
17.	<b>Before taking a test, I feel confident and relaxed.*</b> (Sınava girmeden önce, kendimi özgüvenli ve rahat hissederim.)	1	2	3	4
18.	<b>While taking a test, I feel confident and relaxed.*</b> (Sınava girerken, kendimi özgüvenli ve rahat hissederim.)	1	2	3	4
19.	<b>During the tests, I have the feeling that I am not doing well.</b> (Sınavlar esnasında, iyi performans göstermediğim hissine kapılırım.)	1	2	3	4
20.	<b>When I take a test that is difficult, I feel defeated before I even start.</b> (Zor bir sınava girdiğimde, daha başlamadan kendimi mağlup hissederim.)	1	2	3	4
21.	<b>Finding unexpected questions on a test causes me to feel challenged rather than panicky.*</b> (Bir sınavda beklenmedik sorularla karşılaşmak, kendimi panik hali yerine zorlanmış hissetmeme neden olur.)	1	2	3	4
22.	<b>I am a poor test taker in the sense that my performance on a test does not show how much I really know about a topic.</b> (Bir sınavda gösterdiğim performans, o konu hakkında ne kadar bilgi sahibi olduğumu göstermiyor; bu anlamda sınav performansı zayıf biriyim.)	1	2	3	4
23.	<b>I am not good at taking tests.</b> (Sınavlara girmekte iyi değilimdir.)	1	2	3	4
24.	<b>When I first get my copy of a test, it takes me a while to calm down to the point where I can begin to think straight.</b> (Sınav kağıdımı ilk elime aldığımda, düzgün düşünmeye başlayabilecek noktaya gelene kadar sakinleşmem biraz zaman alır.)	1	2	3	4
25.	<b>I feel under a lot of pressure to get good grades on tests.</b> (Sınavlarda iyi not almak için çok fazla baskı altında hissederim.)	1	2	3	4
26.	<b>I do not perform well on tests.</b> (Sınavlarda iyi performans göstermem.)	1	2	3	4
27.	<b>When I take a test, my nervousness causes me to make careless errors.</b> (Sınava girdiğimde, gerginliğim, dikkatsizce hatalar yapmama neden olur.)	1	2	3	4
Item was recorded to produce consistency in scale so that high values always reflect high-cognitive test.					

**APPENDIX-E: Mindful Attention Awareness Scale-A (MAAS-A)**

**Mindful Attention Awareness Scale-A (MAAS-A) (Bilinçli Farkındalık Ölçeği)**

Please complete the following items using the six-point scale below.

(Lütfen aşağıdaki maddeleri aşağıdaki altı puanlık ölçeği kullanarak doldurunuz.)

1	2	3	4	5	6
<b>Almost always</b> (Neredeyse her zaman)	<b>Very frequently</b> (Çok sık)	<b>Somewhat frequently</b> (Biraz sık)	<b>Somewhat infrequently</b> (Biraz nadir)	<b>Very infrequently</b> (Çok nadir)	<b>Almost never</b> (Neredeyse hiç)

1.	<b>I could be experiencing some emotion and not be conscious of it until some time later.</b> <i>(Bir duygu yaşıyor olabilirim ve bunun farkına ancak bir süre sonra varabilirim.)</i>	1	2	3	4	5	6
2.	<b>I break or spill things because of carelessness, not paying attention, or thinking of something else.</b> <i>(Dikkatsizlikten, dikkat etmemekten ya da başka bir şey düşünmekten dolayı, eşyaları kırıyorum ya da döküyorum.)</i>	1	2	3	4	5	6
3.	<b>I find it difficult to stay focused on what is happening in the present.</b> <i>(Şu anda olup bitenlere odaklanmayı zor buluyorum.)</i>	1	2	3	4	5	6
4.	<b>I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.</b> <i>(Yol boyunca yaşadıklarım dikkat etmeden, gideceğim yere ulaşmak için hızlı yürüme eğilimindeyim.)</i>	1	2	3	4	5	6
5.	<b>I tend not to notice feelings of physical tension or discomfort until they really grab my attention.</b> <i>(Fiziksel gerginlik veya rahatsızlık hislerini, gerçekten dikkatimi çekene kadar fark etme eğiliminde değilim.)</i>	1	2	3	4	5	6
6.	<b>I forget a person's name almost as soon as I have been told it for the first time.</b> <i>(Bir kişinin adını, ilk kez söylendiği anda neredeyse hemen unuturum.)</i>	1	2	3	4	5	6
7.	<b>It seems I am "running on automatic," without much awareness of what I am doing.</b> <i>(Ne yaptığımın pek farkında olmadan, "otomatik olarak" çalışıyormuşum gibi görünüyor.)</i>	1	2	3	4	5	6
8.	<b>I rush through activities without being really attentive to them.</b>	1	2	3	4	5	6

(Etkinlikleri, onlara pek dikkat etmeden, aceleyle yapıyorum.)

- |     |  |   |   |   |   |   |   |
|-----|--|---|---|---|---|---|---|
| 9.  | <b>I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.</b>                     | 1 | 2 | 3 | 4 | 5 | 6 |
|     | <i>(Ulaşmak istediğim hedefe o kadar odaklanıyorum ki o hedefe ulaşmak için şu anda yapmakta olduğum şeyle bağlantımı kaybediyorum.)</i> |   |   |   |   |   |   |
| 10. | <b>I do jobs or tasks automatically, without being aware of what I am doing.</b>   | 1 | 2 | 3 | 4 | 5 | 6 |
|     | <i>(İşleri veya görevleri, ne yaptığının farkında olmadan, otomatik olarak yapıyorum.)</i>   |   |   |   |   |   |   |
| 11. | <b>I find myself listening to someone with 1 ear, doing something else at the same time.</b>   | 1 | 2 | 3 | 4 | 5 | 6 |
|     | <i>(Kendimi, bir kulağımla birini dinlerken, aynı anda başka bir şey yaparken buluyorum.)</i>  |   |   |   |   |   |   |
| 12. | <b>I find myself preoccupied with the future or the past.</b>  | 1 | 2 | 3 | 4 | 5 | 6 |
|     | <i>(Kendimi, gelecek ya da geçmişle meşgul buluyorum.)</i>   |   |   |   |   |   |   |
| 13. | <b>I find myself doing things without paying attention.</b>  | 1 | 2 | 3 | 4 | 5 | 6 |
|     | <i>(Kendimi, dikkat etmeden bir şeyler yaparken buluyorum.)</i>  |   |   |   |   |   |   |
| 14. | <b>I snack without being aware that I am eating.</b>   | 1 | 2 | 3 | 4 | 5 | 6 |
|     | <i>(Yediğimin farkında olmadan atıştırıyorum.)</i>   |   |   |   |   |   |   |

## APPENDIX-F: Reflective Journal Template – Session 1

### Reflective Journal (Session 1)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1) How do you feel **BEFORE** the activities? Circle one:



Stressed



Neutral



Calm



Happy

2) How do you feel **AFTER** the activities? Circle one:



Stressed



Neutral



Calm



Happy

Which **activity** did you **LIKE** and **DISLIKE**? Circle one:

3) the name game:



Like /



Dislike

4) breathing exercise:



Like /



Dislike

5) physical exercise:



Like /



Dislike

6) Did you feel **RELAXED**? Circle one:



Yes

/



No

7) Did you feel **STRESSED**? Circle one:



Yes

/



No

8) What did you **LEARN** today? Write the answer.

Today, I learned \_\_\_\_\_.

I like / dislike \_\_\_\_\_.

I feel \_\_\_\_\_.

I can use these activities in \_\_\_\_\_.

I can / cannot manage test anxiety by using the \_\_\_\_\_ activity because \_\_\_\_\_.

## APPENDIX-G: Reflective Journal Template – Session 2

### Reflective Journal (Session 2)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1) How do you feel **BEFORE** the activities? Circle one:



Stressed



Neutral



Calm



Happy

2) How do you feel **AFTER** the activities? Circle one:



Stressed



Neutral



Calm



Happy

Which **activity** did you **LIKE** and **DISLIKE**? Circle one:

3) listening to music:



Like /



Dislike

4) imagination and drawing your test anxiety:



Like /



Dislike

5) imagination and drawing your safe space:



Like /



Dislike

6) Did you feel **RELAXED**? Circle one:



Yes

/



No

7) Did you feel **STRESSED**? Circle one:



Yes

/



No

8) What did you **LEARN** today? Write the answer.

Today, I learned \_\_\_\_\_.

My test anxiety is \_\_\_\_\_.

My safe space is \_\_\_\_\_.

I feel \_\_\_\_\_.

\_\_\_\_\_.

\_\_\_\_\_.

**APPENDIX-H: Reflective Journal Template – Session 3**

**Reflective Journal (Session 3)**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

1) How do you feel **BEFORE** the activities? Circle one:

 Stressed     |     
  Neutral     |     
  Calm     |     
  Happy

2) How do you feel **AFTER** the activities? Circle one:

 Stressed     |     
  Neutral     |     
  Calm     |     
  Happy

Which **activity** did you **LIKE** and **DISLIKE**? Circle one:

3) the storytelling and the video:

 Like / 
  Dislike

4) drawing and writing the 5-4-3-2-1 grounding technique:

 Like / 
  Dislike

5) Did you feel **RELAXED**? Circle one:

 Yes     /     
  No

6) Did you feel **STRESSED**? Circle one:

 Yes     /     
  No

7) What did you **LEARN** today? Write the answer.

Today, I learned \_\_\_\_\_.

The video and story are \_\_\_\_\_.

5 things I see are \_\_\_\_\_.

4 things I touch are \_\_\_\_\_.

3 things I hear are \_\_\_\_\_.

2 things I smell are \_\_\_\_\_.

1 thing I taste is \_\_\_\_\_.

## APPENDIX-I: Reflective Journal Template – Session 4

### Reflective Journal (Session 4)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1) How do you feel **BEFORE** the activities? Circle one:



Stressed



Neutral



Calm



Happy

2) How do you feel **AFTER** the activities? Circle one:



Stressed



Neutral



Calm



Happy

Which **activity** did you **LIKE** and **DISLIKE**? Circle one:

3) the storytelling and the video:



Like /



Dislike

4) designing glasses and writing positive things:



Like /



Dislike

5) Did you feel **RELAXED**? Circle one:



Yes

/



No

6) Did you feel **STRESSED**? Circle one:



Yes

/



No

7) What did you **LEARN** today? Write the answer.

Today, I learned \_\_\_\_\_.

The video and story are \_\_\_\_\_.

My negative thought is \_\_\_\_\_.

My positive thought is \_\_\_\_\_.

**APPENDIX-J: Reflective Journal Template – Session 5**

**Reflective Journal (Session 5)**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1) How do you feel **BEFORE** the activities? Circle one:



Stressed



Neutral



Calm



Happy

2) How do you feel **AFTER** the activities? Circle one:



Stressed



Neutral



Calm



Happy

Which **activity** did you **LIKE** and **DISLIKE**? Circle one:

3) the storytelling and fight, flight, freeze technique



Like /



Dislike

4) the drama and role-play: \_\_\_\_\_



Like /



Dislike

5) Did you feel **RELAXED**? Circle one:



Yes

/



No

6) Did you feel **STRESSED**? Circle one:



Yes

/



No

7) What did you **LEARN** today? Write the answer.

Today, I learned \_\_\_\_\_

My fight reaction is \_\_\_\_\_

My flight reaction is \_\_\_\_\_

My freeze reaction is \_\_\_\_\_

**APPENDIX-K: Reflective Journal Template – Session 6**

**Reflective Journal (Session 6)**





Name: \_\_\_\_\_

Date: \_\_\_\_\_

1)How do you feel **BEFORE** the activities? Circle one:



 Stressed     |     
  Neutral     |     
  Calm     |     
  Happy

2)How do you feel **AFTER** the activities? Circle one:

 Stressed     |     
  Neutral     |     
  Calm     |     
  Happy

Which **activity** did you **LIKE** and **DISLIKE**? Circle one:

3) listening to music (mindful listening):      Like /      Dislike

4) imagination and drawing your test anxiety:      Like /      Dislike

6)Did you feel **RELAXED**? Circle one:

 Yes     /     
  No

7)Did you feel **STRESSED**? Circle one:

 Yes     /     
  No

8)What did you **LEARN** today? Write the answer.

Today, I learned \_\_\_\_\_

My test anxiety is \_\_\_\_\_

When I am stressed, my favorite method to use is \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**APPENDIX-L: Reflective Journal Template – Session 7**

**Reflective Journal (Session 7)**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

1) How do you feel **BEFORE** the activities? Circle one:



Stressed



Neutral



Calm



Happy

2) How do you feel **AFTER** the activities? Circle one:



Stressed



Neutral



Calm



Happy

Which **activity** did you **LIKE** and **DISLIKE**? Circle one:

3) listening to music (mindful listening) and discussion:



Like /



Dislike

4) imagination and drawing your favorite method:



Like /



Dislike

6) Did you feel **RELAXED**? Circle one:



Yes

/



No

7) Did you feel **STRESSED**? Circle one:



Yes

/



No

8) What did you **LEARN** today? Write the answer.

Today, I learned \_\_\_\_\_.

My test anxiety is \_\_\_\_\_.

When I am stressed, my favorite method to use is \_\_\_\_\_.

\_\_\_\_\_.

\_\_\_\_\_.

## APPENDIX-M: Reflective Journal Template – Session 8

### Reflective Journal (Session 8)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1) How do you feel **AFTER** these activities? Circle one:



Stressed



Neutral



Calm



Happy

2) Which activity did you **LIKE** 🍌 the most?

- Breathing exercises (*Nefes alma egzersizleri*) 🧠🫁
- 5-4-3-2-1method (*Görülen 5, dokunulan 4, duyulan 3, koklanan 2, tadılan 1 şey*) 👁️👋🧠🫁👄
- Imagining my safe space (*Güvenli alanımı hayal etmek*) 🧠💭
- Drawing: my test anxiety, safe space, and mindfulness method (*Çizmek: sınav kaygım, güvenli alanım ve bilinçli farkındalık yöntemim*) 🖋️📄
- Writing positive things on glasses to motivate (*Motive etmek için gözlüklere olumlu şeyler yazmak*) 📄👓
- Fight, flight, freeze technique, and drama (*Savaş, kaç, don tekniği ve drama*) 🎭
- Reading mindful stories and watching videos (*Dikkatli hikayeler okumak ve video izlemek*) 📖👁️📺
- Listening to mindful music (*Dikkatli müzik dinlemek*) 🧠🎵
- Talking about feelings and test anxiety (*Duygularım ve sınav kaygım hakkında konuşmak*) 👤👄💬
- Meditation, yoga, and muscle relaxation (*Meditasyon, yoga ve kas gevşetme*) 🧘🏃

3) What did you **LEARN** in these sessions? Write the answer.

My test anxiety is \_\_\_\_\_

When I am stressed, my favorite method to use is \_\_\_\_\_

Because \_\_\_\_\_

I can / cannot use these methods in \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**APPENDIX-N: Consent Form for Teachers and Administrators**

**ÖĞRETMEN/YÖNETİCİ ONAM FORMU**

**Sayın Öğretmen/Yönetici;**

**Bu alanda araştırmacının Kişisel Verilerin Korunması Kanunu'na uygun olarak hareket edileceğine dair taahhütname ifadeleri yer alacaktır.**

Araştırma T.C. Millî Eğitim Bakanlığı'nın ve okul yönetiminin de izni ile gerçekleştirilmektedir. Araştırma uygulamasına katılım tamamıyla gönüllülük esasına dayalı olmaktadır. Çalışmaya katılıp katılmamakta özgürsünüz. Araştırma herhangi bir istenmeyen etki ya da risk taşımamaktadır. Katılımınız tamamen sizin isteğinize bağlıdır, reddedebilir ya da herhangi bir aşamasında ayrılabilirsiniz. Araştırmaya katılım sağlanamaması veya araştırmadan ayrılma durumunda okul ile ilgili ilişkileriniz etkilenmeyecektir. Çalışmada sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Uygulamalar, genel olarak kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta özgürsünüz. Bu durumda rahatsızlığın giderilmesi için gereken yardım sağlanacaktır. Çalışmaya katıldıktan sonra istediğiniz an vazgeçebilirsiniz. Böyle bir durumda veri toplama aracını uygulayan kişiye, çalışmayı tamamlamayacağınızı söylemeniz yeterli olacaktır. Araştırmaya katılmamak ya da katıldıktan sonra vazgeçmek size hiçbir sorumluluk getirmeyecektir. Araştırmaya onay vermeden önce sormak istediğiniz herhangi bir konu varsa sormaktan çekinmeyiniz.

<b>Araştırmacının Adı Soyadı</b>	<b>Şevval İzgüt</b>
<b>Araştırmacının İletişim Bilgileri</b>	
<b>Araştırmanın Adı</b>	EFL Öğrencilerinin Sınav Kaygısını Azaltmak için Farkındalıkları ve Yaratıcılıkları Üzerine Bir Araştırma
<b>Araştırmanın Amacı</b>	Bu araştırma, Konya Meram ilçesindeki bir ortaokulda Yabancı Dil Olarak İngilizce (EFL) öğrencilerinin sınav kaygısını azaltmaya yönelik potansiyel çözümler olarak farkındalık uygulamaları ve yaratıcı öğretim yöntemlerinin, öğrencilerin sınav kaygısı düzeylerine etkisini araştırmayı amaçlamaktadır. Ayrıca bu çalışma, bu pedagojik yaklaşımlar ile öğrencilerin kaygı düzeyleri, performansı ve genel refahı arasındaki ilişkiyi anlamak için farkındalık uygulamalarının ve yaratıcı öğretim yöntemlerinin ortaokul öğrencilerinin yabancı dil derslerinde sınav kaygısı üzerinde etkili bir şekilde uygulanmasını araştırmayı amaçlamaktadır. Genel olarak çalışma, sınav kaygısını azaltmaya, öğrencilerin farkındalıklarını ve akademik performanslarını geliştirmeye, sınavlara karşı olumlu tutumları teşvik etmeye ve stresi yönetmeye odaklanır. Bu nedenle katılımcılar, farkındalık ve yaratıcı öğretim uygulamalarından faydalanabilir ve bu alandaki diğer öğretmenlere ilham vermek ve farkındalığı bütünlüklerle sınav kaygısıyla mücadelede alternatif

	bir yolun sinyalini vermek açısından önemli olabilecek verimliliklerini gösterebilirler.
--	--

Görev yapmakta bulunduğum Mehmet Beğen Ortaokulu'nda yapılacak olan araştırmaya katılmayı kabul ediyorum. 03/04/2025

Öğretmen Adı-Soyadı:  
İmza:

Yönetici Adı-Soyadı:  
İmza:

## APPENDIX-O: Consent Form for Parents

### VELİ ONAM FORMU

Sayın Veli;

**Bu alanda araştırmacının Kişisel Verilerin Korunması Kanunu'na uygun olarak hareket edileceğine dair taahhütname ifadeleri yer alacaktır.**

Çocuğunuzun katılacağı bu çalışma, "EFL Öğrencilerinin Sınav Kaygısını Azaltmak için Farkındalıkları ve Yaratıcılıkları Üzerine Bir Araştırma" adıyla, 10.03.2025 – 05.05.2025 tarihleri arasında yapılacak bir araştırma uygulamasıdır.

**Araştırmanın Hedefi:** Bu araştırma, İngilizceyi yabancı dil olarak öğrenenlerin sınav kaygısını azaltmaya yönelik potansiyel çözümler olarak farkındalık uygulamalarının ve yaratıcı öğretim yöntemlerinin entegrasyonunu keşfetmeyi konu almaktadır. Bu araştırma ölçek doldurma, eğitim ve gözlem olmak üzere üç aşamadan oluşmaktadır. Ölçek doldurma aşaması on dakika sürecekken, eğitim ve gözlem aşamasının her hafta bir kez olmak üzere otuz dakika sürmesi planlanmaktadır. Katılımcıların farkındalık düzeylerini ölçmek adına çalışmanın başında ve sonunda Bilinçli Farkındalık Ölçeği (Mindful Attention Awareness Scale-A MAAS-A) doldurmaları beklenirken, sınav kaygısı düzeylerini belirlemek adına Bilişsel Sınav Kaygısı Ölçeği (Cognitive Test Anxiety Scale CTAS) doldurmaları beklenmektedir. Araştırmaya katılmayı onayladığınızda, ölçekte yer alan her maddeye çocuğunuzun içtenlikle yanıt vermesi gerekmektedir. Ölçeği tamamlamak yaklaşık on dakika sürecektir. Verilen yanıtlar doğrultusunda elde edilen bilgiler araştırmacı tarafından bilimsel amaç ile kullanılacak olup üçüncü şahıslar ile paylaşılmayacaktır, veriler gizli tutulacaktır. Araştırmanın ikinci kısmı olan eğitim ve üçüncü kısmı olan gözlem aşamalarında, veri toplama ve analiz etme süreçlerinin güvenilirliğini artırmak adına katılımcılar ses kaydına alınacaktır. Ancak elde edilen veriler araştırmacı tarafından bilimsel amaç ile kullanılacak olup, üçüncü şahıslar ile paylaşılmayacak, veriler gizli tutulacaktır.

**Araştırma Uygulaması:** Ölçek / Eğitim / Geri Dönüt şeklindedir.

**Araştırma T.C. Millî Eğitim Bakanlığı'nın ve okul yönetiminin de izni ile gerçekleştirilmektedir. Araştırma uygulamasına katılım tamamıyla gönüllülük esasına dayalı olmaktadır.** Çocuğunuz çalışmaya katılıp katılmamakta özgürdür. Araştırma çocuğunuz için herhangi bir istenmeyen etki ya da risk taşımamaktadır. Çocuğunuzun katılımı tamamen sizin isteğinize bağlıdır, reddedebilir ya da herhangi bir aşamasında ayrılabilirsiniz. **Araştırmaya katılım sağlanamaması veya araştırmadan ayrılma durumunda öğrencilerin akademik başarıları, okul ve öğretmenleriyle olan ilişkileri etkilenmeyecektir. Çalışmada öğrencilerden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Uygulamalar, kişisel rahatsızlık verecek sorular ve durumlar içermemektedir.** Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden çocuğunuz kendisini rahatsız hissederse cevaplama işini yarıda bırakıp çıkmakta özgürdür. Bu durumda rahatsızlığın giderilmesi için gereken yardım sağlanacaktır. Çocuğunuz çalışmaya katıldıktan sonra istediği an vazgeçebilir. Böyle bir durumda veri toplama aracını uygulayan kişiye, çalışmayı tamamlamayacağını söylemesi yeterli olacaktır. Araştırmaya katılmamak ya da katıldıktan sonra vazgeçmek çocuğunuza hiçbir sorumluluk getirmeyecektir. Herhangi bir veli, çocuğunun ses/görüntü kaydının alınmasını

onaylamadığı takdirde kayıt alınmayacaktır. Onay vermeden önce sormak istediğiniz herhangi bir konu varsa sormaktan çekinmeyiniz. Araştırma öncesi, esnası ve sonrasında bilgi almak için araştırmacı ve sorumlu araştırmacıyla iletişime geçebilirsiniz. Çalışma bittikten sonra araştırmacıya ve sorumlu araştırmacıya e-posta ile ulaşarak soru sorabilir, sonuçlar hakkında bilgi isteyebilirsiniz. Araştırmaya zaman ayırdığınız için sizlere teşekkürlerimi sunarım.

<b>Araştırmacının Adı Soyadı</b>	Şevval İzgüt Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü Eğitim Fakültesi İngiliz Dili Eğitimi Anabilim Dalı Yüksek Lisans Öğrencisi
<b>Araştırmacının İletişim Bilgileri</b>	
<b>Sorumlu Araştırmacının Adı Soyadı</b>	Prof. Dr. İsmail Hakkı Mirici Hacettepe Üniversitesi Eğitim Fakültesi Yabancı Diller Eğitimi Bölüm Başkanı İngiliz Dili Eğitimi Anabilim Dalı Başkanı
<b>Sorumlu Araştırmacının İletişim Bilgileri</b>	
<b>Araştırmanın Adı</b>	EFL Öğrencilerinin Sınav Kaygısını Azaltmak için Farkındalıkları ve Yaratıcılıkları Üzerine Bir Araştırma
<b>Araştırmanın Amacı</b>	Bu araştırma, Konya Meram ilçesindeki bir ortaokulda Yabancı Dil Olarak İngilizce (EFL) öğrencilerinin sınav kaygısını azaltmaya yönelik potansiyel çözümler olarak farkındalık uygulamaları ve yaratıcı öğretim yöntemlerinin, öğrencilerin sınav kaygısı düzeylerine etkisini araştırmayı amaçlamaktadır. Ayrıca bu çalışma, bu pedagojik yaklaşımlar ile öğrencilerin kaygı düzeyleri, performansı ve genel refahı arasındaki ilişkiyi anlamak için farkındalık uygulamalarının ve yaratıcı öğretim yöntemlerinin ortaokul öğrencilerinin yabancı dil derslerinde sınav kaygısı üzerinde etkili bir şekilde uygulanmasını araştırmayı amaçlamaktadır. Genel olarak çalışma, sınav kaygısını azaltmaya, öğrencilerin farkındalıklarını ve akademik performanslarını geliştirmeye, sınavlara karşı olumlu tutumları teşvik etmeye ve stresi yönetmeye odaklanır. Bu nedenle katılımcılar, farkındalık ve yaratıcı öğretim uygulamalarından faydalanabilir ve bu alandaki diğer öğretmenlere ilham vermek ve farkındalığı bütünleştirerek sınav kaygısıyla mücadelede alternatif bir yolun sinyalini vermek açısından önemli olabilecek verimliliklerini gösterebilirler.

Velisi bulunduğum ..... sınıfı ..... numaralı öğrencisi .....'in yukarıda açıklanan araştırmaya katılmasına izin veriyorum. (Lütfen formu imzaladıktan sonra çocuğunuzla okula geri gönderiniz\*). .... / ..... / .....

- Yalnızca ses kaydı alınmasına izin veriyorum.
- Görüntü kaydı alınmasına izin veriyorum.
- Ses ve görüntü kaydı alınmasına izin vermiyorum.

Velinin Adı-Soyadı:  
İmza:

## APPENDIX-P: Consent Form for Participants

### KATILIMCI ONAM FORMU

**Sayın Katılımcı;**

**Bu alanda arařtırmacının Kişisel Verilerin Korunması Kanunu'na uygun olarak hareket edileceđini dair taahhütname ifadeleri yer alacaktır.**

Katılacađınız bu çalıřma, "EFL Öğrencilerinin Sınav Kaygısını Azaltmak için Farkındalıkları ve Yaratıcılıkları Üzerine Bir Arařtırma" adıyla, 10.03.2025 – 05.05.2025 tarihleri arasında yapılacak bir arařtırma uygulamasıdır.

**Arařtırmanın Hedefi:** Bu arařtırma, İngilizceyi yabancı dil olarak öğrenenlerin sınav kaygısını azaltmaya yönelik potansiyel çözümler olarak farkındalık uygulamalarının ve yaratıcı öğretim yöntemlerinin entegrasyonunu keřfetmeyi konu almaktadır. Bu arařtırma ölçek doldurma, eğitim ve gözlem olmak üzere üç ařamadan oluşmaktadır. Ölçek doldurma ařaması on dakika sürecekken, eğitim ve gözlem ařamasının her hafta bir kez olmak üzere otuz dakika sürmesi planlanmaktadır. Katılımcıların farkındalık düzeylerini ölçmek adına çalıřmanın bařında ve sonunda Bilinçli Farkındalık Ölçeđi (Mindful Attention Awareness Scale-A MAAS-A) doldurmaları beklenirken, sınav kaygısı düzeylerini belirlemek adına Bilişsel Sınav Kaygısı Ölçeđi (Cognitive Test Anxiety Scale CTAS) doldurmaları beklenmektedir. Arařtırmaya katılmayı onayladıđınızda, ölçekte yer alan her maddeye çocuđunuzun içtenlikle yanıt vermesi gerekmektedir. Ölçeđi tamamlamak yaklaşık on dakika sürecektir. Verilen yanıtlar dođrultusunda elde edilen bilgiler arařtırmacı tarafından bilimsel amaç ile kullanılacak olup üçüncü şahıslar ile paylaşılmayacaktır, veriler gizli tutulacaktır. Arařtırmanın ikinci kısmı olan eğitim ve üçüncü kısmı olan gözlem ařamalarında, veri toplama ve analiz etme süreçlerinin güvenilirliđini artırmak adına katılımcılar ses kaydına alınacaktır. Ancak elde edilen veriler arařtırmacı tarafından bilimsel amaç ile kullanılacak olup, üçüncü şahıslar ile paylaşılmayacak, veriler gizli tutulacaktır.

**Arařtırma Uygulaması:** Ölçek / Eğitim / Geri Dönüt şeklindedir.

**Arařtırma T.C. Millî Eğitim Bakanlığı'nın ve okul yönetiminin de izni ile gerçekleřmektedir. Arařtırma uygulamasına katılım tamamıyla gönüllülük esasına dayalı olmaktadır.** Çocuđunuz çalıřmaya katılıp katılmamakta özgürdür. Arařtırma çocuđunuz için herhangi bir istenmeyen etki ya da risk taşımamaktadır. Çocuđunuzun katılımı tamamen sizin isteđinize bađlıdır, reddedebilir ya da herhangi bir ařamasında ayrılabilirsiniz. **Arařtırmaya katılım sađlanamaması veya arařtırmadan ayrılma durumunda öğrencilerin akademik başarıları, okul ve öğretmenleriyle olan iliřkileri etkilenmeyecektir. Çalıřmada öğrencilerden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece arařtırmacılar tarafından deđerlendirilecektir. Uygulamalar, kişisel rahatsızlık verecek sorular ve durumlar içermemektedir.** Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden çocuđunuz kendisini rahatsız hissederse cevaplama iřini yarıda bırakıp çıkmakta özgürdür. Bu durumda rahatsızlıđın giderilmesi için gereken yardım sađlanacaktır. Çocuđunuz çalıřmaya katıldıktan sonra istediđi an vazgeçebilir. Böyle bir durumda veri toplama aracını uygulayan kişiye, çalıřmayı tamamlamayacađını söylemesi yeterli olacaktır. Arařtırmaya katılmamak ya da katıldıktan sonra vazgeçmek çocuđunuza hiçbir sorumluluk getirmeyecektir. Herhangi bir veli, çocuđunun ses/görüntü kaydının alınmasını onaylamadıđı takdirde kayıt alınmayacaktır. Onay vermeden önce sormak istediđiniz herhangi bir konu varsa sormaktan çekinmeyiniz. Arařtırma öncesi, esnası ve sonrasında bilgi almak için arařtırmacı ve sorumlu arařtırmacıyla iletiřime geçebilirsiniz. Çalıřma

bittikten sonra arařtırmacıya ve sorumlu arařtırmacıya e-posta ile ulařarak soru sorabilir, sonular hakkında bilgi isteyebilirsiniz. Arařtırmaya zaman ayırdığınız için sizlere teřekkürlerimi sunarım.

<b>Arařtırmacının Adı Soyadı</b>	řevval İzgüt Hacettepe Üniversitesi Eđitim Bilimleri Enstitüsü Eđitim Fakóltesi İngiliz Dili Eđitimi Anabilim Dalı Yüksek Lisans Öğrencisi
<b>Arařtırmacının İletişim Bilgileri</b>	
<b>Sorumlu Arařtırmacının Adı Soyadı</b>	Prof. Dr. İsmail Hakkı Mirici Hacettepe Üniversitesi Eđitim Fakóltesi Yabancı Diller Eđitimi Bölüm Bařkanı İngiliz Dili Eđitimi Anabilim Dalı Bařkanı
<b>Sorumlu Arařtırmacının İletişim Bilgileri</b>	
<b>Arařtırmanın Adı</b>	EFL Öğrencilerinin Sınav Kaygısını Azaltmak için Farkındalıkları ve Yaratıcılıkları Üzerine Bir Arařtırma
<b>Arařtırmanın Amacı</b>	Bu arařtırma, Konya Meram ilçesindeki bir ortaokulda Yabancı Dil Olarak İngilizce (EFL) öğrencilerinin sınav kaygısını azaltmaya yönelik potansiyel çözümler olarak farkındalık uygulamaları ve yaratıcı öğretim yöntemlerinin, öğrencilerin sınav kaygısı düzeylerine etkisini arařtırmayı amaçlamaktadır. Ayrıca bu çalıřma, bu pedagojik yaklařımlar ile öğrencilerin kaygı düzeyleri, performansı ve genel refahı arasındaki iliřkiyi anlamak için farkındalık uygulamalarının ve yaratıcı öğretim yöntemlerinin ortaokul öğrencilerinin yabancı dil derslerinde sınav kaygısı üzerinde etkili bir şekilde uygulanmasını arařtırmayı amaçlamaktadır. Genel olarak çalıřma, sınav kaygısını azaltmaya, öğrencilerin farkındalıklarını ve akademik performanslarını geliřtirmeye, sınavlara karřı olumlu tutumları teřvik etmeye ve stresi yönetmeye odaklanır. Bu nedenle katılımcılar, farkındalık ve yaratıcı öğretim uygulamalarından faydalanabilir ve bu alandaki diđer öğretmenlere ilham vermek ve farkındalığı bütünleřtirerek sınav kaygısıyla mücadelede alternatif bir yolun sinyalini vermek aısından önemli olabilecek verimliliklerini gösterebilirler.

Bulduğum ..... sınıfı ..... numaralı öğrenci olarak .....'in  
yukarıda açıklanan arařtırmaya katılmama izin veriyorum. .... / ..... / .....

- Yalnızca ses kaydı alınmasına izin veriyorum.
- Görüntü kaydı alınmasına izin veriyorum.
- Ses ve görüntü kaydı alınmasına izin vermiyorum.

Katılımcının Adı-Soyadı:

İmza:

**APPENDIX-Q: Participant Numbers per Session****Participant Numbers per Session**

<b>Sessions</b>	<b>Participants of Experimental Group 1</b>	<b>Participants of Experimental Group 2</b>	<b>Participants of Control Group 1</b>	<b>Participants of Control Group 2</b>
Consent Forms	37	38	37	38
Pre-Tests	35	36	35	36
Intervention Session 1	35	36	-	-
Intervention Session 2	32	33	-	-
Intervention Session 3	30	32	-	-
Intervention Session 4	35	34	-	-
Intervention Session 5	31	32	-	-
Intervention Session 6	30	36	-	-
Intervention Session 7	33	31	-	-
Intervention Session 8	35	36	-	-
Post-Tests	35	36	35	36

**APPENDIX-R: Descriptive Statistics for Pre-Test and Post-Test Scores of Treatment and Control Groups for Both Scales: Mean (standard deviation)**

*Descriptive Statistics for Pre-Test and Post-Test Scores of Treatment and Control Groups for Both Scales: Mean (standard deviation)*

	MAAS-A		CTAS	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Treatment	3.93 (0.84)	4.20 (0.79)	2.21 (0.49)	2.11 (0.45)
Control	3.51 (0.87)	3.52 (0.75)	2.49 (0.50)	2.45 (0.51)

*Note: n = 142, with 71 participants in the treatment group and 71 participants in the control*

group

**APPENDIX-S: Results of the Paired Samples T-test Comparing Pre-Test and Post-Test Scores of the Treatment and Control Groups**

*Results of the Paired Samples T-test Comparing Pre-Test and Post-Test Scores of the Treatment and Control Groups*

	<i>t</i>		<i>p</i>		Cohen's <i>d</i>	
	MAAS-A	CTAS	MAAS-A	CTAS	MAAS-A	CTAS
Treatment	-3.21	2.53	<b>0.002**</b>	<b>0.014**</b>	-0.382	-0.300
Control	-0.17	1.04	0.865	0.302	-0.020	0.123

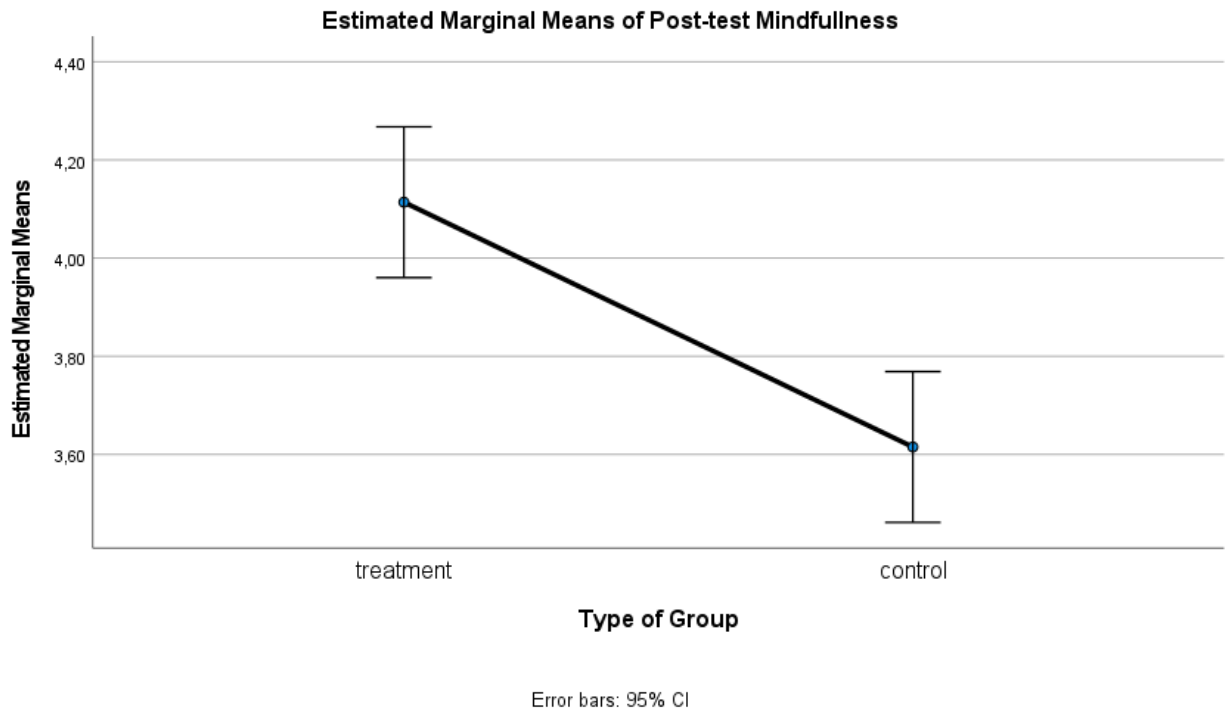
Note: \*\* indicates  $p < 0.05$

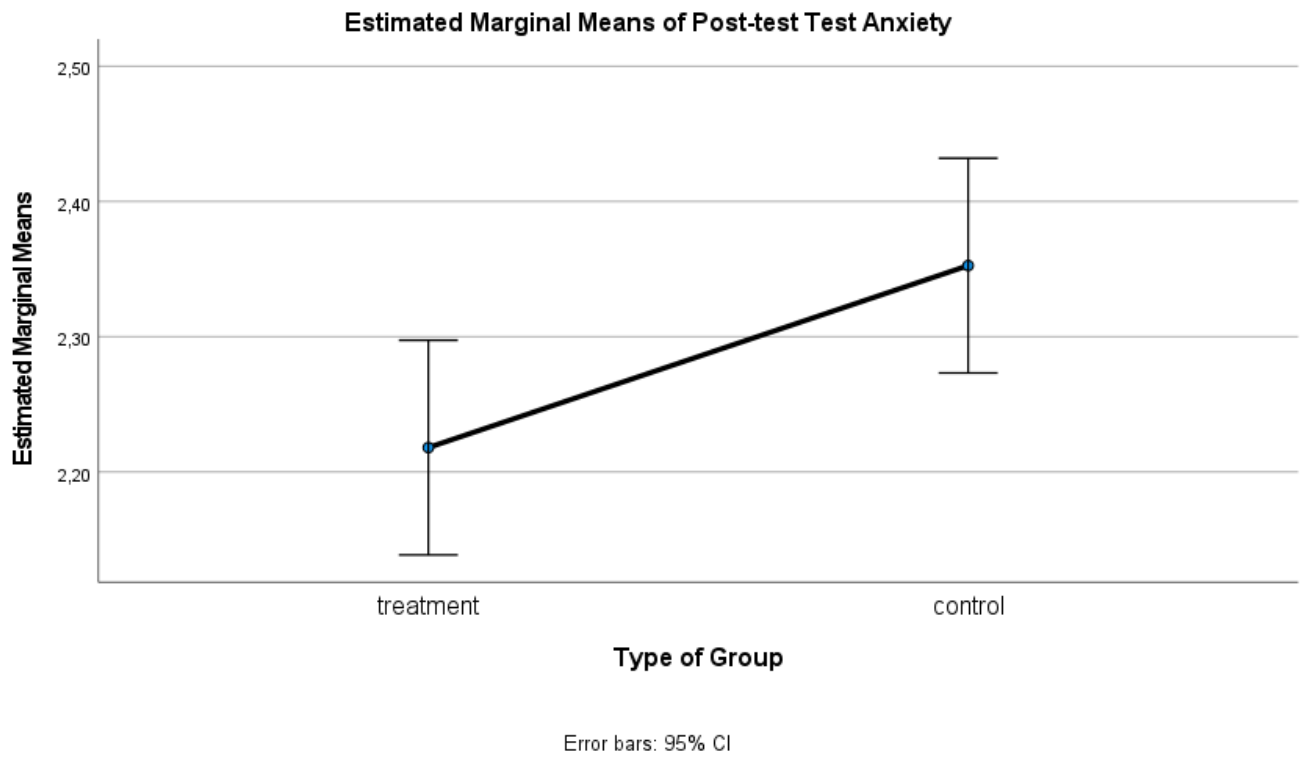
**APPENDIX-T: Multivariate and Univariate Analysis of Covariance for Mindfulness  
and Test Anxiety**

Multivariate and Univariate Analysis of Covariance for Mindfulness and Test Anxiety

Level of Analysis	Variable/Effect	Wilks' $\Lambda$	$F$	$df$	$p$	$\eta^2$
Multivariate	Group Type	.853	11.78	(2, 137)	< .001**	.147
Univariate	MAAS-A		19.70	(1, 138)	< .001**	.125
	CTAS		5.37	(1, 138)	.022**	.037

Note: \*\* indicates  $p < 0.05$

**APPENDIX-U: Adjusted Post-Test Mindfulness Scores by Group****Adjusted Post-Test Mindfulness Scores by Group**

**APPENDIX-V: Adjusted Post-Test Test Anxiety Scores by Group****Adjusted Post-Test Test Anxiety Scores by Group**

## APPENDIX-W: Theme 1 – Sources of Test Anxiety

### Theme 1. Sources of Test Anxiety

Theme	Sub-Themes	Codes	Frequency	Representative Reflective Journal Prompts
Sources of Test Anxiety	Technical and Procedural Anxiety	Optical reader misreads, Fear of mis-marking answer sheets, Fear of mis-marking optical form, Running out of time,	20 out of 24 participants	#P01, #P22
Sources of Test Anxiety	Time-Induced Stress and Task Demands	Having little time left for difficult questions, Running out of time, Facing unfamiliar topics, Facing hard questions.	24 out of 24 participants	#P04, #P06
Sources of Test Anxiety	Performance Evaluation	Getting a low score, Failing the test, Being stuck between two choices.	20 out of 24 participants	#P03, #P10
Sources of Test Anxiety	External and Evaluative Pressures	Parents getting angry or shouting, Comparison to siblings, Performing worse than peers, Fearing failure, Feeling "stupid."	13 out of 24 participants	#P03, #P11, #P23

## APPENDIX-X: Theme 2 – Symptoms and Responses of Test Anxiety

### Theme 2. Symptoms and Responses of Test Anxiety

Theme	Sub-Themes	Codes	Frequency	Representative Reflective Journal Prompts
Symptoms and Responses of Test Anxiety	Physiological Stress Responses	Rapid heartbeats, Hand tremors, Sweating, Heavy breathing.	7 out of 24 participants	#P07, #P11
Symptoms and Responses of Test Anxiety	Behavioral Responses	Stress Fight, flight, and freeze responses, Tearing up exam papers, Throwing the pencil away, Screaming at the pens, Hitting the desks, Hand tremors, Shouting, Pretending to be sick to avoid the test, Going to the bathroom, Staring blankly, Staying silent, Looking at the wall.	24 out of 24 participants	#P01, #P04, #P05, #P06, #P08, #P10, #P11, #P12, #P13, #P16, #P17, #P19, #P20, #P22
Symptoms and Responses of Test Anxiety	Cognitive Responses	Stress Forgetting everything, Memory blockage, Intrusive thoughts.	5 out of 24 participants	#P01, #P08, #P12, #P15, #P18
Symptoms and Responses of Test Anxiety	Emotional/Affective Stress Responses	Feeling anxious, Feeling stressed, Feeling “stupid.”	24 out of 24 participants	#P08

### APPENDIX-Y: Theme 3 – Coping Mechanisms and Mindfulness Strategies

#### Theme 3. Coping Mechanisms and Mindfulness Strategies

Theme	Sub-Themes	Codes	Frequency	Representative Reflective Journal Prompts
Coping Mechanisms and Mindfulness Strategies	Physiological Regulation	Breathing exercises, Physical exercises, Body scans, Yoga, Muscle-relaxation activities.	24 out of 24 participants	#P01, #P04, #P07, #P10, #P15, #P18
Coping Mechanisms and Mindfulness Strategies	Cognitive Restructuring and Self-Talk	Writing positive affirmations such as “I can do it,” Transforming negative thoughts into positive ones. Replacing “what if I fail,” with “if I work hard, I can do it.”	24 out of 24 participants	#P12, #P16
Coping Mechanisms and Mindfulness Strategies	Grounding and Sensory Awareness	The 5-4-3-2-1 grounding technique. Noticing sensory details, such as a pencil, an exam sheet, whispers, and the paper’s scent, to calm down.	24 out of 24 participants	#P06
Coping Mechanisms and Mindfulness Strategies	Visualization/Guided Imagery	Imagining a safe space.	24 out of 24 participants	#P01, #P02, #P08, #P10, #P11, #P12, #P14, #P16, #P23
Coping Mechanisms and Mindfulness Strategies	Task-Oriented Actions	Studying more, Reading fast, Checking the answer sheets and optical forms.	19 out of 24 participants	#P08, #P12, #P19

## APPENDIX-Z: Theme 4 – Emotional Regulation

### Theme 4. Emotional Regulation

<b>Theme</b>	<b>Sub-Themes</b>	<b>Codes</b>	<b>Frequency</b>	<b>Representative Reflective Journal Prompts</b>
Emotional Regulation	Relaxation	Feeling relaxed, Calming down.	23 out of 24 participants	#P01, #P02, #P07, #P10, #P12, #P17
Emotional Regulation	Body Awareness	The calming effect of yoga, body scan, and meditation	10 out of 24 participants	#P13, #P16
Emotional Regulation	Visualization/Guided Imagery	Imagining a safe space.	24 out of 24 participants	#P08, #P12, #P14
Emotional Regulation	Present-Moment Focus	Grounding with senses (the 5-4-3-2-1 grounding technique).	24 out of 24 participants	#P13, #P16

## APPENDIX-AA: Theme 5 – Intervention Outcomes

### Theme 5. Intervention Outcomes

<b>Theme</b>	<b>Sub-Themes</b>	<b>Codes</b>	<b>Frequency</b>	<b>Representative Reflective Journal Prompts</b>
Intervention Outcomes	Emotional Shift	Feeling calm, happy, or neutral.	23 out of 24 participants	#P09, #P14
Intervention Outcomes	Behavioral Awareness	Identifying the fight, flight, and freeze reactions, Realizing what their test anxiety is, Realizing where their safe space is.	24 out of 24 participants	#P07, #P15
Intervention Outcomes	Student Agency and Preference	Identifying favorite methods.	23 out of 24 participants	All of the participants
Intervention Outcomes	Transferability and Practical Application	Using methods during tests, while studying, or in real life.	20 out of 24 participants	#P06, #P07, #P09, #P17

**APPENDIX-AB: Participant Gender Distribution by Group****Participant Gender Distribution by Group**

Group	Male	Female	Total
Treatment Group 1	20	16	36
Treatment Group 2	21	14	35
Control Group 1	21	15	36
Control Group 2	20	15	35

**APPENDIX-AC: Eğitim Bilimleri Enstitüsü Araştırma Etik Kurulu Onay Bildirimi**

T.C.  
HACETTEPE ÜNİVERSİTESİ REKTÖRLÜĞÜ  
Eğitim Bilimleri Enstitüsü Araştırma Etik Kurulu

Tarih: 24/10/2024 04:09  
Sayı: E-51944218-050-  
00003839466  
00003839466



Sayı : E-51944218-050-00003839466  
Konu : Etik Kurul (Şevval İZGÜT ve İsmail Hakkı MİRİCİ)

24/10/2024

**YABANCI DİLLER EĞİTİMİ ANABİLİM DALI BAŞKANLIĞINA**

İlgi : 04.10.2024 tarihli ve E-48490341-300-00003804735 sayılı yazı.

Ana Bilim Dalınız İngiliz Dili Eğitimi Yüksek Lisans Programı öğrencilerinden **Şevval İZGÜT**'ün, **Prof. Dr. İsmail Hakkı MİRİCİ** danışmanlığında yürüttüğü "**EFL Öğrencilerinin Sınav Kaygısını Azaltmak İçin Farkındalıkları ve Yaratıcılıkları Üzerine Bir Araştırma**" başlıklı tez çalışması Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü Araştırma Etik Kurulunun **16.10.2024** tarihinde yapmış olduğu toplantıda incelenmiş olup, etik açıdan uygun bulunmuştur.

Bilgilerinizi ve ilgiliye tebliğini rica ederim.

Prof. Dr. İsmail Hakkı MİRİCİ  
Kurul Başkanı

**Bu belge güvenli elektronik imza ile imzalanmıştır.**

Belge Doğrulama Kodu: C7F4A6F7-1F77-4F76-B88F-E0AA194EAAB8

Belge Doğrulama Adresi: <https://www.turkiye.gov.tr/hu-ebys>

Adres: Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü Müdürlüğü 06800  
Beytepe-ANKARA

Bilgi için: Gülgün İLKDOĞAN (EBE ARAŞTIRMA  
ETİK KURUL ÜYESİ)

E-posta: Elektronik Ağ: [www.hacettepe.edu.tr](http://www.hacettepe.edu.tr)

Kurul Üyesi

Telefon: Faks:

Telefon: 2978571

Keç:



**APPENDIX-AD: 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.

(04) / (03) / (2026)

(Signature)

Şevval İzgüt

**APPENDIX-AE: Thesis Originality Report**

04/03/2026

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

Thesis Title: An Investigation of Mindfulness and Creative Teaching Methods to Reduce EFL Learners' Test Anxiety

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.

Time Submitted	Page Count	Character Count	Date of Thesis Defense	Similarity Index	Submission ID
04/03/2026	152	40831	02/03/2026	16%	2874807994

Filtering options applied:

1. Bibliography excluded
2. Quotes included
3. Match size up to 5 words excluded

I declare that I have carefully read Hacettepe University Graduate School of Educational Sciences Guidelines for Obtaining and Using Thesis Originality Reports; that according to the maximum similarity index values specified in the Guidelines, my thesis does not include any form of plagiarism; that in any future detection of possible infringement of the regulations I accept all legal responsibility; and that all the information I have provided is correct to the best of my knowledge.

I respectfully submit this for approval.

**Name Lastname:** Şevval İzgüt  
**Student No.:** N23137380  
**Department:** Department of Foreign Language Education  
**Program:** Program of English Language Teaching  
**Status:**  Masters  Ph.D.  Integrated Ph.D.

Signature

**ADVISOR APPROVAL**

APPROVED  
(Title, Name Lastname, Signature)

## APPENDIX-AF: 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.

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

04 /03 /2026

(imza)

Şevval İZGÜT

---

"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 tez erişime 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 tezlerle 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.

