REPUBLIC OF TURKEY
ISTANBUL MEDENIYET UNIVERSITY
INSTITUTE OF GRADUATE STUDIES
DEPARTMENT OF FOREIGN LANGUAGE EDUCATION
ENGLISH LANGUAGE EDUCATION

TEACHERS' MINDSETS IN FOREIGN LANGUAGE CLASSROOMS

MASTER'S THESIS

BETÜL OLDAÇ

JULY 2022

REPUBLIC OF TURKEY
ISTANBUL MEDENIYET UNIVERSITY
INSTITUTE OF GRADUATE STUDIES
DEPARTMENT OF FOREIGN LANGUAGE EDUCATION
ENGLISH LANGUAGE EDUCATION

TEACHERS' MINDSETS IN FOREIGN LANGUAGE CLASSROOMS

MASTER'S THESIS

BETÜL OLDAÇ

SUPERVISOR

PROF. DR. SELAMİ AYDIN

JULY 2022

BİLDİRİM

"Teachers' Mindsets in Foreign Language Classrooms" adlı yüksek lisans tez çalışmamın tamamen kendi çalışmam olduğunu, akademik ve etik kuralları gözeterek çalıştığımı ve her alıntıya kaynak gösterdiğimi taahhüt ederim.

Betül Oldaç

Danışmanlığını yaptığım işbu tezin tamamen öğrencimin çalışması olduğunu, akademik ve etik kuralları gözeterek çalıştığını taahhüt ederim.

Prof. Dr. Selami Aydın

T.C.

İSTANBUL MEDENİYET UNIVERSITY

INSTITUTE OF GRADUATE STUDIES

DEPARTMENT OF FOREIGN LANGUAGE EDUCATION

ENGLISH LANGUAGE EDUCATION

Betül Oldaç tarafından hazırlanan "Teachers' Mindsets in Foreign Language Classrooms" başlıklı bu yüksek lisans tezi Yabancı Diller Eğitimi Ana Bilim Dalında hazırlanmış ve jürimiz tarafından kabul edilmiştir.

JÜRİ ÜYELERİ **İMZA**

Tez Danışmanı:

Prof. Dr. Selami Aydın .....

Kurumu: İstanbul Medeniyet Üniversitesi

Üyeler:

Dr. Öğr. Üyesi Ferdane Denkci Akkaş .....

Kurumu: İstanbul Medeniyet Üniversitesi

Dr. Öğr. Üyesi Sezen Arslan .....

Kurumu: Bandırma Onyedi Eylül Üniversitesi

Tez Savunma Tarihi: 07/07/2022

ACKNOWLEDGMENTS

First and foremost, I would like to express my deepest gratitude to my supervisor Prof. Selami Aydın for his endless patience, unceasing support, and invaluable guidance from the very first day I met him to the present. I feel very lucky to have completed this thesis under his supervision. His belief in my potential made me flourish day by day in my career as a researcher.

I would also like to extend my sincere gratitude to Assoc. Prof. Özge Cengiz and Asst. Prof. Ferdane Denkci Akkaş for being a source of inspiration and giving continuous support throughout my master's education.

Thanks should also go to all my warmhearted friends who supported me through the process of researching and writing this thesis. Feeling their support and love was invaluable.

Last but not least, I would like to thank my family whose warmest love I felt day after day along this journey. I could not have undertaken this study without the love and support of my mother, father, brother, and little sister.

I would also like to extend my thanks to the Scientific and Technological Research Council of Turkey (TUBITAK) for providing financial support within the scope of the 2210-A National Scholarship Program for Master's Students.

ABSTRACT

TEACHERS' MINDSETS IN FOREIGN LANGUAGE CLASSROOMS

Oldaç, Betül

Master's Thesis, Department of Foreign Language Education, English Language Education

Supervisor: Prof. Dr. Selami Aydın

July 2022, 100 pages

This research aims to explore English teachers' mindsets about intelligence and abilities and further investigate whether teachers' mindsets have anything to do with nine factors, namely, age, gender, the highest level of education completed, department graduated in, being abroad for education, receiving in-service training programs, teaching experience, level taught, and institution. In this descriptive study, data were collected from 162 English teachers working at geographically diverse institutions in Turkey through an online survey. The survey included a background questionnaire and the Dweck Mindset Instrument. Data were analyzed through Statistical Package of Social Sciences (SPSS) 26.0 software using descriptive and inferential statistics. Findings showed that more than half of the English teachers had a fixed mindset, and the remaining had either a mixed or a growth mindset, of which the latter constituted the smallest group in number. Results also revealed that teachers' mindsets were irrespective of nine previously determined variables.

Keywords: English as a foreign language, language teachers, mindset

ÖZET

YABANCI DİL SINIFLARINDA ÖĞRETMENLERİN ZİHNİYETİ

Oldaç, Betül

Yüksek Lisans, Yabancı Diller Eğitimi Ana Bilim Dalı, İngiliz Dili Eğitimi Bilim Dalı

Tez Danışmanı: Prof. Dr. Selami Aydın

Temmuz 2022, 100 sayfa

Bu çalışmanın amacı, İngilizce öğretmenlerinin zekâ ve becerilere ilişkin zihniyetlerini keşfetmek ve öğretmenlerin zihniyetlerinin belirlenmiş dokuz faktörle ilişkisi olup olmadığını araştırmaktır. Tanımlayıcı nitelikteki bu çalışma için Türkiye'de çeşitli kurumlarda görev yapan 162 İngilizce öğretmeninden çevrim içi anket aracılığıyla veri toplanmıştır. Anket, öğretmenlerin yaş, cinsiyet, eğitim geçmişi ve öğretmenlik deneyimlerine yönelik sorulardan ve Dweck Zihniyet Ölçeğinden oluşmaktadır. Elde edilen veriler SPSS 26.0 istatistik programı aracılığıyla analiz edilmiş, analizlerde betimsel ve çıkarımsal istatistik yöntemleri kullanılmıştır. Bulgular, İngilizce öğretmenlerinin yarısından fazlasının sabit zihniyete sahip olduğunu, diğerlerinin ise karma zihniyete veya gelişim zihniyetine sahip olduğunu göstermektedir. Buna ek olarak gelişim zihniyetine sahip olan öğretmenlerin sayıca en küçük grubu oluşturduğu saptanmıştır. Bununla birlikte sonuçlar, öğretmenlerin zihniyetlerinin belirlenmiş dokuz değişken ile bir ilişkisi olmadığını ortaya çıkarmıştır.

Anahtar Kelimeler: Yabancı dil olarak İngilizce, dil öğretmenleri, zihniyet

To my family

TABLE OF CONTENTS

ACKNOWLEDGMENTS iv
ABSTRACT v
ÖZET vi
TABLE OF CONTENTS viii
LIST OF TABLES xi
LIST OF FIGURES xii
LIST OF ABBREVIATIONS xiii
1. INTRODUCTION 1
1.1 Background of the Study 2
1.2 Statement of the Problem 3
1.3 Aims of the Study 4
1.4 Significance of the Study 5
1.5 Research Questions 6
1.6 Limitations 6
2. RELATED LITERATURE 8
2.1 Theoretical Framework 8
2.1.1 The Mindset Theory 9
2.2 Literature Review 13
2.2.1 Studies on Mindset and Academic Achievement 14
2.2.2 Studies on Teacher Mindset 19
2.2.3 Studies on Mindset Intervention 24
2.2.4 Studies on Mindset and Demographic Variables 31
2.2.5 Studies on (Language) Mindset and Language Learning 32
2.2.6 Conclusion 38
3. METHODOLOGY 42
3.1 Research Design 42
3.2 Participants 43
3.3 Tools 45
3.4 Procedure 46

3.5 Data Analysis 47
4. RESULTS 49
4.1 RQ1: What Type of Mindsets Do EFL Teachers Have About Intellectual Abilities? 49
4.2 RQ2: Do EFL Teachers' Mindsets Differ According to Predetermined Variables? 50
4.2.1 Age 52
4.2.2 Gender 54
4.2.3 Highest Level of Education Completed 55
4.2.4 Department 55
4.2.5 Being Abroad for Education 56
4.2.6 Teaching Experience 57
4.2.7 Level Taught 58
4.2.8 Institution 59
4.2.9 Receiving In-Service Training Programs 60
4.3 Summary of the Results 60
5. CONCLUSIONS and DISCUSSION 62
5.1 Conclusions 62
5.2 Implications 63
5.3 Practical Recommendations 65
5.4 Recommendations for Further Research 66
REFERENCES 68
APPENDIX A: Informed Consent Form 77
APPENDIX B: Background Questionnaire 78
APPENDIX C: Dweck Mindset Instrument 79
APPENDIX D: Approval Form Received From Istanbul Medeniyet University Educational Sciences Ethics Committee 80
APPENDIX E: Kruskal-Wallis H Test Results for Scale Items (Age as Independent Variable) 81
APPENDIX F: Mann-Whitney U Test Results for Scale Items (Gender as Independent Variable) 83
APPENDIX G: Kruskal-Wallis H Test Results for Scale Items (Highest Level of Education Completed as Independent Variable) 85

APPENDIX H: Mann-Whitney U Test Results for Scale Items (Department as Independent Variable) 87
APPENDIX I: Independent Sample T-Test Results for Scale Items (Being Abroad for Education as Independent Variable) 89
APPENDIX J: One-Way ANOVA Test Results for Scale Items (Teaching Experience as Independent Variable) 91
APPENDIX K: Kruskal-Wallis H Test Results for Scale Items (Level Taught as Independent Variable) 93
APPENDIX L: Independent Sample T-Test Results for Scale Items (Institution as Independent Variable) 96
APPENDIX M: Independent Sample T-Test Results for Scale Items (Receiving In-Service Training as Independent Variable) 98
ÖZGEÇMİŞ 100

LIST OF TABLES

Table 1. Background Information About the Participants 44
Table 2. Reliability Values of the Scale in Previous Studies 46
Table 3. Classification of Participants' Mindsets 50
Table 4. Dweck Mindset Instrument (n=162) 51
Table 5. Relationship Between Mindset and Age (Kruskal-Wallis H Test) 53
Table 6. Tamhane's T2 Post Hoc Analysis for Items Indicating Statistically Significant Difference 53
Table 7. Relationship Between Mindset and Gender (Mann-Whitney U Test) 55
Table 8. Relationship Between Mindset and Highest Level of Education Completed (Kruskal-Wallis H Test) 55
Table 9. Relationship Between Mindset and Department (Mann-Whitney U Test) . 56
Table 10. Relationship Between Mindset and Being Abroad for Education (Independent Sample T-Test) 57
Table 11. Relationship Between Mindset and Teaching Experience (One-Way ANOVA) 57
Table 12. Scheffe Post Hoc Analysis for the Item Indicating Statistically Significant Difference 58
Table 13. Relationship Between Mindset and Level Taught (Kruskal-Wallis H Test) 59
Table 14. Relationship Between Mindset and Institution (Independent Sample T-Test) 59
Table 15. Relationship Between Mindset and Receiving In-Service Training (Independent Sample T-Test) 60
Table 16. Summary of the Results 61

LIST OF FIGURES

Figure 1. Summary of the Two Mindsets 10
Figure 2. Growth Mindset and Performance in Reading, Mathematics, and Science 15
Figure 3. Growth Mindset and Fear of Failure 16
Figure 4. Summary of the Factors Fostering and Inhibiting Growth Mindset Among Teachers 23
Figure 5. The Relationship Between Growth Mindset, Well-Being, Perseverance of Effort, and Working Engagement 24
Figure 6. Ecosystem and Its Layers 34
Figure 7. The Mindsets–Goals–Responses Model of L2 Learning in Failure Situations 36

LIST OF ABBREVIATIONS

COCA	Corpus of Contemporary American English
EFL	English as a Foreign Language
ELT	English Language Teaching
ESL	English as a Second Language
FLL	Foreign Language Learning
GPA	Grade Point Average
L2	Second/foreign language
LMI	Language Mindset Inventory
OECD	The Organisation for Economic Co-operation and Development
SPSS	Statistical Package of Social Sciences
SRL	Self-Regulated Learning

I

INTRODUCTION

"I love challenge!"

A ten-year-old boy once uttered this sentence when he was struggling with hard puzzles. Shortly, he has become the role model of the professor who had never thought anybody loved failure. This boy knew that abilities could grow through effort. When something went wrong, he was not failing but learning. This incident constituted one of the first attempts to understand the nature of the mindset that could make failure into a gift (Dweck, 2006, p. 6).

The introduction section of this study aims to form the basis of the research study with five subsections: background of the study, statement of the problem, aims of the study, significance of the study, and research questions. First, the background of the study part presents the starting point of the study and the importance of the mindset theory in language teaching. Second, the statement of the problem part discusses why it is worthwhile to dig into the issue bringing up the shortcomings in the current literature and the problems related to teacher mindset. Third, the aims of the study section introduces the purposes of conducting such research. Fourth, the significance of the study part explains the importance of this study in terms of both contributions to literature and potential implications for teachers. Finally, the research questions part provides the research questions that are intended to be answered by the end of the study.

1.1 Background of the Study

Intelligence has long been under the spotlight of many, including teachers, teacher trainers, educators, parents, and students. From which perspectives and by which means it is investigated have always differed, yet the complexity of the human mind remained unchanged. Considering that intelligence and teaching are two inseparable concepts, and intelligence is one of the factors that contribute to learning, the starting point of this study is the everlasting complexity of the human mind and irreducible interest in the interdependence of human intelligence and learning. Nonetheless, the relationship between intelligence and learning cannot be downgraded into the former being one of the predictors of the latter as can be traditionally thought. Far beyond that, this relationship is so complex that learners' beliefs and perceptions of the nature of human intelligence may affect the meaning of effort and challenge to them, their conceptions of failure, and the goals they set for success (Dweck & Leggett, 1988; Dweck, 2006; Dweck et al., 2014).

When it comes to the relationship between intelligence and language learning, there is a dichotomy between the schools of thought. According to the first view, language skills are no different from other skills, so they can be learned as any other skill. By contrast, the second view suggests that language differs from other skills in that people have a special talent called language aptitude to acquire a language (Pishghadam & Khajavy, 2013). However, these seemingly conflicting standpoints still have two things in common: they adopt an outsider view on the learner's intelligence and talents, can measure them at some point, and in turn, use that measurement as a reference point. What is neglected to a great extent is that people's implicit theories of intelligence and talents may somehow affect their motivation and language learning processes.

As scientists for years have developed many scientific theories about intelligence, people also develop their implicit theories of intelligence or mindsets that involve their underlying beliefs about the nature of intelligence (Dweck & Leggett, 1988; Hong et al., 1995). People who believe in the malleability of intelligence are said to have a *growth mindset*, while others who think that intelligence is a fixed trait have a *fixed mindset* (Dweck, 2006). However, it is unlikely that all people fall into two

discrete categories according to their mindsets; instead, they lie on a continuum, two extreme sides of which are the growth mindset and the fixed mindset. To put it differently, people may change in how much they believe in the malleability of intelligence or reject it. More importantly, individuals' mindsets may differ in various areas such as sports, science, or language learning. When the uniqueness and distinctiveness of language learning are considered, the concept of mindset concerning foreign language learning (FLL) comes to prominence. Given that research investigating mindsets concerning FLL is very limited in the literature, there is a need for domain-specific study of mindsets to better understand mindsets and language learning and teaching relations (Lou & Noels, 2016).

In addition to the mindsets about their teaching skills, teachers also have mindsets about their students' intelligence and abilities, which brings forward the issue of nature versus nurture (Dweck, 2012). That is, do teachers believe that their students have certain capacities to learn and succeed in life by nature, or would nurture and teachers' efforts make their students any better? Teacher mindset is all-important particularly due to two reasons. First, teachers' mindsets may influence their classroom teaching practices and affect student learning and the whole learning environment (DeLuca et al., 2019). Second, teachers' expectations for their students' intellectual abilities and performances may affect students' performances serving as self-fulfilling prophecies (Rosenthal, 1963; Rosenthal & Jacobson, 1968). Teachers' mindsets are suggested to be domain-specific, and teachers' implicit theories of intelligence may vary based on interpersonal factors (Patterson et al., 2016). This is why it seems worthwhile to study teachers with various backgrounds in a prespecified domain and further investigate whether factors such as age, experience, educational background, and teaching experience have anything to do with teachers' mindsets.

1.2 Statement of the Problem

For years, intelligence has been studied as stable individual differences in intellectual abilities of people (Carr & Dweck, 2011) though it has not quite found a place in the English as a Foreign Language (EFL) research, especially until the last few decades

(Lou & Noels, 2019; Pishghadam & Khajavy, 2013). More remarkably, compared to the research on the relationship between EFL and intelligence, studies that focus on implicit theories of intelligence relating to EFL are few and far between. Studies focusing on people's implicit theories of intelligence or mindsets date back to the eighties (see Dweck & Leggett, 1988). In the literature of this relatively new and immature field, quite a few studies about the relationship between student mindset and academic achievement, the relationship between mindset and demographic variables, the impacts of teacher mindset on teaching practices, and mindset intervention studies in which the possibility and outcomes of mindset change are examined can be found. However, many studies of this kind do not investigate language learning and teaching, while only very few delve into the issue of mindset regarding learning and teaching EFL.

Given that teachers' mindsets affect their practices and behaviors in the classroom (DeLuca et al., 2019), teachers' perceptions of students' skills affect how students view themselves (Seaton, 2018), and the messages teachers send, even praises, foster either of the mindsets in students (Dweck, 2006), the importance of teacher mindset is evident. A research study investigating EFL teachers' mindsets and describing teachers' mindsets in relation to their backgrounds and teaching experience would apparently contribute to the field. In addition to contributing to the field with empirical data providing a sound basis for studies on EFL teachers' mindsets, such research might also pave the way for further research regarding this issue.

1.3 Aims of the Study

Intelligence has long been investigated as one of the factors that may possibly contribute to learning. However, research shows that it is much more complicated than that. People's perceptions of human intelligence affect what they make of effort and challenge, how they interpret failure, and the goals they set in life (Dweck, 2006; Dweck et al., 2014; Dweck & Leggett, 1988). Dweck and her colleagues (Dweck, 2006; Dweck et al., 2014; Dweck & Leggett, 1988; Hong et al., 1995) suggest that people differ in how much they believe in the malleability of intelligence. People with a growth mindset believe that intelligence can improve through effort, while

people with a fixed mindset think intelligence is fixed and is all a person has within themselves. As people have mindsets that include their views on human intelligence, teachers also have mindsets about their students' intelligence. Differently and significantly, the mindsets teachers have may greatly affect the learning environment in the classroom and influence students' underlying beliefs about human intelligence (DeLuca et al., 2019; Seaton, 2018).

In light of these, this study has two fundamental aims. The first aim of this study is to discover EFL teachers' mindsets relating to human intelligence. This study may raise awareness among pre-service and in-service language teachers of the teacher mindset and draw attention to the importance of implicit theories. Considering the domain-specificity of teacher mindset and the limitedness of such research in the Turkish EFL context, the second aim of this study is to investigate teacher mindset within the scope of the EFL context and gain insight into whether EFL teachers' mindsets have anything to do with teachers' demographic profile, background, and teaching experience. Herewith, this study intends to call forth any further research regarding the teacher mindset.

1.4 Significance of the Study

This study is significant essentially on two bases. First, it contributes to the literature with empirical data collected from a specific group of language teachers as an outcome of meticulous work. Besides contributing to the literature with empirical data, this study may also set the ground for mindset intervention studies that train people to adopt a growth mindset by changing their conceptions of challenge, effort, and failure. People with a growth mindset have learning goals, learn from challenges and failure, and be aware of the need for effort to be successful, and this is why it appears to be worth training people through intervention studies. Second, aiming to find the relationship between language teachers' mindsets and factors regarding their backgrounds and teaching experience, this study sets forth a different perspective on language teachers' belief systems and provides implications for EFL teachers while it may also inform pedagogical practices in the language classrooms.

1.5 Research Questions

As mentioned before, teacher mindset is an immature field in which research relating to EFL teachers' mindsets is scarce. The importance of domain-specific research regarding teacher mindset and the need for such research relating to the EFL context makes this study worth conducting. This study aims to provide insights into the mindset issue and lead to further research by answering the following research questions:

1. What type of mindsets do EFL teachers have about intellectual abilities?
2. Do EFL teachers' mindsets differ according to demographic variables such as their age and gender; their educational backgrounds including the program they graduated in, the highest level of education they completed, being abroad for education or not; and their teaching experience including years of teaching, the levels they teach, and the type of institutions they work at?

1.6 Limitations

The present study has several limitations. First, this is a descriptive cross-sectional study that measured teachers' mindsets at a given point in time. However, as intervention studies show, the mindset itself is a mutable and cultivatable quality. Thus, the identified mindsets of the participating teachers may not remain consistent over time. Second, only quantitative data were collected for this descriptive study, using a background questionnaire and a six-point Likert-type mindset scale that comprises sixteen items. Qualitative data obtained through interviews and observations, together with quantitative data, could help better understand the teachers' underlying belief systems (Creswell & Garrett, 2008). Third, data collected for this research are based on self-reports, which might not reflect the actual beliefs of participants. Fourth, the participants of this study are limited to 162 teachers. Moreover, out of 162 teachers, only twenty-four of them were males, which may be insufficient to represent the group. Fifth, this study did not use random sampling, teachers who responded to the online survey were, at least to some extent, technology literate and reached the survey by technological means. Further research may mitigate any inconvenience arising from this by collecting data from a bigger

number of participants that would reflect the characteristics of the target population better or collecting data through both online and paper-based surveys for those who are unavailable to receive the online invitation letters and/or participate in the online survey.

II

RELATED LITERATURE

The second section of this thesis, *Related Literature*, contains two subsections: theoretical framework and literature review. In the first subsection, the theory on which this study is grounded, namely the Mindset Theory, is explained in relation to several concepts such as effort, goals, and failure. The second subsection reviews the relevant literature on mindset and academic achievement; teacher mindset; mindset interventions; mindset and demographic variables; and (language) mindset and language learning. The reviewed studies are reported thematically to set the terrain for the analysis and discussion of the data collected in the present study.

2.1 Theoretical Framework

Mindset is a broad term that is likely to appear in various contexts. A short corpus-based study shows that, though it is not a very frequent word, it collocates with various words and occurs in numerous contexts. The word mindset appears 7,507 times in the Corpus of Contemporary American English (COCA), which has data of over one billion words. Despite the diverse contexts in which this word is used, its meaning is quite the same in all contexts it appears (Davies, n.d.). Various definitions found in online dictionaries for this word more or less refer to the same concept with different wording. Throughout this study, the use of *mindset* is limited to individuals' mindsets about personal attributes such as intelligence, abilities, and competence as identified in the Mindset Theory by Dweck (Blackwell et al., 2007; Dweck, 2000; Dweck & Leggett, 1988). The alternate term *implicit theories* (aka *self-theories*), introduced before the term mindset in the same framework to convey the same meaning, is also used interchangeably with mindset throughout this study.

2.1.1 The Mindset Theory

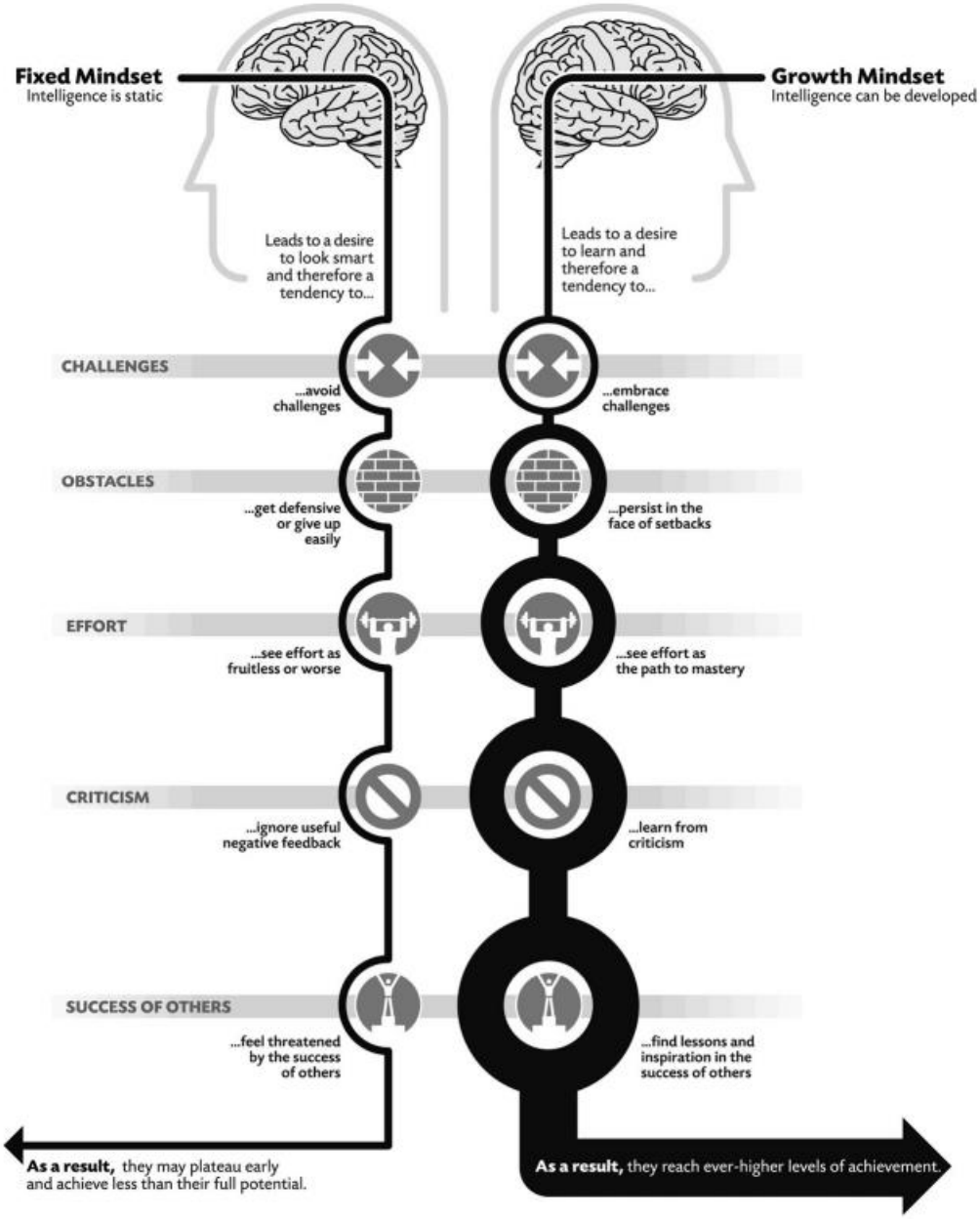
The Mindset Theory was developed by American psychologist Carol S. Dweck and is based on a model in which individuals develop *self-theories* that reflect their belief systems and self-concepts (Dweck, 2000; Dweck & Leggett, 1988). These self-theories or mindsets are set of beliefs that are powerful enough to affect people's thoughts, views, and behaviors (Dweck & Leggett, 1988). According to the mindset theory, there are two types of mindsets: the growth mindset (incremental theory) and the fixed mindset (entity theory). Individuals do not necessarily have a sharp single mindset, contrarily, they may have different mindsets for different areas of intellectual abilities, and the degree of fixed or growth mindset they hold may change. Moreover, as mindsets are beliefs in people's minds, people may change their beliefs and, in turn, their minds over time. (Dweck, 2006; Dweck et al., 1995).

According to Dweck and Leggett (1988), the way of conceptualizing things in mind seriously impacts how they are treated. In other words, people perceive that uncontrollable and fixed things can be assessed and evaluated, while controllable and improvable things can be worked on and developed. Therefore, people may differ in what type of goals they set for success, how they perceive effort and failure, how willing they are to put effort, and how much they accept failures according to their mindsets. It is also noteworthy that individuals with different mindsets may initially be equal in their abilities, although some avoid challenges because of the fear of being judged, and some find challenges and difficulties more tolerable. The summary of the two mindsets is given in Figure 1.

2.1.1.1 Growth mindset

Incremental theory, in other words, the growth mindset theory, implies that, though people are born with various endowments, talents, and interests, they can improve at different levels through effort and experience. In other words, people may differ in their attitudes, abilities, and motivation, but they can improve and go beyond where they start. Regarding this, one's full potential and possible progress through effort

Figure 1. Summary of the Two Mindsets (Dweck, 2016)



and devotion can never be known (Dweck, 2006). Individuals with the growth mindset focus more on learning goals rather than performance goals. In other words, their goals include improving their abilities more than documenting their abilities (Blackwell et al., 2007).

2.1.1.1.1 Meaning of effort in growth mindset

The growth mindset refers to the belief that people can improve their intellectual abilities regardless of where they start and how skillful they are. What is more, the growth mindset lets people love what they are doing despite the difficulties. When they confront challenges, though they may feel anxious, they are apt to take risks, face the difficulty and work on them with determination. If abilities can be improved and there is potential for progress and growth through effort, it means there are still many ways to success (Dweck, 2006). As it is well-said by Dweck (2006, p. 30), "maybe they haven't found the cure for cancer, but the search was deeply meaningful". However, it should also be emphasized that the growth mindset is not all about effort. Effort has a crucial role in success, but it is not the only parameter. People need to try different strategies and approaches when they need to take further steps in addition to their determined efforts. More importantly, this effort will include strategies like seeking input from others when they are puzzled or stuck (Dweck, 2015).

2.1.1.1.2 Goals in growth mindset

Instead of performance goals that aim to show the best of what one already has, people with a growth mindset have learning goals (or mastery goals) that turn setbacks into learning (Dweck et al., 2014). In other words, with learning goals, individuals desire to learn, improve and increase their competence instead of delivering performances as a result of which they can gain positive labels regarding their intelligence and abilities. That is to say, such people tend to learn and grow through challenges instead of giving up when they suffer setbacks (Dweck & Leggett, 1988). Moreover, students who hold a growth mindset and set learning goals may show greater grit in their school lives (Dweck et al., 2014).

2.1.1.1.3 Failure in growth mindset

Individuals with the growth mindset will inevitably have setbacks and disappointments, and sticking to the growth mindset may not always be easy.

However, when these people experience a failure, they know it does not define them, even if it is painful. Failure is an experience to be learned from. The growth mindset lets people believe that their qualities may develop, and their abilities may improve. If there are chances of growth and improvement, it is possible to take many different paths to success (Dweck, 2006).

2.1.1.2 Fixed mindset

The entity theory or the fixed mindset refers to the belief that one's intelligence and abilities are fixed and cannot easily change. That is to say, according to the fixed mindset, intelligence is a fixed trait, not a malleable one, and individuals have a certain amount of it. People with this mindset consider that they may learn new things, but their underlying intellectual abilities remain unchanged (Dweck et al., 1995). It is suggested that believing in the fixed mindset puts a heavy load on people's shoulders because if somebody has a fixed amount of intelligence, they feel an urge to prove that it is at a sufficient level (Dweck, 2006). People with a fixed mindset may have worries about the certain amount of intelligence they have, overthinking about looking as they have enough of it (Dweck, 2000).

2.1.1.2.1 Meaning of effort in fixed mindset

Although in both mindsets ability and effort are seen as factors contributing to success, the weight given to them may vary according to the mindset a person holds (Hong et al., 1999). In the fixed mindset, the outcome is more important than the process. If people are not successful enough or cannot reach the desired outcome, all the effort is wasted. They may feel humiliated and even give up (Dweck, 2006; Dweck et al., 2014). Further to that, effort is terrifying for people with a fixed mindset due to two reasons. First, if people are intelligent enough, they do not need to put in any effort to succeed; if they put in effort, it casts doubt on their intellectual abilities. Second, it precludes excuses for failure; once people put effort into something, they cannot claim that they would be successful if they put effort into it (Dweck, 2006).

2.1.1.2.2 Goals in fixed mindset

Individuals with a fixed mindset are generally prone to worry about *"proving"* their abilities rather than *"improving"* them (Dweck & Leggett, 1988, p. 259). To put it differently, they have performance goals that involve the need to prove that the fixed amount of intelligence they have is at a sufficient level (Dweck, 2006). More explicitly, these people either have a "performance approach goal" and endeavor to show that they are performing well or have a "performance avoidance goal" and try to avoid poor performance (Dweck et al., 2014, p. 8).

2.1.1.2.3 Failure in fixed mindset

People who focus too much on performance goals, with the expectation of being potentially judged by others, become more vulnerable to feeling helpless after a failure. This is prevalent, especially when people feel insecure and less confident about their abilities (Dweck, 2000). Failure is threatening for people with a fixed mindset who put other people in the judge's position instead of having them as allies. First, if people have positive impressions of a person, failure may turn those positive impressions into negative, resulting in the change of that person's label. Second, since there is no true way for success in the fixed mindset and trying harder cannot really let individuals go beyond their limits, the possibility of ending up with a negative label after a failure terrifies people (Dweck, 2006).

2.2 Literature Review

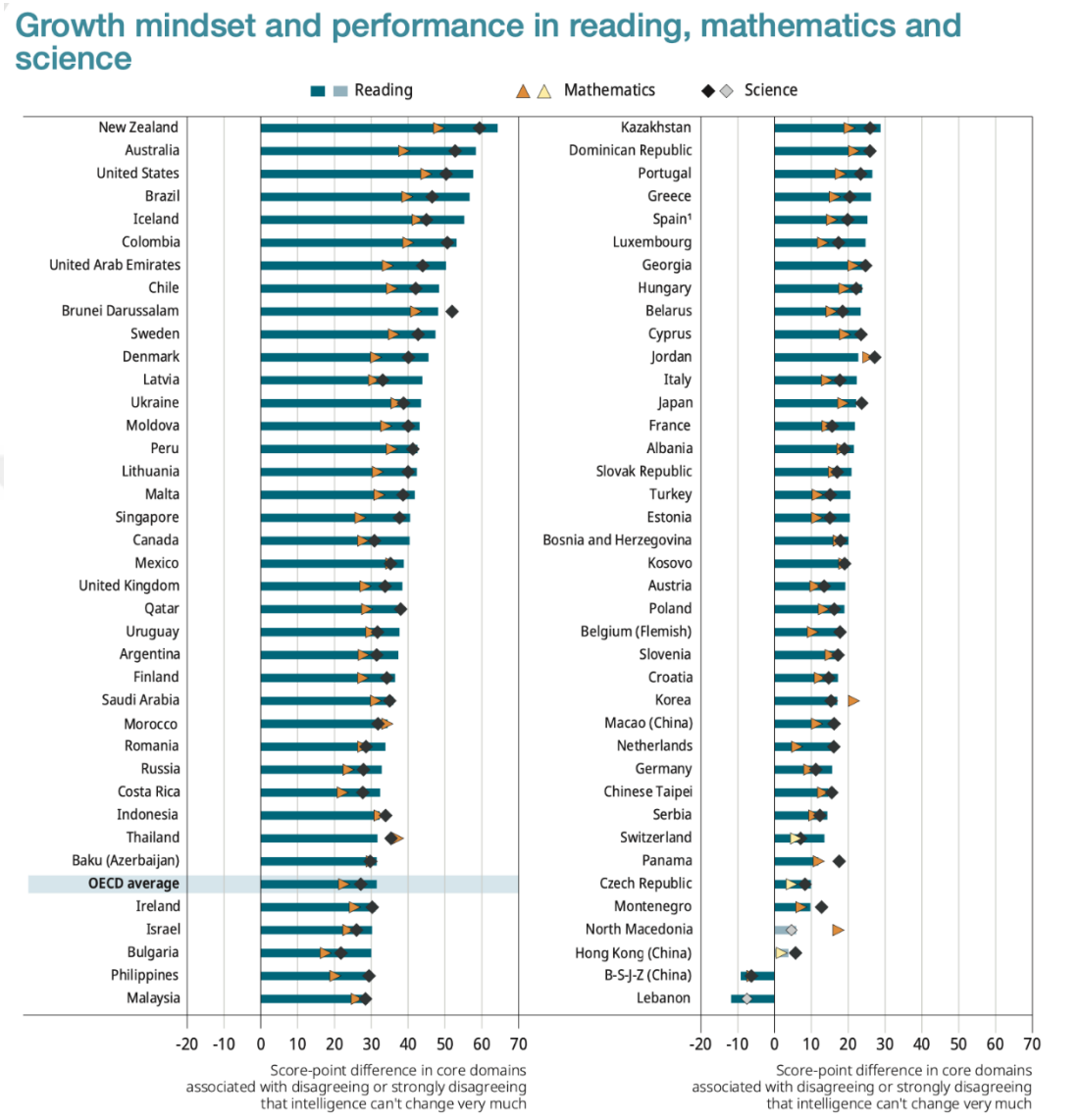
An in-depth review of the literature shows that mindset has been studied in relation to many concepts like academic achievement, self-regulation, teachers' in-class practices, assessment, demographic variables, personal factors, and so forth. However, not all concepts have their shares equally in the literature; while some are well-researched, some others are underresearched. In this part, which is organized thematically, relevant research on mindset and academic achievement; teacher mindset; mindset interventions; mindset and demographic variables; and (language) mindset and language learning are provided.

2.2.1 Studies on Mindset and Academic Achievement

Early research in the 1980s shows that students with similar intellectual abilities may differ in their responses to academic challenges according to their implicit theories. In other words, if students believe that they have a certain amount of intelligence that is unchangeable, they think that their abilities are measured, and if things go in the negative direction, they tend to give up. On the other hand, if students believe that intelligence and abilities can improve, they adopt more positive attitudes toward challenging tasks and putting more effort into difficulty (Blackwell et al., 2007; Dweck, 2006; Dweck & Leggett, 1988). Studies reported in this part mainly show how mindset is positively related to academic achievement, communicative competence, regulated learning, and employment of sophisticated learning strategies (Claro et al., 2016; Gouëdard, 2021; Nordin & Broeckelman-Post, 2019; Yan et al., 2014). Yet several other studies report no significant relationship or a slight negative correlation between mindset and academic achievement (Bahník & Vranka, 2017; Li & Bates, 2020; Sisk et al., 2018).

A great number of studies in the literature show that growth mindset is associated with higher grades and better school performance and a report by the Organisation for Economic Co-operation and Development (OECD) supports this association. Nordin and Broeckelman-Post (2019) conducted a correlational study with 1,011 university students aiming to investigate the relationship between a growth mindset and several communicative skills. They concluded that the growth mindset was positively correlated with speech grades and interpersonal communicative competence, while it was negatively correlated with public speaking anxiety. Moreover, it was stated in the study that regression tests revealed that growth mindset and interpersonal communication competence predicted student engagement in the communication course. The OECD report published in 2021 is in line with the findings in the literature concerning mindset and academic achievement. The OECD report analyzing 15-year-old students participating in PISA 2018 across countries shows a positive relationship between growth mindset and academic achievement. According to the report, among the OECD countries, students participating in PISA 2018 and having a growth mindset received 23 points higher in mathematics, 27

Figure 2. Growth Mindset and Performance in Reading, Mathematics, and Science (Gouëdard, 2021)



1. In 2018, some regions in Spain conducted their high-stakes exams for tenth-grade students earlier in the year than in the past, which resulted in the testing period for these exams coinciding with the end of the PISA testing window. Because of this overlap, a number of students were negatively disposed towards the PISA test and did not try their best to demonstrate their proficiency. Although the data of only a minority of students show clear signs of lack of engagement (see PISA 2018 Results Volume I, Annex A9), the comparability of PISA 2018 data for Spain with those from earlier PISA assessments cannot be fully ensured.

Notes: Statistically significant values are shown in darker tones.

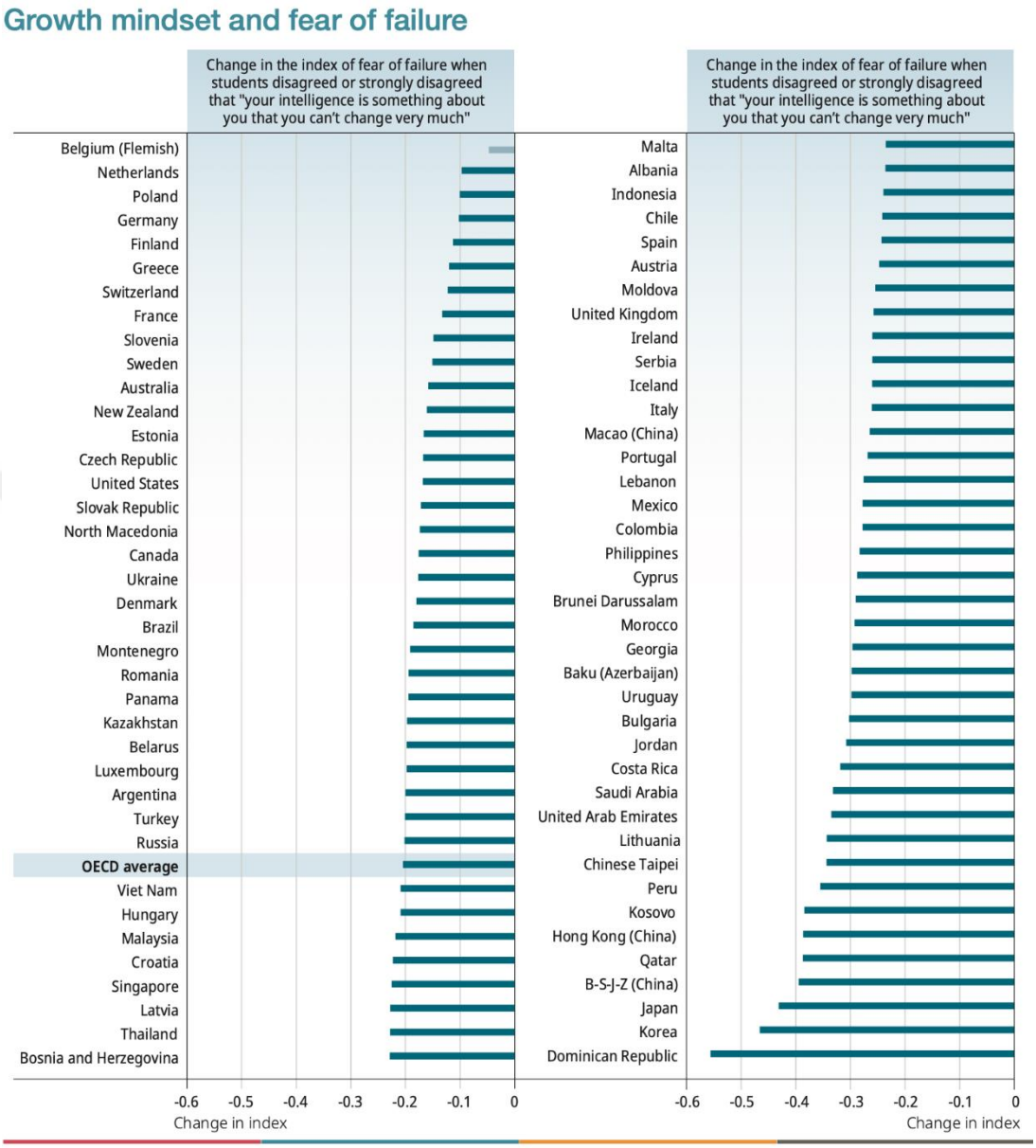
All linear regression models account for students' and schools' socio-economic profile. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).

Countries and economies are ranked in descending order of the score-point difference in reading associated with disagreeing or strongly disagreeing that intelligence can't change very much.

Source: OECD, PISA 2018 Database

points higher in science, and 31 points higher in reading compared to their counterparts with a fixed mindset (see Figure 2). What is more, the fear of failure

Figure 3. Growth Mindset and Fear of Failure (Gouëdard, 2021)



Notes: Statistically significant values are shown in darker tones.
All linear regression models account for students' and schools' socio-economic profiles. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).
Countries and economies are ranked in descending order of the change in the index of fear of failure associated with disagreeing or strongly disagreeing that intelligence can't change very much.
Source: OECD, PISA 2018 Database

found to be significantly lower among students with a growth mindset than students with a fixed mindset across all countries except one (see Figure 3). More importantly, it was also stated that female, disadvantaged and immigrant students with a growth mindset gained 3, 12, and 9 scores higher than male, advantaged, and non-immigrant students with a growth mindset (Gouëdard, 2021).

Another noteworthy study in the related literature explores the relationship between mindset and self-regulated learning among adults. Yan et al. (2014) investigated how adults' learning activities and habits relate to their mindsets and beliefs about intelligence. The survey included a demographics questionnaire and a learning and memory questionnaire including a part about participants' learning motivations for both school and work. Participants consisted of both student and non-student adults whose ages ranged between 18 and 74, with an average of 34.23. Non-student participants needed to refer to their experiences as students for the questions about school learning. The analyses suggested that people with a growth mindset tended to be involved in more metacognitively sophisticated learning activities and utilize more productive learning strategies. To exemplify, they were more aware of the importance of self-testing and more likely to restudy the previously learned subject matters. On the other hand, it was found that those with a fixed mindset were less likely to restudy a material that had been learned previously and had more extrinsic motivation than intrinsic motivation. These results regarding adults with a fixed mindset were reported to be consistent with the fixed mindset beliefs that ability is immutable, the things that were learned may still exist, and much effort to learn a material may mean a lack of abilities. The pivotal role of this study is that it is one of the very few studies investigating mindset concerning learning with participants with a very wide range of ages up to 74.

A large body of research investigates how student mindset relates to academic achievement, yet very few of them do so paying regard to students' socioeconomic backgrounds. Claro et al. (2016) conducted nationwide research with 10th graders at public schools in Chile using a national dataset that includes scores of standardized language and mathematics tests administered by the Chilean Government. The analyses included 75% of all 10th-grade public school students, and data revealed a robust relationship between mindset and academic achievement across all socioeconomic groups. To put it differently, students with a growth mindset outperformed those with a fixed mindset at all socioeconomic levels. A link between students' mindsets and family income was found, and it was further stated that students in the lowest family income group were two times more likely to hold a fixed mindset than students in the highest family income group. Moreover, it was

concluded that lower-income level amplifies the negative effects of a fixed mindset, or contrariwise, a growth mindset reduces the negative effects of economic disadvantage on academic achievement. What is important about this research is that it is the first study to report a relationship between student mindset and socioeconomic status, to the researchers' knowledge.

The studies presented thus far provide evidence that believing in the malleability of intellectual abilities, i.e., holding a growth mindset, is positively related to academic achievement; however, not all studies corroborate such findings. Li and Bates (2020) conducted two interrelated studies to test the association of mindset with university grades. In the first study, it was hypothesized that students with a more of growth mindset would fare better in their grades than their counterparts with a fixed mindset. Data collected from 246 undergraduate students through scales and self-reports yielded a near-zero association between mindset and course grades. The second study with a longitudinal research design recruited 586 undergraduate students. Participants completed a mindset scale, and their university entry grades and official average grades for each academic year were available. Data revealed that mindset predicted neither higher grades upon entry to university nor higher grades across academic years at university. It was concluded after both studies that either a growth mindset was unrelated to achievement or there was a non-significant negative association between them. Similarly, Bahník and Vranka (2017) investigated how students' mindsets related to the national test that is carried out several times in an academic year and used for university entrance in the Czech educational context. Data collected from 5,653 students showed that mindset is neither correlated with academic achievement nor predicted any improvement between administrations. Moreover, a slight negative correlation between the results of the tests and the growth mindset was observed. Furthermore, a meta-analytic study by Sisk et al. (2018) concluded that there was only a very weak relationship between a growth mindset and academic achievement.

2.2.2 Studies on Teacher Mindset

In addition to the mindsets about their teaching skills, teachers also have mindsets about their students' intelligence and abilities. (Dweck, 2012; Seaton, 2018). Several studies show that teachers' mindsets about intelligence impact teachers' practices at schools (Jonsson et al., 2012; Rissanen et al., 2019; Stipek et al., 2001). Relevantly, the concept "Pygmalion effect", which can be traced back to the seminal work by Rosenthal and Jacobson (1968), implies that teachers' expectations of their students may enhance students' abilities and improve their intellectual performance. This being said, the importance of a teacher mindset is quite obvious and researchers' interest in this area is unsurprising. Studies in this part mainly report how teachers' mindsets vary according to their ages, experiences, and academic domains, how internal and external factors shape mindsets, and how mindset relates to different classroom practices, assessment, and work engagement (DeLuca et al., 2019; Jonsson et al., 2012; Lee, 1996; Leroy et al., 2007; Patterson et al., 2016; Rissanen et al., 2019; Zeng et al., 2019; Zilka et al., 2019).

Domain specificity regarding teacher mindset is an area of interest for researchers. Patterson et al. (2016) carried out a study with 73 preservice and 53 practicing teachers from whom data were collected through a combination of measures. In the study with three major research questions, one of the aims was to investigate whether teacher beliefs about intellectual abilities and the determinants of academic performance vary across different academic domains. Results showed that participants believed that in the art domain including creative writing and music and the STEM domain including science, technology, engineering, and mathematics performance was more ability-based compared to the humanities domain. Besides, the humanities domain, which includes social studies and languages, was the one with the most reported effort-based views. One striking finding of the study is that although teachers' theories of intelligence were not always in line with their domain-specific ability versus effort attributions, teachers' beliefs about intelligence and determinants of achievement were consistent in most domains, one of which was humanities. That is, teachers with malleable views of intelligence considered humanities as effort-based. Another important finding of the research was that teachers with a strong fixed mindset tended to feel less responsible for students'

academic attainment because of the belief that teachers have little impact on students' achievement, which may decrease the teaching efficacy.

Studies regarding mindset suggest that teachers' mindsets may lead to different treatments in classrooms. Lee (1996) carried out an experimental study with 200 elementary school teachers in Korea. Participants were chosen purposively as 50 female and 50 male incremental theorists and 50 female and 50 male entity theorists. Participants were given simulated tasks in which they needed to evaluate students, rank their performances, give feedback, choose follow-up assignments, and elaborate on the reason why they chose those assignments. Teachers also needed to explain their views on grouping students, i.e., whether they prefer heterogeneous or homogeneous groups based on students' abilities. The study reports that teachers with a growth mindset were inclined to give average scores, while teachers with a fixed mindset were inclined to give non-average scores to students. Regarding this, no substantial difference was found between teachers when scoring intermediate students. Moreover, teachers with a fixed mindset tended to give ability-oriented feedback and focus on students' performances, whereas teachers with a growth mindset tended to give effort-oriented feedback and focus on students' learning. A significant difference was found in grouping students; teachers with a growth mindset recommended ability-heterogeneous groups, whereas teachers with a fixed mindset recommended ability-homogeneous groups. Findings suggest that the difference between teachers with a growth mindset and a fixed mindset in their treatments was more conspicuous when they had high or low expectations rather than intermediate expectations. It was concluded that teachers' mindsets were reflected in their treatments; teachers with a fixed mindset were found to be treating students in a more biased and unfair way, while teachers with a growth mindset tended to treat students more fairly and appropriately. In another study conducted in the French educational context, Leroy et al. (2007) examined how teachers' support for autonomy in the classrooms was affected by teachers' mindsets. Data collected from 298 fifth-grade teachers through questionnaires demonstrated that teachers who held a growth mindset with the belief that academic abilities may be improved through effort led to an increase in teachers' self-efficacy, which in turn, resulted in classes with more autonomy-supportive climates. These results imply that teachers'

behaviors in the classrooms are, to some extent, influenced by their beliefs regarding learners' academic abilities.

Several case studies seek to examine how mindsets are reflected in teachers' pedagogical thinking and practice. One of these studies is conducted by Rissanen et al. (2019, p. 211) in Finland with a class teacher, a teacher who is responsible for teaching all subjects to a class between grades one to six in the Finnish educational system. The data were collected through a semi-structured interview, video-recorded observations, and stimulated recall interviews. Results showed that the teacher who had a mixed mindset actualized many features of growth mindset pedagogy such as encouraging students to set learning goals and be concerned with skill acquisition, fostering individual learning processes, and guiding students to process-focused thinking by praising efforts and strategies. However, some of the features of fixed mindset pedagogy were also observed in teachers' practices. The teacher did not notice or respond to students' fixed mindset behaviors; she focused too much on the motivating power of success instead of teaching her students how to cope with failure and learn from it. She also treated her competent students in a more trait-focused manner. That is, instead of helping each student go beyond their actual level, she helped her low-achieving students more partly because she was convinced that high-achieving students' competence is stable. As reported by researchers, findings suggest that growth mindset pedagogy mainly overlaps with what is regarded as "good pedagogy" in today's teacher education though teachers' fixed mindset beliefs influence their pedagogies; thus, a research-based approach to implicit beliefs should be included in teacher education programs. This study is specifically important in that it shows how teachers' mindsets take shapes in the classroom though the results of this research may be unrepresentative of teachers in different contexts and the same context.

Findings do not only report a meaningful relationship between teacher mindset and classroom practices but also assessment. DeLuca et al. (2019) carried out a correlational study with 396 pre-service teachers in Ontario, Canada, investigating the relationship between teachers' mindsets and their approaches to assessment. They found out that all participants had either a growth mindset (54.3%) or a mixed mindset (45.7%); none of the teacher candidates held a fixed mindset. Moreover, this

research provided evidence that teacher candidates differed in their conceptualizations of assessment purposes and assessment fairness according to the mindset they held. Teacher candidates with a growth mindset significantly prioritized assessment *as* learning approach, while teachers with a mixed mindset tended to prioritize assessment *for* learning approach. When it comes to assessment fairness, candidates with a growth mindset preferred a differentiated approach in which students could show their learnings in highly-personalized ways, whereas candidates with a mixed mindset preferred an equitable approach in which accommodations and variations were possible in a more consistent way of assessment.

Although many studies in the literature investigate the impacts and contributions of teacher mindset, several studies focus on how internal and external factors shape teachers' mindsets. In one of these studies, Zilka et al. (2019, p. 9) conducted semi-structured interviews with fourteen Israeli teachers (eight females and six males) who were chosen through theoretical sampling. Data analysis showed that, according to teachers' perceptions, personal background including the way they were raised, success and failure experiences, grit, and inner motivation were some of the internal factors, while mentorship, guidance, feedback, school environment, principal support, and required external changes such as reforms and changes in school policy were some of the external factors that fostered a growth mindset. On the other hand, several internal factors including personal background such as being a conformist, having an ego, and suffering from burnout, and some external factors such as unsupportive school environment, lack of autonomy, absence of sufficient appreciation, "culture of mediocrity", and teacher's status were perceived as factors inhibiting growth mindset (see Figure 4). The research concludes that internal factors were believed to play a more active role in developing mindsets, although external factors were not counted as uninvolved. Therefore, a timeline approach was adopted in that teachers' mindsets were developed with the contributions of internal factors within this timeline of the past and present. It was highlighted that a person's mindset is affected by the past and present and influential in the future, yet this does not mean that a teacher's mindset is immutable.

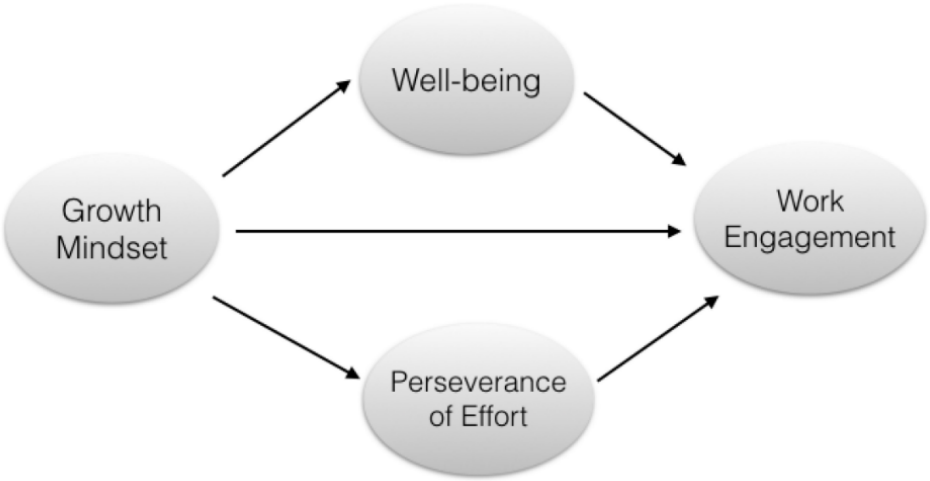
Figure 4. Summary of the Factors Fostering and Inhibiting Growth Mindset Among Teachers (Zilka et al., 2019)

Factors perceived as enhancing growth mindset	Factors perceived as inhibiting growth mindset
Internal Factors: (1) Personal background: education, self-efficacy, diverse experiences, values of stimulation and openness for change, facing difficulties and failures (2) Inner motivation for teaching (3) Success experiences (4) Grit	Internal Factors: (1) Personal background: non-diverse experience, conformity values (2) Burnout: Lack of inner motivation, shortcoming of attention and spare time for learning (3) Ego
External Factors: (1) Mentorship and feedback (2) School learning climate (3) Principal support (4) Dictated external changes	External Factors: (1) Unsupportive environment: mediocrity culture, lack of binding framework, lack of quality measures (2) The status of teachers: lack of autonomy, insufficient appreciation, unfair rewards

Yet another growing body of literature investigates how teachers' mindsets relate to the factors such as teachers' age, teaching experience, and subject area. Jonsson et al. (2012) conducted a study with 226 Swedish high school teachers from different disciplines whose years of experience ranged between 0 and 40. The schools where participants worked were chosen purposively to ensure variation. Findings revealed that there was a significantly higher tendency to hold a growth mindset rather than a fixed mindset among teachers whose subject areas were language, social science, and practical disciplines while, contrastingly, there was no significant difference in science and mathematics teachers' preferences. Furthermore, it was pointed out that younger and less experienced teachers together with older and more experienced teachers showed the highest preference for a growth mindset, whereas younger and more experienced teachers, as well as older and less experienced teachers, showed a lower preference for a growth mindset. The attention was drawn to the importance of teacher education and training teacher candidates to be aware that intelligence and abilities are malleable, and achievement depends on effort.

Studies regarding teacher mindset do not only bear upon how it relates to teachers' classroom implementations, pedagogical practices, or personal backgrounds but also investigate whether teacher mindset has anything to do with teachers' work engagement. Data collected from 472 secondary school teachers in China showed that a growth mindset, well-being, and perseverance of effort predicted work engagement. Furthermore, as shown in Figure 5, mediation analysis and the structural equation model revealed that well-being and perseverance could

Figure 5. The Relationship Between Growth Mindset, Well-Being, Perseverance of Effort, and Working Engagement (Zeng et al., 2019)



partially mediate the relationship between teachers' mindsets and work engagement. It was concluded that having a growth mindset affected teachers' work engagement both directly and indirectly (Zeng et al., 2019).

2.2.3 Studies on Mindset Intervention

People holding different theories perceive the world from two different perspectives. In the fixed mindset, traits and actions are tied together; thus, drawing inferences about traits from actions is possible to a great extent. However, on the ontological level, people with a growth mindset recognize that human abilities are dynamic and cultivatable. Yet on the epistemological level, people with a growth mindset acknowledge the dynamism of human attributes and expandability of abilities (Dweck et al., 1995). Dweck (2006) suggests that people may change their minds and begin to react differently just by learning and thinking about two mindsets. With this viewpoint, mindset itself is not counted as a trait variable but something that might change through interventions. Studies aiming to foster a growth mindset in students and teachers through interventions can be categorized as mindset intervention studies. Nevertheless, it is worth noting that not all studies regarding mindset interventions aim to promote growth mindset through interventions, but

some have skeptical viewpoints that the effectiveness of mindset interventions are overstated.

To better understand the predictive feature of mindset on academic achievement, Blackwell et al. (2007) conducted two interrelated studies the first of which investigated the relationship between mindsets and academic achievement. The first study was conducted in New York City, the USA, with 373 seventh-grade students to investigate how beliefs about intelligence affect junior high school students' mathematics grades over two years. It was reported that, compared to students with a fixed mindset, students with a growth mindset were more inclined to set learning goals, hold positive views of effort, and avoid attributing failures to their lack of abilities. Moreover, adolescents with a growth mindset were found to be faring better in mathematics after two years compared to their counterparts holding a fixed mindset. However, researchers noted that this discrepancy between the two mindsets only existed during a challenging transition; before junior high school, students with a fixed mindset were doing fine. The second study was conducted with 91 seventh graders from a public school in New York City, the USA, aiming to explore the impacts of an intervention on adolescents' motivation and success. Data revealed that teaching students the malleability of intelligence through eight-session intervention increased students' motivation. It was further reported that, after the intervention, no decline was observed in students' performance in the experimental group, contrary to the decline observed in the very same group before intervention and the continuing decline found in the control group.

This threefold study does not merely induce a growth mindset among students aiming to find a causal relationship but also includes two other studies investigating students' effort attributions and their tendency to take remedial actions after a failure. Hong et al. (1999) carried out three studies to test the relationship between the mindset theory and effort versus ability attributions. In the first study, participants were 50 female and 47 male undergraduate university students from the United States. It was concluded that in the case of receiving negative feedback, students holding a growth mindset showed a greater focus on effort when compared to students with a fixed mindset. The second study was conducted with 168 freshmen from a university in Hong Kong with the supposition that when a failure takes place,

students with a fixed mindset would not tend to take remedial action with the belief that intellectual abilities are finite endowments that cannot improve and failing again would only serve to validate their low abilities. The results were consistent with the hypothesis: when compared to entity theorists, incremental theorists were more likely to state that they would prefer to take remedial actions if they received unsatisfactory English examination results. The third study was conducted with 60 undergraduate students from Hong Kong to investigate the causal relationship between mindset and responses to failure by intervening with participants' implicit theories. After implementation, participants who received input teaching fixed mindset, compared to participants who received input teaching growth mindset, were less likely to take remedial actions, and the effort attributions mediated this tendency.

Several mindset intervention studies show that some people may benefit from interventions more than others. Aronson et al. (2002) carried out an experimental research study with 79 undergraduate students aiming to test a method of helping African American students overcome "stereotype threat", a phenomenon that occurs when people undertake the negative stereotypes about their groups as their personal characteristics (Steele & Aronson, 1995). This experimental research design included two control groups and a treatment group. In the treatment group, a mixed group of African American and Caucasian participants were asked to write about the malleability of intelligence to the pen pals. In accordance with the predictions of the researchers, African American students in the treatment group changed their views of intelligence from a fixed mindset to a growth mindset. Moreover, they reported greater enjoyment of academic studies and greater academic engagement and received higher GPAs compared to their counterparts in the control groups. Differently, though white students also benefited from the intervention and achieved higher grades, the change in their attitudes towards expandability of intellectual abilities did not persist and no increase in academic identifications and enjoyment was reported. Intending to change junior high school students' beliefs about the nature of intelligence, Good et al. (2003) implemented a mindset intervention that aimed to foster a growth mindset among seventh-grade students. Students were matched with mentors who offered them advice and helped with school-related issues. In the two treatment groups, mentors discussed either the brain plasticity and

expandability of human intelligence or the difficulty of transitioning to junior high school and the likelihood of overcoming those hardships. In the third treatment group, mentors combined both messages. On the other hand, the control group received messages about the dangers of drug use. Results showed that students who were taught the malleability of intelligence outperformed those who were told about the danger of drug use in math and reading tests. Data also revealed that girls improved their math scores more than boys in the mindset intervention group, which resulted in the disappearance of the gender gap.

An important study regarding mindset change examines whether school achievements may be improved through large-scale online mindset intervention procedures applied to geographically diverse schools. Paunesku et al. (2015) conducted a research study aiming to discover whether mindset interventions can be applicable and effective at scale. With this aim, 1,594 students from 13 high schools in the eastern, western, and southwestern United States were delivered growth mindset interventions through online modules. The study reports that growth mindset interventions resulted in a more malleable view of intelligence, higher GPAs in core academic courses, and a bigger number of satisfactory grades in core classes among underachieving high school students who have the risk of dropping out. This study is specifically important because it is one of the first large-scale mindset intervention studies and it includes diverse schools from different contexts and less researcher involvement.

Intending to explore the long-term impacts of interventions, Molway and Mutton (2020) carried out an intervention study with 119 students who were learning German as a foreign language at a secondary school in the UK. In this quasi-experimental study, some students received training in both growth mindset and reading strategies, some only in reading strategies, and the rest received no intervention as they were in the control group. Obtained qualitative and quantitative data showed that effective interventions could change students' mindsets for both the short-term and long-term. It was suggested that while change may occur gradually in some students, some students may go through a radical mindset change. Moreover, students in both of the experimental groups showed a positive shift in their responses

to challenges faced in the classroom and made more progress in learning language compared to their peers in the control group.

There have been a number of studies in the literature investigating the teacher-related variations in the outcomes of the mindset interventions. One of these studies is conducted by Schmidt et al. (2015) with two middle school science teachers, one of whom held a master's degree and had 20 years of teaching experience, while the other held a bachelor's degree and had six years of teaching experience. Student participants of the research were 160 in number and had various racial and ethnic backgrounds. The intervention was comprised of a web-based tutorial called Brainology through which students were taught that the brain is like a muscle and individuals may enhance their learning, abilities, and intelligence through effort and strategies. Analyses of classroom observations that took place before, during, and after intervention revealed that teachers were important factors that influence the longevity of the intervention outcomes in students. Though both teachers implemented similar activities, their way of communicating with students and the mindset messages they sent differed. The teacher who was more experienced and educated promoted a growth mindset, mastery orientation, strategy use, and achievement more effectively compared to the other teacher. Interactions in the classroom were reported to be influential in sustaining positive effects of mindset intervention including students' beliefs about the malleability of intelligence, their preference for setting mastery-oriented learning goals, and the improvement in their achievements.

A good question, whether students may implement their growth mindsets in the learning environment by themselves or should educational context support them, was asked by Yeager et al. (2022, p. 19) in a recent study, and 9,167 students and 223 math teachers provided data for the research to test the "*mindset-plus-supportive-context*" hypothesis. Both treatment and control groups received two sessions of intervention with a one to four weeks period between each session. The control group was provided with interesting information about the human brain, memory, and learning, while the treatment group was taught about the malleability of intellectual abilities. The study reports that mindset intervention helped students increase their math grades overall, but the benefits were not the same for all students.

Students whose teachers endorsed more of a fixed mindset did not show improvement compared to the control group while students whose teachers endorsed more of a growth mindset made meaningful progress. It was concluded, thereof, newly developed growth mindsets may not be readily implemented in any context; instead, teachers and the classroom environment should support mindsets by offering "affordances" (p. 29). Nevertheless, it should be noted that receiving education in the very same educational context and even the same classroom does not always provide that students hold similar mindsets. In her study, Mystkowska (2014) interviewed four female third-year undergraduate students with the mean age being 22 and concluded that albeit having much in common including age, gender, background, and courses being taken, people might vary in the mindsets they endorse and the degree they endorse a mindset.

Besides researchers, educators themselves may be interested in guiding students towards a growth mindset in their classes. Rau (2016) conducted a multi-case study with her three (two males and a female) fourth graders for three months to explore the impacts of intentional teacher language, including questions and feedback, on students' language, mindsets, and responses to challenges. For this study, data were collected through surveys, recordings, written reflections, and interviews and analyzed reflectively during the ongoing research process. Student interviews and written reflections showed how student language evolved within three months, while recordings let the teacher be aware of the sentences she uttered and reflect upon her process-oriented language in the classroom. On the other hand, mindset surveys were delivered both at the beginning and the end of the research to explore students' mindsets. Collected data revealed that teachers' use of process-oriented language in the classroom affected students' language, mindsets, and responses to challenges. Students began to use a language that focused on improvement and problem-solving strategies. Students valued effort focused more on the process rather than the product, and their mindset shifted from fixed to more of a growth mindset. Albeit this is a multi-case study conducted with a very small group, and the results may well be unrepresentative, this study is important in that it shows what steps teachers can take in their classrooms both as a teacher and a researcher and how they can become researchers of their own class.

Mindset intervention studies reported so far aimed at creating a positive change in students through interventions that guide students towards a growth mindset. However, in an educational context, those are not only students who hold mindsets about intellectual abilities but also teachers. As stated in Seaton (2018), the teacher mindset is twofold. First, teachers' mindsets about student abilities impact how students perceive themselves. Second, teachers' perceptions of themselves influence their confidence and practices. Acknowledging the vital role of the teacher mindset in an educational setting, Seaton (2018) carried out a study aiming to foster a growth mindset among teachers and examine the effects of an intervention on teacher practices. The study involved six training sessions and employed a mixed-method research design in which qualitative and quantitative data were collected from teachers at five primary schools and a high school in Scotland. Data revealed that a significant change towards a growth mindset occurred after the intervention. Moreover, the follow-up data showed that no significant change was observed regarding teachers' mindsets within three months after post-data. That is to say, the effects of training sustained for three months after training was completed. This suggests that long-lasting results can be reached with systematic training programs that allow teachers to experience cognitive dissonance and learn actively instead of one-off training programs. Last but not least, as stated by participants, the training program impacted not only participant teachers but also students and school atmospheres. Teachers' use of growth mindset language helped increase students' perseverance. Furthermore, the teachers were eager to sustain the positive changes in their mindsets and practices and share the concept with the school community.

Unsurprisingly, not all studies suggest that mindset interventions lead to positive changes among students. In their study, Sisk et al. (2018) conducted two meta-analyses, the first of which showed only a weak relationship between growth mindset and academic achievement, as mentioned in one of the previous subsections. On the other hand, the results of the second meta-analysis demonstrated that mindset interventions did not have significant effects on adolescents, typical students, and students experiencing situational difficulties such as a stereotype threat or a transition to a school. However, data showed that mindset interventions worked for students who are at high risk or in economically disadvantaged positions.

2.2.4 Studies on Mindset and Demographic Variables

Another body of research in the related literature investigates the relationship between mindset and demographic factors, measured intelligence, and educational level. For instance, Macnamara and Rupani (2017) investigated how age, gender, and attained education relate to mindset among adults through three consecutive studies all with a correlational research design. Data collected from a total of 450 participants revealed several results: In the first study, it was found that women tended to hold a growth mindset more than their male counterparts. No significant relationship was found between age or gender and mindset in the second one. In the last one, data suggested no main effect of education, age, intelligence, and gender on participants' mindsets. Examination of whether mindset predicted academic achievement (here, the highest level of education completed) provided no evidence to support such a relationship; contrary to the expected, people with a fixed mindset were found to be more likely to attain higher academic achievement, though the correlation was not statistically significant.

Another study in the related literature seeks evidence for the relationship between mindset and personality and measured intelligence. Spinath et al. (2003) conducted a research study to explore how and to what extent mindset relates to personality and intelligence among adults. For the study, 592 participants completed measures and collected data revealed that mindset was mostly unrelated to people's personality and their psychometric intelligence. However, it was found that there was a small but significant correlation between implicit theories and gender; that is, women believed that intelligence is cultivatable more than men did. Moreover, a weak but consistent tendency was found between age and implicit theories of intelligence among participants, which indicated that people tend to hold a fixed mindset with increasing age.

A large-scale study in the Turkish educational context investigates how students' mindsets relate to demographic variables. Beyaztaş and Hymer (2018) carried out a large-scale study in the Turkish educational context with 1,350 students from primary school to the university level examining how mindsets differ according to variables including age and gender. Data revealed that students were more likely to

endorse a fixed mindset than a growth mindset when analyzed irrespective of all predetermined variables. Regarding age, both children and adults were more likely to endorse a fixed mindset rather than a growth mindset. When gender is taken into consideration, no significant difference was found for children in terms of mindset, but it was found that adult males tended to hold more of a fixed mindset while adult females tended to hold more of a growth mindset. In the study, it was further suggested that teachers showed higher fixed-intelligence scores than growth-intelligence scores.

2.2.5 Studies on (Language) Mindset and Language Learning

Domain specificity regarding mindset is a well-documented phenomenon in the literature. In the small-scale exploratory study which, as they stated, suggests only "initial findings", Mercer and Ryan (2010, p. 443) highlight the point that people's mindsets may differ in different aspects of life and, as for the FLL domain, many people are inclined to believe that individuals have an innate gift for learning foreign languages (L2). Such an innate gift is named *aptitude*, and it is a quite oft-heard concept in the field of FLL. What is striking regarding aptitude is not the concept itself, but how much weight it carries with a language learner. A person viewing aptitude as significant in language learning may hold a fixed mindset, while a person who believes in the importance of efforts may hold a growth mindset. This study, which involved semi-structured and in-depth interviews with nine EFL learners at universities in Japan and Austria and was analyzed through the grounded theory approach, suggests that things are not as simple as a mere dichotomy between effort versus talent. Students lay on a continuum between two extreme points even in this one single domain: a strong fixed mindset and a strong growth mindset. What is more intriguing is that, even in the FLL domain, students were found to hold different mindsets for skill-specific subdomains such as speaking (and/or pronunciation) and writing. The research concludes that even students with a growth mindset may need guidance for metacognitive knowledge of strategies; therefore, while helping students adopt a growth mindset, teachers should provide their

students with necessary strategies and tools to help them improve and give their students feedback on the process, effort, and hard work.

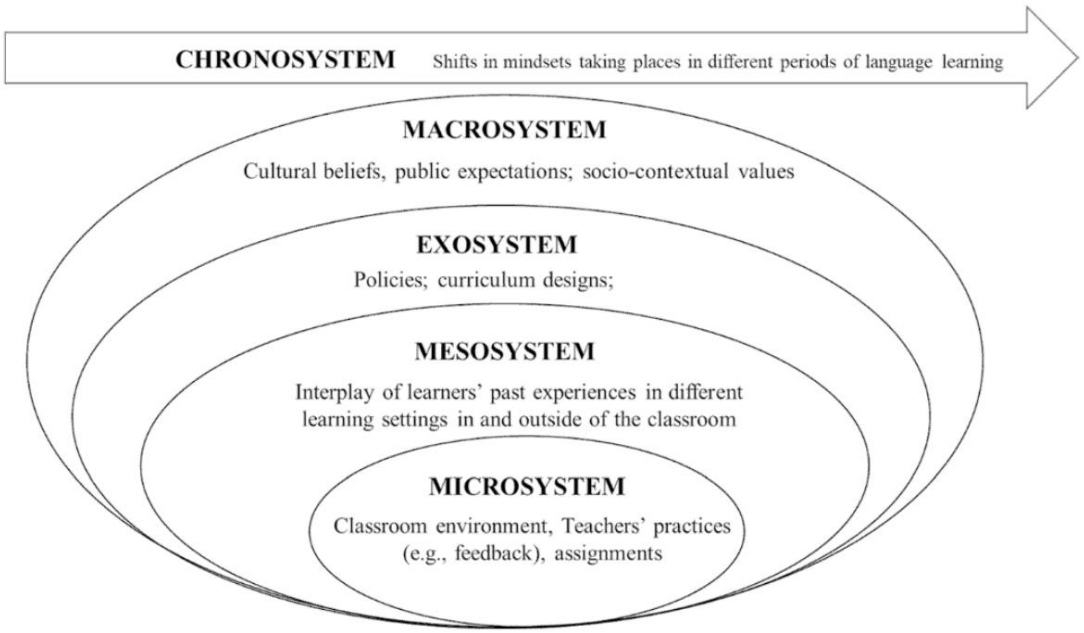
In accordance with the abovementioned study, a few more studies report that learners' mindsets may differ even in subdomains of a given subject area. In a small-scale work, Mercer (2011, p. 71) investigated two highly successful expert EFL learners' belief systems and how these belief systems may interrelate with learners' personal history. Qualitative data collected through interviews were analyzed employing the grounded theory approach, and analyses yielded important results. First, learners had complex belief systems consisting of interrelated beliefs that might change over time, and their personal histories might somehow affect these belief systems. Second, although one participant held more holistic beliefs about language learning and endorsed more of a growth mindset, the other had more domain-specific beliefs about different areas of the language such as pronunciation, vocabulary, and grammar and mostly endorsed a fixed mindset; both were very successful language learners. Thus, it was concluded that learners' mindsets should not be labeled as good or bad but seen as unique systems that reflect their personal histories, and there are various pathways to succeed in language learning instead of a "one-size-fits-all" belief system. In their study, Khajavy, Pourtahmasb, and Li (2021) examined the language mindsets and L2 reading mindsets of 489 Iranian university students separately and intended to find out whether L2 reading mindset predicted specific L2 reading outcomes. Data gathered through questionnaires and an L2 reading test showed that an L2 reading mindset predicted L2 reading enjoyment, reading anxiety, and reading achievement better than a general language mindset.

In the same vein as the previous research, several more studies emphasize the domain-specificity of mindsets and attempt to shine new light on mindsets concerning language learning. Intending to examine how motivational factors such as mindset, self-efficacy, and intrinsic value relate to self-regulated learning (SRL) and English language learning success among young EFL/ESL learners, Bai and Wang (2020) carried out a research study in Hong Kong with 690 fourth grade primary school students. Data for this study were collected using a questionnaire and a standardized English proficiency examination. It was concluded that the growth mindset was predictive of SRL more than self-efficacy and intrinsic value were. In

turn, the use of SRL strategies such as monitoring and effort regulation, though not goal setting and planning, predicted students' English language learning achievements. This study is especially important for being one of the first empirical research studies that investigated the predictive role of a growth mindset in the EFL/ESL contexts.

A recent study describes how mindsets take the shape that they currently are. Shirvan et al. (2021) designed their study to better understand the language mindsets of adult EFL learners from an ecological perspective, a perspective that acknowledges the pivotal role of interaction between students and the educational contexts they are in. Two male and four female adult L2 learners were interviewed for this aim, and data yielded important findings. First, students did not endorse one mindset fully but held a mindset that is a mixture of both mindsets with different weights. Second, students had different mindsets for different language skills instead of a holistic mindset for all language skills. Last but not least, it was further proposed that mindsets are dynamic frameworks of beliefs that are formed by virtue of students' interactions with parents, teachers, educational settings, and sociocultural environments. That is, mindsets are shaped by the factors within different ecological layers in an ecosystem, as shown in Figure 6.

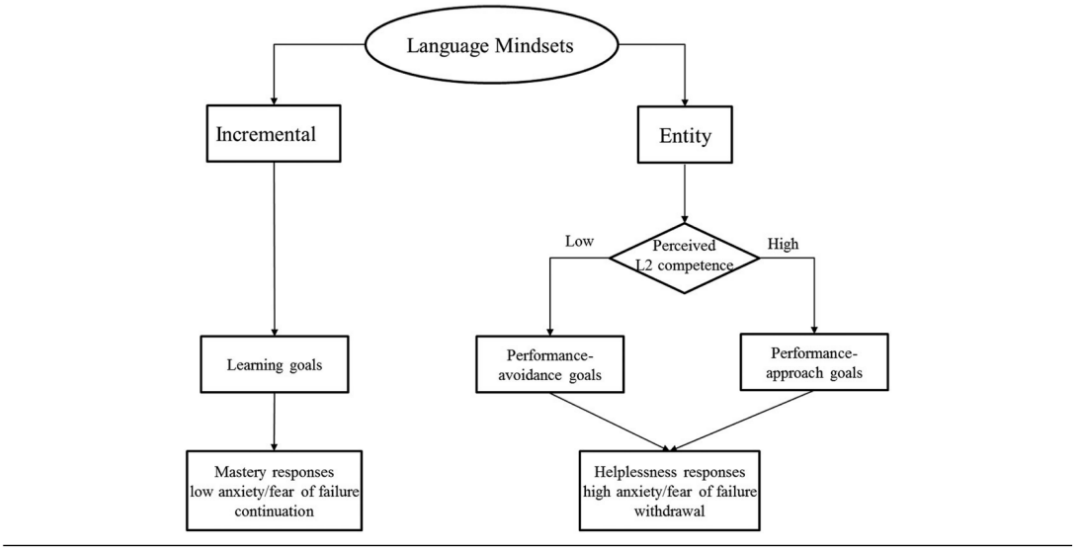
Figure 6. Ecosystem and Its Layers (Shirvan et al., 2021)



Several studies in the literature intend to explore the effects of priming a language mindset on students' goals, their responses to failure, and their willingness to keep learning the language. Lou and Noels (2016) conducted a research study in Canada with 150 university students with participants' gender ratio being 70% for females and 30% for males. In the study, participants were assigned to either growth or fixed language mindset groups in which the corresponding mindset was primed by reading passages. The study reports that, though students' beliefs did not vary much in the pre-test, in the post-test, students in the growth mindset group endorsed more with a growth mindset while participants in the fixed mindset group endorsed more with a fixed mindset. It was further stated that participants who held a growth mindset set learning goals and, in turn, responded in a mastery-oriented way after a failure and were willing to keep learning the language. On the other hand, in the fixed mindset group, students who perceived themselves as talented in language learning tended to set performance goals in which they desired to gain favorable judgments, responded in a more helpless-oriented manner, and were more apprehensive of failure. In their previous work (published later, though), besides developing the Language Mindset Inventory (LMI) used in the aforecited study, Lou and Noels (2017) established the mindsets-goals-responses model of L2 learning, highlighting the domain specificity of mindsets. The model that is primarily based on Dweck and Leggett's (1988) model counts language mindset as a related but distinct mindset and is best described in Figure 7. Importantly, the model established in the former study is supported by the findings of the latter.

Yet a few other studies in the literature expand on the relationship between language mindset and academic achievement. In their study, Eren and Rakıcıoğlu-Söylemez (2020) examined the relationship between EFL students' language mindsets and their graded performance paying special attention to mediating factors. For this correlational study, data were collected from 526 EFL students studying at a university in Turkey. A weak negative correlation was found between a fixed mindset and graded performance, while a weak positive correlation was found between a growth mindset and graded performance as a result of statistical analyses. Further analysis showed that the relationship between students' growth mindset related to language aptitude and their graded performance was partially mediated

Figure 7. The Mindsets–Goals–Responses Model of L2 Learning in Failure Situations (Lou & Noels, 2017)



by engagement and fully mediated by perceived instrumentality. Hassanzadeh et al. (2020) aimed to investigate the relationship between language mindset and English achievement. Data were collected from 370 Iranian EFL learners through three scales, and the institute's written reports on participants' English grades were also included in the data set. Correlational analyses showed that there was a direct and significant relationship between language mindsets and EFL learners' English achievement. It was further stated that the relationship between the two was mediated by self-regulation and engagement. Khajavy, MacIntyre, and Hariri (2021) conducted a study in which they sought answers to five research questions including whether language mindsets differ according to gender and to what extent language mindset predicts L2 achievement. 1,178 Iranian university students enrolled in English courses at two universities provided quantitative data for this large-scale study through questionnaires, and students' final course grades constituted the other fraction of the whole data obtained. Results revealed no gender differences for language mindsets among language learners, and further analyses showed that the growth language mindset predicted L2 achievement while the fixed language mindset did not.

Further review of the literature shows that mindset has recently become a popular research interest in the Turkish EFL context. Yılmaz (2020) carried out a correlational research study with 151 English instructors working at universities in Turkey aiming to find out the relationship between teachers' mindsets and their perceived self-efficacy and how these two variables separately related to teachers' demographic characteristics. After finding a direct relationship between a growth mindset and self-efficacy beliefs, further analyses showed that there was a significant difference in the mindsets scores of teachers in terms of gender. Female instructors tended to endorse a growth mindset, while male instructors tended to hold a fixed mindset. Moreover, instructors who attended teacher training programs reported having higher scores on a growth mindset. However, instructors' mindsets did not differ according to their workplace, teaching experience, the program they graduated in, or the highest education level completed. In a similar study, Ergen (2019) found a positive correlation between mindset and technology self-efficacy beliefs with the data collected from 146 secondary school EFL teachers in Turkey. That is, teachers who endorse a growth mindset tended to have higher levels of self-efficacy in technology use, but it was further explored that the former construct did not predict the latter. Delibalta (2020) carried out a study with 330 preparatory class students, and statistical analyses showed that students with a growth mindset with some fixed ideas outnumbered others with a strong fixed mindset, strong growth mindset, and a fixed mindset with some growth ideas. It was further suggested that female participants were more likely to hold a growth mindset than men. Altunel (2020) conducted a correlational research study with 203 English preparatory class students studying at two universities in Turkey and found out that students with a growth mindset outnumbered those with a fixed mindset in this sample. Furthermore, it was reported that female students were more likely to hold a growth mindset while male students tended to hold a fixed mindset.

Several more studies investigate mindset in other EFL contexts. Zarrinabadi et al. (2021) carried out a study with 392 university-level EFL students to investigate whether classroom context predicts language mindset. They concluded that students who perceived their teachers as autonomy-supportive were more likely to hold a growth language mindset, and in turn, felt more competent in English and were more

willing to communicate. In Janudom's (2021) study, it was found that EFL learners held both mindsets and applied them in different areas, i.e., students tended to endorse a growth mindset in perceiving failures, criticism, and others' achievements while they tended to endorse a fixed mindset in perceiving challenges and mistakes. It was concluded that students' perception of the value of effort could be superficial in that students expressed that they value effort in words but had difficulty in putting it into practice. In Sato's work (2019), how the presentation-practice-production approach might be implemented in EFL classrooms to foster a growth mindset is described, and it was suggested that teaching mindsets explicitly, letting students practice newly-learned language structure in the focused practice part to prevent any confusion and feeling of lost, guiding them on the important role of failure in learning would help students endorse the malleability of abilities. In their study, Chuanon et al. (2021) examined whether Thai students language mindsets differed according to their age and year of study and concluded that most students were inclined to hold a growth mindset and there was no significant difference regarding students' language mindsets in relation to their age and year of study. Hussein (2018) examined the effects of writing reflective journals on EFL learners, and qualitative analyses revealed that writing reflective journals improved students' conceptual knowledge, enhanced their understanding of inner thoughts, and fostered a growth mindset. Ocampo (2017) studied 260 Japanese university students' mindsets regarding English grammar and reading, and data collected through questionnaires demonstrated that 81% of students tended to hold a fixed mindset, while only 19% of students tended to hold a growth mindset.

2.2.6 Conclusion

A review of relevant research shows that literature on mindset is growing day by day. Albeit early studies regarding mindset date back to the eighties and much research has been added to the field since then, it is possible to say that research on mindset concerning language learning is still in its youth.

Studies reviewed so far showed that a growth mindset is positively related to academic achievement, better school performance, higher GPAs, and lower levels of

fear of failure among adolescents and adults. This positive relationship is also supported by an OECD report published in 2021. Several studies suggest that this relation is mediated by self-regulated learning that includes students' employment of metacognitively sophisticated learning activities. Further research confirms that a growth mindset is positively correlated with academic achievement irrespective of students' socioeconomic background. However, as all arguments have counterarguments, all studies do not reveal a direct correlation between mindset and academic achievement, but some of them report a near-zero association while some of them report an insignificant inverse correlation between them.

Reviewed literature also shows that research pays special attention to the teacher mindset. Several studies report that teachers have domain-specific mindsets regarding various academic domains. Yet another growing area of research suggests that teachers' mindsets are reflected in their pedagogical thinking and practices. Adding to this, several studies report that teachers' mindsets may lead to different treatments in the classroom including the types of feedback they provide, the assessment approaches they adopt, and the way they evaluate their students. There is also research investigating the relationship between teacher mindset and various factors; some studies conclude that several internal and external factors shape teachers' mindsets, while some others study how teachers' age, teaching experiences, and subject areas relate to their mindset. Additionally, some research in the literature reports that teachers' mindsets predict their work engagement.

Most researchers have a consensus that the mindsets individuals hold may change over time. In this sense, the mindset itself is regarded as a malleable and changeable trait. Numerous mindset intervention studies were conducted in the literature yielding various results and they may either support or confute the previous statement. Many studies show that mindset intervention studies result in a more malleable view of intellectual abilities and result in increased grades, higher GPAs, and better academic achievement. Some of them further report that interventions work better for some people; that is, disadvantaged students and girls benefit more from interventions than advantaged students and boys, respectively. Furthermore, studies researching the long-term effects of interventions and the practicality of large-scale interventions report that interventions may have both short- and long-term results, and they may be

effective at scale. Research also shows that teachers' classroom practices and interactions with their students may affect the results of mindset interventions, and students whose teachers endorse more of a growth mindset may show greater improvement. Yet some other research suggests that not only students but also teachers take advantage of mindset interventions, and positive changes in teachers' mindsets lead to positive changes in school atmosphere and students. However, it should also be noted that some research claims that interventions do not have significant effects on student achievement.

Another growing area of research suggests that the mindsets people hold in various domains such as language, science, mathematics, sports, creative writing, and music may differ from each other. Some research focusing on language learning suggests that students may have a combination of both growth and fixed mindset with different weights. In the related literature, it was further stated that students' mindsets concerning each sub-domain of language learning such as writing, vocabulary, grammar, and reading might also well be different from each other. Research also investigates how priming a language mindset impacts students' goals, responses to failure, and their willingness to learn the language. How a mindset evolves into the way it is over time in the environment a person lives is another area that is studied in relation to language learning. Moreover, while some recent research reports a positive relationship between growth language mindset and English achievement, others investigate how English teachers' mindsets correlate with their self-efficacy beliefs and with other variables such as age, gender, highest education level attained, workplace, etc.

A meticulous review of the literature shows that mindset has recently become a more popular concept among educational researchers and many researchers from different fields of study. The concept has been studied in many ways for many different purposes so far, but still many gaps are waiting to be closed by scientific research. Focusing closely on the research on mindset and education, more specifically, mindset and language teaching, it is possible to spot those gaps in the literature. While reviewing the literature, it was determined that several studies investigate language teachers' mindsets and how their mindsets correlate with several factors such as age, gender, highest education level completed, workplace, and so forth.

However, to the knowledge of the author, no study investigates language teachers' mindsets in the Turkish EFL context in relation to a number of predetermined variables collecting data from participants teaching different grades from primary to university level and working at diverse institutions across the country. Thus, this empirical research is important in that it will contribute to the field by addressing one of those gaps in the literature.

III

METHODOLOGY

This section briefly explains the methodology of the study with five subsections, namely research design, participants, tools, procedure, and data analysis. The research design part gives a short overview of the study declaring its design, while the participants part provides information about the participants recruited for the study. In addition, the tools part describes the questionnaire and the scale used for obtaining data, and the procedure part summarizes the procedure followed in carrying out this study. Lastly, the data analysis part clarifies how and by which means the data were analyzed.

3.1 Research Design

This research first identifies English teachers' mindsets and then explores the relationship between English teachers' mindsets and several predetermined factors. These factors are namely demographic variables such as age and gender; educational backgrounds including the department participants graduated in and the highest level of education they attained; being abroad for education or not; and their teaching experience including years of teaching, the levels they teach, type of institutions they work at, and attending any in-service training or not. That is to say, this study identifies several factors that may relate to a predetermined construct, which is mindset, and investigate the construct itself and its relationship with the factors identified. Therefore, this research adopts an analytic approach since it investigates the components of a phenomenon separately and closely rather than attempting to understand a phenomenon as a whole. The aim of this research is identified as deductive because the study begins with research questions that narrow the scope of

the study and let the phenomenon be examined systematically. There is no manipulation in this research but an investigation of the variables as they exist, and thus this research is defined as descriptive in its design (Seliger & Shohamy, 1989). To sum up, what has been said so far, as stated in Dulock (1993), this descriptive research portrays the characteristics of a group of people, explores the associations between already existing variables, and documents the phenomenon methodically as it naturally occurs in its setting. For conducting such descriptive research, an online survey method was employed. The questionnaire that collected background information about participants and the scale that measured teachers' mindsets were both combined and integrated into an online survey. According to Wright (2005), the online survey method for collecting data is advantageous due to several reasons. While collecting data, online surveys let the researcher recruit a great number of participants in a short time and save time for the researcher. Moreover, it gives the chance to involve participants who are otherwise hard to reach because of distance. Considering the abovementioned advantages, the online survey method was determined as the most appropriate method to use within this research design and for the purposes of such a study.

3.2 Participants

One hundred and sixty-two English teachers/instructors from diverse schools and universities in Turkey participated in the study. Of these participants, 85.2% were females (n=138) and 14.8% were males (n=24). The mean age of all participants is calculated as 32.1 with the youngest participant being 23 and the oldest being 65 years old. Slightly more than half of the participants had a bachelor's degree (%53.7, n=87), while 38.3% of them had a master's (n=62), and 8% of them had a doctoral degree (n=13). Most teachers, with a percentage of 83.3, graduated from English Language Teaching (ELT) Department (n=135), while 16.7% of the teachers graduated from departments such as Language and Literature, Translation, Linguistics, and Educational Sciences (n=27). Moreover, 54.9% of the teachers stated that they had not been abroad for educational purposes (n=89), while 45.1% stated that they had been abroad for education at any time (n=73).

Table 1. Background Information About the Participants

	F	%	M	Min	Max
Age			32.1	23	65
20-30	79	48.8			
31-40	67	41.4			
41 and older	16	9.9			
Gender					
Female	138	85.2			
Male	24	14.8			
Highest level of education completed					
B.A.	87	53.7			
M.A.	62	38.3			
Ph.D.	13	8			
Department					
English Language Teaching	135	83.3			
Others (Language and Literature, Translation, Linguistics, Educational Sciences)	27	16.7			
Being abroad for education					
Yes	73	45.1			
No	89	54.9			
Year of experience			8.8	1	40
0-5 years	55	34			
6-10 years	64	39.5			
11 or more years	43	26.5			
Level Taught					
Preschool	3	1.9			
Primary School	18	11.1			
Secondary School	37	22.8			
High School	23	14.2			
University	81	50			
Institution					
State/Public	104	64.2			
State	58	35.8			
Attending in-service training					
Yes	59	36.4			
No	103	63.6			

Participants had 8.8 years of teaching experience on average with the least experienced teacher having one and the most experienced teacher having 40 years of teaching experience. Participants taught various groups of learners at preschools (*n*=3), primary schools (*n*=18), secondary schools (*n*=37), high schools (*n*=23), and universities (*n*=81). Most participants with a percentage of 64.2 worked at public/state institutions (*n*=104), and 35.8% of them worked at private institutions (*n*=58). Moreover, 36.4% of the participants stated that they attended at least one in-service teacher training program in their lives (*n*=59), while 63.6% of them expressed attending no in-service teacher training programs (*n*=103). More detailed demographic information about participants is shown above in Table 1.

3.3 Tools

With the aim of collecting data, an online survey consisting of a questionnaire (see Appendix B) and the Dweck Mindset Instrument (see Appendix C) was used. The questionnaire included nine questions aiming to collect background information about participants. In the questionnaire part, participants were expected to provide information on their age, gender, the highest level of education completed, the department they graduated in, being abroad for education or not, years of experience in teaching English, the level they teach, type of institution they work at, and attending any in-service training program or not.

The second part of the online survey was made up of the Dweck Mindset Instrument, one of the commonly used versions of mindset scales that originate from the Implicit Theories of Intelligence Scale provided in Dweck (2000). The scale includes sixteen items that investigate people's core assumptions and beliefs about intelligence and talent. For each item, participants need to make a numerical expression that reflects their beliefs about the given statement using a six-point Likert-type scale (6 = "Strongly agree", 5 = "Agree", 4 = "Mostly Agree", 3 = "Mostly Disagree", 2 = "Disagree", 1= "Strongly Disagree"). On the scale, items 1, 2, 4, 6, 9, 10, 12, and 14 are measuring fixed mindset, while items 3, 5, 7, 8, 11, 13, 15, and 16 are measuring growth mindset. This stems from phrasing statements either positively or negatively. For instance, strongly agreeing with a negatively phrased item such as *"You have a*

certain amount of intelligence, and you can't really do much to change it." indicates a high level of a fixed mindset. On the other hand, strongly agreeing with a positively phrased item such as *"No matter who you are, you can significantly change your intelligence level."* indicates a high level of a growth mindset. With reverse scoring of the fixed mindset items, the instrument gives a score of mindset between 0 and 6 in which a higher score means endorsing more of a growth mindset and a lower score means endorsing more of a fixed mindset. As Dweck et al. (1995, p. 269) define mindset as a "construct with a simple unitary theme" and thus state that mindset scale items can be used alone to form shorter versions of the scale (Dweck, 2000), the reliability coefficients of the scale with the different number of items were calculated in several other studies and are given below in Table 2.

Table 2. Reliability Values of the Scale in Previous Studies

	Studies	**Reliability Coefficients in Cronbach's Alpha (α)**
16-item	DeLuca et al., 2019	.93
	Ergen, 2019	.72
	Sarshar, 2017	
	Growth mindset	.81
	Fixed mindset	.78
6-item	Blackwell et al., 2007 (2-week test-retest, *r* = .77)	.78
3-item	Yan et al., 2014	.95
	Dweck et al., 1995 (six studies) (2-week test-retest, *r* = .80)	.94 - .98

3.4 Procedure

After receiving the approval of the Educational Sciences Ethics Committee at Istanbul Medeniyet University (see Appendix D), the online survey that consists of a demographic questionnaire and Dweck Mindset Instrument was shared with English teachers and instructors working at diverse institutions in Turkey through e-mails and

social media posts. Since it was empirically found that sending personalized invitations and reminder messages increase the participation rate in web-based surveys, participants were sent personalized invitation letters when possible and reminded several times about the survey (Muñoz-Leiva et al., 2010).

The online survey included a brief text informing prospective participants of the aim, methodology, and procedure of the study. Participants were also ensured that the data obtained through the survey would be kept confidential and be used only for the purposes of this scientific research (see Appendix A). Moreover, a brief definition of the term *mindset* was provided since the word mindset in the given instrument refers to a specific notion that some of the participants might not be familiar with. After being informed about the study, participants needed to approve the consent form to be eligible to see the items and fill out the survey. All items of the demographic questionnaire and Dweck Mindset Instrument were presented together to maintain the integrity of the survey. Participation was totally voluntary, and participants had the right to leave the survey whenever they wished without submitting their answers. Participants also had the ease and flexibility of filling out the survey at any time and at any place they wished. When the data collection phase terminated, the online survey was deactivated and collected data were analyzed through statistical software.

3.5 Data Analysis

When the data collection procedure was completed, the obtained data were checked for missing data. No missing data were found in the spreadsheet, the reason for which might be the voluntary nature of participation. Therefore, all the data collected from 162 English teachers were used for analysis. Analyses of data were computed using Statistical Package of Social Sciences (SPSS) 26.0 statistical software. First, the mean age and the mean of teachers' years of experience were calculated. Then, the minimum and maximum values for the age and experience range were found. Right after, intervals for both age and years of experience were specified, and the frequencies and percentages for each interval were computed. For gender, frequencies and percentages were computed, as well. Regarding the highest education level attained, B.A., M.A., and Ph.D. were identified as three nominal

categories, and as for the department they graduated in, teachers were separated into two groups: English Language Teaching Department graduates and graduates of other departments. Other nominal variables were yes-no questions, namely, being abroad for education or not and attending any in-service training or not. The level participants teach, and the institutions they work at were also identified as nominal variables. Analyses were performed for all nominal variables to find the frequencies and percentages.

Concerning the scale, first, the eight of the items that measure fixed mindset were reversed (1 [strongly disagree] became 6 [strongly agree], 2 [disagree] became 5 [agree], 3 [mostly disagree] became 4 [mostly agree] and so on) so that disagreeing with a fixed mindset item was similar to agreeing with a growth mindset item. Then, reliability and construct validity tests were conducted for the 16-item scale. The reliability coefficient of the scale was calculated in Cronbach's alpha and found as $\alpha = .91$ indicating good internal reliability. As for the construct validity of the scale, the varimax rotation was run, and % of variance was calculated as 70.15 for this study. By averaging their scores on sixteen scale items, participants' mindset scores were calculated out of 6 in which the highest end (6.0) indicates a strong endorsement of a growth mindset, and the lowest end (1.0) indicates a strong endorsement of a fixed mindset. Participants were assigned to three categories according to their mindset scores: participants with a mindset score of 4.00-6.00 fell into the growth mindset category, participants with a mindset score of 1.0-3.0 fell into the fixed mindset category, and participants with a mindset score of 3.01-3.99 were identified as having a mixed mindset. Later, the frequency and percentage of participants together with mean and standard deviation values were calculated for the responses given to each item separately. Finally, the relationships between the scale score and the other variables were investigated through parametric tests (one-way ANOVA and independent sample t-test) where data were normally distributed and through non-parametric tests (Mann-Whitney U test and Kruskal-Wallis H test) where data were skewed. In other words, data including a value less than 30 for a group of participants were considered as skewed and subjected to non-parametric tests.

IV

RESULTS

This section presents the findings of the study which were obtained as a result of careful statistical analyses. To address the first research question, the mindset scores of participants were computed, and participants were classified into three distinct mindset categories according to their scores. With the mindset score being calculated, to address the second research question, parametric and non-parametric tests were conducted, and the relationships between mindset and the other predetermined variables were investigated. Findings on research questions are provided separately under the title of each research question.

4.1 RQ1: What Type of Mindsets Do EFL Teachers Have About Intellectual Abilities?

The mindset score was computed for each participant by averaging the responses given to the items in the entire instrument. Calculated scores were then used to assign participants to the mindset categories as was done in many seminal works in the literature (Aronson et al., 2002; Blackwell et al., 2007; Claro et al., 2016; Dweck et al., 1995; Hong et al., 1999). In the present study, participants with a mean mindset score greater than or equal to 4.0 were identified as having a growth mindset, while the ones with a mean mindset score less than or equal to 3.0 were identified as having a fixed mindset (Dweck et al., 1995). Participants with a mindset score higher than 3.0 and lower than 4.0 were classified as having a mixed mindset, which refers to having both growth and fixed mindset ideas.

As Table 3 illustrates, out of 162 participants, 10.49% (*n*=17) had a growth mindset, 58.02% % (*n*=94) had a fixed mindset, and 31.48% (*n*=51) had a mixed mindset.

Although there were participants who strongly agreed to fixed mindset ideas in each item so that they scored the minimum score of 1.00 indicating a very strong endorsement of a fixed mindset, no participants strongly agreed to growth mindset ideas throughout the entire scale and received the highest score that would imply a very strong endorsement of a growth mindset. The mean score of the mixed mindset category ($\bar{x}$=3.42) also shows that a great majority of the participants in the mixed mindset category were closer to the fixed mindset beliefs rather than growth mindset beliefs. With exploratory analyses, skewness and the Kurtosis values for the mindset scores were found to be .31 and -.26, respectively, which demonstrate the normal distribution of the data (George & Mallery, 2010).

Table 3. Classification of Participants' Mindsets

	N	%	M	MIN	MAX	Std. Deviation
Growth Mindset (Mindset score ≥4)	17	10.49	4.41	4.00	5.13	.35
Fixed Mindset (Mindset score ≤3)	94	58.02	2.27	1.00	3.00	.47
Mixed Mindset	51	31.48	3.42	3.06	3.94	.25
Total	162	100	2.85	1.00	5.13	.84

4.2 RQ2: Do EFL Teachers' Mindsets Differ According to Predetermined Variables?

Before analyzing the relationship between teachers' mindsets and several other variables, frequency and percentage values for responses given to each item were computed. Mean and standard deviation values for each scale item were also provided. Table 4 illustrates findings on the responses given to each item in a detailed manner.

Table 4. Dweck Mindset Instrument (n=162)

Items	% / N	Strongly Disagree	Disagree	Mostly disagree	Mostly Agree	Agree	Strongly Agree	Mean	Std. Deviation
1) You have a certain amount of intelligence, and you can't really do much to change it.	%	1.9	14.2	22.2	16	32.1	13.6	4.03	1.35
	N	3	23	36	26	52	22		
2) Your intelligence is something about you that you can't change very much.	%	1.9	11.7	18.5	20.4	36.4	11.1	4.11	1.28
	N	3	19	30	33	59	18		
3) No matter who you are, you can significantly change your intelligence level.	%	17.3	32.1	21.6	14.2	13.6	1.2	2.78	1.33
	N	28	52	35	23	22	2		
4) To be honest, you can't really change how intelligent you are.	%	4.9	13	13	23.5	35.8	9.9	4.02	1.36
	N	8	21	21	38	58	16		
5) You can always substantially change how intelligent you are.	%	9.3	36.4	20.4	19.8	12.3	1.9	2.95	1.26
	N	15	59	33	32	20	3		
6) You can learn new things, but you can't really change your basic intelligence.	%	6.2	21.6	18.5	19.8	27.2	6.8	3.60	1.42
	N	10	35	30	32	44	11		
7) No matter how much intelligence you have, you can always change it quite a bit.	%	9.9	37	26.5	10.5	13.6	2.5	2.88	1.28
	N	16	60	43	17	22	4		
8) You can change even your basic intelligence level considerably.	%	11.1	32.1	19.8	20.4	14.8	1.9	3.01	1.32
	N	18	52	32	33	24	3		
9) You have a certain amount of talent, and you can't really do much to change it.	%	3.1	9.3	13	20.4	36.4	17.9	4.31	1.33
	N	5	15	21	33	59	29		

Table 4. (continued)

Items	% / N	Strongly Disagree	Disagree	Mostly disagree	Mostly Agree	Agree	Strongly Agree	Mean	Std. Deviation
10) Your talent in an area is something about you that you can't change very much.	%	2.5	8.6	13	24.7	36.4	14.8	4.28	1.26
	N	4	14	21	40	59	24		
11) No matter who you are, you can significantly change your level of talent.	%	14.8	38.9	24.1	13	6.8	2.5	2.65	1.22
	N	24	63	39	21	11	4		
12) To be honest, you can't really change how much talent you have.	%	1.9	7.4	13	23.5	40.1	14.2	4.35	1.20
	N	3	12	21	38	65	23		
13) You can always substantially change how much talent you have.	%	11.7	38.3	24.7	17.3	6.2	1.9	2.73	1.17
	N	19	62	40	28	10	3		
14) You can learn new things, but you can't really change your basic level of talent.	%	3.7	10.5	16	22.8	37	9.9	4.09	1.30
	N	6	17	26	37	60	16		
15) No matter how much talent you have, you can always change it quite a bit.	%	10.5	38.3	27.2	13	10.5	.6	2.77	1.17
	N	17	62	44	21	17	1		
16) You can change even your basic level of talent considerably.	%	12.3	39.5	25.3	13.6	8.6	.6	2.69	1.16
	N	20	64	41	22	14	1		

4.2.1 Age

The first variable investigated in relation to English teachers' mindsets was age. A Kruskal-Wallis H test was performed to explore whether English teachers' mindsets differed according to their age. As Table 5 shows, there was no statistically significant difference ($H(2)=2.63$, $p=.27$) in the mindsets of the teachers aged between 20 and 30, 31 and 40, or 41 and older.

Table 5. Relationship Between Mindset and Age (Kruskal-Wallis H Test)

	Age Groups	N	Mean Rank	*H* (chi-square)	Sig. (*p*-value)
Mean Mindset Score	20-30	79	80.44	2.63	.27
	31-40	67	86.52		
	41+	16	65.69		
	Total	162			

However, a detailed item-based analysis revealed that teachers' responses to some of the items differed significantly among prespecified age groups (See Appendix E). Significance values were found as .02, .04, .02, .01 for items 6, 9, 10, and 14, respectively, which indicates a statistically significant (p<.05) difference among groups regarding these four items. To further understand which group differed from the others significantly, a post hoc analysis was conducted. As Table 6 illustrates, the Tamhane's T2 test showed that in items 6 and 14, teachers who were 41 years of age or older tended to endorse the fixed mindset ideas more than teachers between 20-30 did. However, teachers aged between 20-30 did not differ significantly from the other groups in their responses to these items. As for items 9 and 10, the post hoc analysis did not reveal a significance level that is in the prespecified range (p=.10-.48).

Table 6. Tamhane's T2 Post Hoc Analysis for Items Indicating Statistically Significant Difference

Dependent Variable	(I) Age Interval	(J) Age Interval	Mean Difference (I-J)	Sig. (*p*-value)
6) You can learn new things, but you can't really change your basic intelligence.	20-30	31-40	.42	.20
		41+	-.59	.31
	31-40	20-30	-.42	.20
		41+	-1.01*	.03
	41+	20-30	.59	.31
		31-40	1.01*	.03

Table 6. (continued)

Dependent Variable	(I) Age Interval	(J) Age Interval	Mean Difference (I-J)	Sig. (*p*-value)
9) You have a certain amount of talent, and you can't really do much to change it.	20-30	31-40	.30	.43
		41+	-.48	.48
	31-40	20-30	-.30	.43
		41+	-.79	.12
	41+	20-30	.48	.48
		31-40	.79	.12
10) Your talent in an area is something about you that you can't change very much.	20-30	31-40	.29	.39
		41+	-.52	.40
	31-40	20-30	-.29	.39
		41+	-.82	.10
	41+	20-30	.52	.40
		31-40	.82	.10
14) You can learn new things, but you can't really change your basic level of talent.	20-30	31-40	.44	.12
		41+	-.53	.28
	31-40	20-30	-.44	.12
		41+	-.97*	.02
	41+	20-30	.53	.28
		31-40	.97*	.02

4.2.2 Gender

A Mann-Whitney U test was performed to determine whether English teachers' mean mindset scores differed regarding their gender. As Table 7 shows, the results indicated that the difference between males and females in terms of their mindsets was non-significant (U=1642, p=.95). However, an item-based Mann-Whitney U test analysis revealed that there was a significant difference (p=.03) in teachers' responses to the item 3, showing a greater endorsement of a growth mindset idea *"No matter who you are, you can significantly change your intelligence level."* for the female teachers' part, with the mean ranks calculated as 84.83 and 62.38 for females and males, respectively. More details are given in Appendix F.

Table 7. Relationship Between Mindset and Gender (Mann-Whitney U Test)

	Gender	N	Mean Rank	*U*	*Sig.* (*p*-value)
Mean Mindset Score	Female	138	81.40	1642	.95
	Male	24	82.08		
	Total	162			

4.2.3 Highest Level of Education Completed

A Kruskal-Wallis H test was conducted to determine whether there was a significant difference in English teachers' mindsets according to the highest level of education they attained. As Table 8 demonstrates, teachers' mindsets did not differ significantly ($H(2)=1.28$, $p=.53$) according to attaining a bachelor's, master's, or doctoral degree. A further item-based analysis was also performed to determine any possible statistically significant difference in teachers' responses to the scale items (see Appendix G). Nevertheless, teachers' responses to the scale items did not differ significantly according to the highest level of education they completed ($p=.16$-$.94$)

Table 8. Relationship Between Mindset and Highest Level of Education Completed (Kruskal-Wallis H Test)

	Highest Level of Education Completed	N	Mean Rank	*H* (chi-square)	Sig. (*p*-value)
Mean Mindset Score	Bachelor's degree	87	82.82	1.28	.53
	Master's degree	62	77.33		
	Doctoral degree	13	92.54		
	Total	162			

4.2.4 Department

To see if there was a statistically significant difference in the mean mindset scores between English Language Teaching and other department graduates, a Mann-

Whitney U test was conducted. As Table 9 illustrates, although teachers who graduated in other departments tended to have a higher mean score of mindset than teachers who graduated in the English Language Teaching Department, this difference was not statistically significant (U=1713.5, p=.62). An item-based Mann-Whitney U test was also conducted to see if there was a difference in teachers' responses to scale items (see Appendix H). Analysis showed no significant difference in teachers' responses to the scale items when their departments were considered (p=.18-.95).

Table 9. Relationship Between Mindset and Department (Mann-Whitney U Test)

	Department	**N**	**Mean Rank**	***U***	***Sig.* (*p*-value)**
Mean Mindset Score	English Language Teaching	135	80.69	1713.5	.62
	Other	27	85.54		
	Total	162			

4.2.5 Being Abroad for Education

To determine if there was a significant difference in the mindsets of teachers' who had been abroad for educational purposes and those who had not, an independent sample t-test was performed. As Table 10 demonstrates, analyses revealed that the mindsets of teachers who had been abroad for educational purposes (M=2.76, SD=.94) did not differ significantly from those of teachers who had not (M=2.93, SD=.76) providing the p-value as .22. Further analyses were also conducted to identify any significant difference in teachers' responses to the individual scale items (see Appendix I). No statistically significant difference was observed in teachers' responses to scale items regarding their overseas experiences (p=.06-.89). Although interestingly teachers' mean scores on items 6 and 8 differed indicating that teachers who had not been abroad for education endorsed growth mindset ideas (M=3.42,

3.19) more than the other group of teachers (*M*=3.84, 2.79), this difference was not at a significant level (*p*=.06).

Table 10. Relationship Between Mindset and Being Abroad for Education (Independent Sample T-Test)

	Being Abroad for Education	N	Mean	Std. Deviation	*t*	Sig. (*p*-value)
Mean Mindset Score	Yes	73	2.76	.94	-1.25	.22
	No	89	2.93	.76		
	Total	162				

4.2.6 Teaching Experience

To ascertain whether there was a significant difference in English teachers' mindsets according to their teaching experiences, a one-way ANOVA test was conducted. As Table 11 illustrates, despite the differences in the mean values of English teachers' mindsets varying according to their teaching experiences (*M*=2.86, 2.77, 2.97; *SD*=.90, .75, .90), the computed significance value (*p*=.49) shows that the difference is insignificant. An item-based one-way ANOVA test was also conducted to further explore if participants' responses to the scale items differed significantly (see Appendix J). The analysis yielded a significant difference in the responses given to item 7, "*No matter how much intelligence you have, you can always change it quite a bit.*" (*p*=.03).

Table 11. Relationship Between Mindset and Teaching Experience (One-Way ANOVA)

	Teaching Experience	N	Mean	Std. Deviation	*F*	Sig. (*p*-value)
Mean Mindset Score	0-5	55	2.86	.90	.72	.49
	6-10	64	2.77	.75		
	11+	43	2.97	.90		
	Total	162				

To find which group differed from the others in their responses to item 7, a post hoc analysis was conducted. The Scheffe test revealed that, as shown in Table 12, participants with teaching experience of 11 years or more agreed to the growth mindset idea more than participants with teaching experience of 6-10 years did, and this difference was statistically significant (p=.03). However, relatively less experienced teachers' (0-5 years) responses to the item did not differ significantly from those of teachers in other groups.

Table 12. Scheffe Post Hoc Analysis for the Item Indicating Statistically Significant Difference

Dependent Variable	(I) Experience Interval	(J) Experience Interval	Mean Difference (I-J)	Sig. (p-value)
7) No matter how much intelligence you have, you can always change it quite a bit.	0-5	6-10	.25	.57
		11+	-.41	.29
	6-10	0-5	-.25	.57
		11+	-.65*	.03
	11+	0-5	.41	.29
		6-10	.65*	.03

4.2.7 Level Taught

As the number of participants teaching at different levels was not normally distributed and there were more than two categories, a Kruskal-Wallis H test was conducted to determine whether teachers' mindsets differed significantly across groups. As Table 13 shows, teachers' mindsets about intellectual abilities differed insignificantly according to the levels they teach $H(4)=4.01$, p=.40). To capture the significant differences in the responses given to individual scale items, if there were any, a further Kruskal-Wallis H test was performed. However, again, the difference in teachers' responses to the scale items was insignificant, with p-values ranging between .21 and .97 (see Appendix K).

Table 13. Relationship Between Mindset and Level Taught (Kruskal-Wallis H Test)

	Level Taught	N	Mean Rank	*H* (chi-square)	Sig. (*p*-value)
Mean Mindset Score	Preschool	3	106.67	4.01	.40
	Primary School	18	65.67		
	Secondary School	37	76.77		
	High School	23	87.50		
	University	81	84.54		
	Total	162			

4.2.8 Institution

To see if teachers differed significantly in their mindsets according to the institutions they work at, an independent sample t-test was conducted. As Table 14 shows, teachers' mindsets who worked at state institutions (*M*=2.85, *SD*=.87) did not differ significantly from those who worked at private institutions (*M*=2.85, *SD*=.81), with the calculated *p*-value being .99. To capture the significant differences in the responses given to individual scale items, if there were any, a further independent sample t-test was performed. However, there were non-significant differences in the responses given to the individual scale items by teachers working at state or private institutions, with *p*-values ranging between .24 and .95 (see Appendix L).

Table 14. Relationship Between Mindset and Institution (Independent Sample T-Test)

	Institution	N	Mean	Std. Deviation	*t*	Sig. (*p*-value)
Mean Mindset Score	State	104	2.85	.87	-.01	.99
	Private	58	2.85	.81		
	Total	162				

4.2.9 Receiving In-Service Training Programs

To find out if there was a significant difference in the mindsets of teachers' who had received in-service training and those who had not, an independent sample t-test was performed. As Table 15 illustrates, analyses showed that the mindsets of teachers who had received in-service training (*M*=2.80, *SD*=.80) did not differ significantly from those of teachers who had not (*M*=2.89, *SD*=.87) providing the *p*-value as .54. Further analyses were also performed to identify any significant difference in teachers' responses to the individual scale items (see Appendix M). The independent sample t-test performed for scale items revealed that, except for an item, no statistically significant difference was observed in teachers' responses to the scale items according to having received in-service teacher training or not (*p*=.12-.98). However, for item 13, *"You can always substantially change how much talent you have."*, there was a significant difference in the mean value calculated for the teachers' having received in-service teacher training (*M*=2.47, *SD*=1.04) or not (*M*=2.88, *SD*=1.22). Interestingly, teachers who have not attended any in-service teacher training programs differed in endorsing the abovementioned growth mindset idea more than the other group of teachers at the significance level of .03.

Table 15. Relationship Between Mindset and Receiving In-Service Training (Independent Sample T-Test)

	In-service Training	**N**	**Mean**	**Std. Deviation**	***t***	**Sig. (*p*-value)**
Mean Mindset Score	Yes	59	2.80	.80	.62	.54
	No	103	2.89	.87		
	Total	162				

4.3 Summary of the Results

One of the two major findings of this study is that teachers having a fixed mindset outnumbered greatly teachers having either a growth mindset or a mixed mindset. The second major finding of the study is that teachers' mindsets did not differ

significantly according to any of the nine predetermined variables. After finding no statistically significant difference in teachers' mindsets regarding nine variables, further analyses were conducted to determine if teachers' responses to individual scale items differed significantly depending on the variables. Regarding five of the variables, teachers' responses to the scale items did not differ significantly. However, as for the four variables, a significant difference was observed in the responses given to several scale items. A more detailed summary of the results is provided below in Table 16.

Table 16. Summary of the Results

Research Questions	**Results**
1) What type of mindsets do EFL teachers have about intellectual abilities?	Seventeen teachers (10.49%) had a growth mindset, ninety-four teachers (58.02%) had a fixed mindset, and fifty-one teachers (31.48%) had a mixed mindset.
2) Do EFL teachers' mindsets differ according to predetermined variables?	
a. Age	No significant difference was found. Only for four scale items, there was a significant difference.
b. Gender	No significant difference was found. Only for a scale item, there was a significant difference.
c. Highest level of education completed	No significant difference was found.
d. Department	No significant difference was found.
e. Being abroad for education	No significant difference was found.
f. Teaching experience	No significant difference was found. Only for a scale item, there was a significant difference.
g. Level taught	No significant difference was found.
h. Institution	No significant difference was found.
i. Receiving in-service training programs	No significant difference was found. Only for a scale item, there was a significant difference.

V

CONCLUSIONS and DISCUSSION

This section comprises four subsections. In the first subsection, the findings of the present study are provided. In the second subsection, findings were discussed in relation to the relevant literature. In the last two subsections, recommendations for practice and recommendations for further research were presented.

5.1 Conclusions

The main purpose of this study was to investigate English Language teachers' mindsets about intellectual abilities. For doing so, teachers' mindsets were initially identified, and then the association between teachers' mindsets and several variables was studied. In accordance with the two research questions, this study has two main conclusions. First, teachers with a fixed mindset outnumbered those with a mixed or a growth mindset greatly. In other words, more than half of the English teachers in the Turkish EFL context had a fixed mindset, and the remaining had a mixed or a growth mindset, of which the latter constituted the smallest group.

Second, this research concludes that teachers' mindsets were irrespective of nine previously determined variables. That is, teachers' mindsets did not differ significantly according to their age, gender, the highest level of education completed, the department they graduated in, being abroad for education or not, years of experience in teaching English, the level they teach, type of institution they work at, and attending any in-service training program or not. However, it is noteworthy that the item-based analyses showed a significant difference in teachers' beliefs regarding the ideas given in some of the items. This is specifically important once it is

considered that the scale used in this research is reducible to fewer items before use (Dweck, 2000).

5.2 Implications

Considering the importance of teacher mindset for teachers themselves, their students, and the whole educational setting, the importance of findings regarding teacher mindset becomes more evident. For instance, according to Leroy et al. (2007), the teacher mindset is crucial because teachers' beliefs on abilities guide their behaviors in educational settings. Besides, the teacher mindset is vital because how students perceive their abilities is affected by their teachers' beliefs (Seaton, 2018). In line with these, an OECD report suggests that teaching a growth mindset in schools might enhance the school atmosphere and improve students' learning, and teachers should be the first to be taught a growth mindset (Gouëdard, 2021).

Although there are a number of opposing studies (Bahník & Vranka, 2017; Li & Bates, 2020; Sisk et al., 2018), a great majority of the studies in the literature report that students with a growth mindset reach a higher level of achievement and show a better school performance compared to their counterparts (Aronson et al., 2002; Blackwell et al., 2007; Claro et al., 2016; Good et al., 2003; Gouëdard, 2021; Nordin & Broeckelman-Post, 2019; Paunesku et al., 2015). What makes these findings on student attainment relevant to the findings of the present study is that, as addressed by many studies, teacher mindset has direct and indirect impacts on student achievement. Teacher mindset directly influences students' academic success because teachers with a growth mindset feel more responsible for student's academic attainment; give effort-based feedback and focus more on students' learning; foster individual learning processes; and prioritize assessment *as* learning approach (DeLuca et al., 2019; Patterson et al., 2016; Rissanen et al., 2019). Teacher mindset may also indirectly impact students' academic success because teachers with a growth mindset treat students in a more unbiased and appropriate way; support autonomy in the classroom; help students alter their responses to challenges; and most importantly help students develop a malleable view of intellectual abilities (Lee, 1996; Leroy et al., 2007; Rau, 2016; Yeager et al., 2022).

This research study concludes that the majority of the participants in the sample have either a fixed or a mixed mindset and only a small proportion has a growth mindset, which is in line with the findings of Beyaztaş and Hymer (2018), despite diverging from those of Delibalta (2020) and Altunel (2020). It is noteworthy that the last two aforecited studies were conducted in more or less similar contexts, i.e., data were collected from students at preparatory classes of universities in Turkey. However, in the first, data were collected from students aged between nine and thirty recruiting a greater number of participants. The second major conclusion this study drew is that teachers' mindsets do not vary according to demographic variables such as their age and gender, their educational backgrounds, and their teaching experience. These findings are in line with the findings of Macnamara and Rupani (2017) who reported an insignificant relationship between mindsets and age, gender, and education, and partially congruent with those of Yılmaz (2020) who found that teachers' mindsets did not differ significantly according to their workplace, teaching experience, the program they graduated in, and the highest education level attained. However, the findings differ from those of Spinath et al. (2003) who reported that mindset had a weak but consistent relationship with gender and age and partially differ from those of Yılmaz (2020) who reported that mindset was significantly related to gender and receiving teacher training.

The independence of mindset from certain variables statistically documented in this study suggests that mindset is a distinct trait, and a type of mindset cannot be attributed to a certain group. That is, expecting a teacher to hold a particular mindset because they belong to a group is undue and invalid. Therefore, it cannot be expected that a teacher who graduated in the ELT department or holds a doctoral degree possess growth mindset ideas and effectively communicate them in their classrooms, for instance. Moreover, intuitively thinking that a group of teachers holds a fixed mindset just because they have several characteristics in common would be misleading. These are consistent with Mystkowska's (2014) findings that despite people sharing much in common such as having similar backgrounds, taking the same courses, and having the same age and gender, they may vary in their mindsets. As further explicated by Zilka et al., teachers' mindsets are complex systems shaped by internal and external factors. Internal factors that contribute to one's mindset

include the way they were raised, their grit, inner motivation, ego, burnout, and success and failure experiences. On the other hand, external factors that shape one's mindset include mentorship, guidance, feedback, school environment, principal support, lack of autonomy, lack of sufficient appreciation, and so forth.

To foster a growth mindset among teachers and, in turn, lead their students to achieve higher, implementations and training programs can be utilized. Research shows that such practices are effective when they are systematically implemented and include active and reflective teaching strategies (Seaton, 2018). Nevertheless, it should be clarified that mindsets are not a panacea, although they seem to be a point of entry to improving education. Besides, labeling mindsets as good or bad can be misleading at some point. There are many pathways in life to improve and achieve, and people may prefer their unique ways to go. In other words, one size does not fit all at every turn (Mercer, 2011).

5.3 Practical Recommendations

This study has several implications for practice. As it was concluded in this study that English teachers tend to have a fixed mindset and it was empirically found in the previous studies that promoting a growth mindset among teachers is beneficial for both teachers themselves and their students, teachers should be well-educated and trained to become aware of their mindsets and how their mindsets influence their pedagogies and, in turn, their students' mindsets and achievements. For this, first, teacher training programs at universities may be designed in a way that teacher candidates are instructed in mindsets and their awareness is raised on the importance of implicit theories. Second, teachers may personally take several steps to enhance their belief systems. Teachers may receive additional training and attend seminars or courses that teach the plasticity of the brain and how intellectual abilities can be developed through effort. Furthermore, teachers may also individually read scientific articles that discuss the power of effort and become more aware of the malleable characteristics of human intelligence and abilities.

As Kroeper et al. (2022) point out, students' being equipped with growth mindset beliefs are not sufficient for having the desired level of motivation and academic achievement; students also need a supportive learning environment. To provide a supportive learning environment, teachers may endeavor to adopt growth mindset beliefs by broadening their perspectives, then better communicate growth mindset messages in classrooms and implement classroom activities that promote growth mindset beliefs. Moreover, as it was used as an effective method in a few intervention studies (Blackwell et al., 2007; Good et al., 2003), teachers may teach the malleability of human abilities to their students through workshops, journal papers, scientific articles, books, or videos, either implicitly or explicitly, as a supplement to the instructional plan.

In addition to the roles of teachers' mindsets in creating a supportive learning climate in classrooms, as Rattan et al. (2015) point out, teachers also transfer their mindsets to students. Starting from this, it might be asserted that policymakers and educators have an important role in prioritizing and implementing the desired mindset among students. Thus, policymakers, school managers, and teachers should work collaboratively toward implementing a growth mindset at schools. This can be done by creating a supportive school environment, choosing proper teaching materials, and designing lessons that integrate growth mindset messages. However, it may not be as simple as it seems, so effective strategies should be sought to achieve substantial changes. With the steps taken, teachers may lead their students to set learning goals, value effort, and learn from failures.

5.4 Recommendations for Further Research

As mentioned earlier, the teacher mindset regarding language teaching and/or learning is still in its youth, and there is a lot to unveil in the area. For instance, research may study mindsets through longitudinal research to develop an understanding of how teachers' mindsets take shape in time, and these longitudinal studies may or may not include an intervention. In the former, whether personal or environmental factors change teacher mindset over time may be investigated. If yes, to what extent and by which means personal or environmental factors influence

teacher mindset can be examined. In the latter, research may study the effectiveness and possible outcomes of various types of mindset interventions.

Further research may also address how teachers' mindsets are reflected in their pedagogies in classrooms. To achieve this, qualitative or mixed-method research that uses scales, interviews, and extensive classroom observations may be carried out. Such research may be extended to the study of teacher mindset and its reflections in relation to student achievement. Small-scale studies mainly provide extensive and in-depth information on the investigated phenomenon. Nevertheless, rigorous large-scale studies can be carried out to reach more conclusive and generalizable findings on how the teacher mindset reveals itself in school settings.

For this study, data were collected through a mindset scale that measured teachers' beliefs on general abilities; further research may measure teachers' language mindset and investigate how teachers' language mindset relates to certain factors. Besides, research may study whether teacher mindset regarding general intellectual abilities and teacher mindset regarding abilities to learn languages vary, and if yes, how and to what extent. Meanwhile, some other research may address teachers' mindsets about subdomains of a language such as reading, writing, speaking, and listening as separate units. Yet other research may scrutinize the interdependence of teacher and student mindsets, how they are related, and whether there is a cause-and-effect relationship between the two.

All in all, there are many areas concerning teacher mindset that are under-researched by now and are waiting to be disclosed. On the one hand, research might be conducted to bring uninvestigated areas to light, and on the other hand, research adopting different methods and perspectives with distinctive research designs might be carried out to develop new insights into the already investigated issues.

REFERENCES

Altunel, I. (2020). Mind matters: How is mindset correlated with demographic variables in foreign language learning? *Journal of Language Research*, *4*(1), 27–40. https://doi.org/10.51726/jlr.739471

Aronson, J., Fried, C. B., & Good, C. (2002). Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence. *Journal of Experimental Social Psychology*, *38*, 113–125. https://doi.org/10.1006/jesp.2001.1491

Bahník, Š., & Vranka, M. A. (2017). Growth mindset is not associated with scholastic aptitude in a large sample of university applicants. *Personality and Individual Differences*, *117*, 139–143. https://doi.org/10.1016/j.paid.2017.05.046

Bai, B., & Wang, J. (2020). The role of growth mindset, self-efficacy and intrinsic value in self-regulated learning and English language learning achievements. *Language Teaching Research*, 1–22. https://doi.org/10.1177/1362168820933190

Beyaztaş, D. İ., & Hymer, B. (2018). An analysis of Turkish students' perception of intelligence from primary school to university. *Gifted Education International*, *34*(1), 19–35. https://doi.org/10.1177/0261429416649041

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development*, *78*(1), 246–263. https://doi.org/10.1111/j.1467-8624.2007.00995.x

Carr, P. B., & Dweck, C. S. (2011). Intelligence and motivation. In R. J. Sternberg & S. B. Kaufman (Eds.), *The Cambridge handbook of intelligence* (pp. 748–770). Cambridge University Press.

Chuanon, C., Kuroda, A., & Yuankrathok, P. (2021). Exploring Thai EFL university students' growth language mindsets: The beliefs about the role of talent and effort. *Proceedings of the 6th Annual International Seminar on Transformative*

Education and Educational Leadership (Aisteel 2021), *591*, 566–570. https://doi.org/10.2991/assehr.k.211110.142

Claro, S., Paunesku, D., & Dweck, C. S. (2016). Growth mindset tempers the effects of poverty on academic achievement. *Proceedings of the National Academy of Sciences of the United States of America*, *113*(31), 8664–8668. https://doi.org/10.1073/pnas.1608207113

Creswell, J. W., & Garrett, A. L. (2008). The "movement" of mixed methods research and the role of educators. *South African Journal of Education*, *28*(3), 321–333. https://doi.org/10.15700/saje.v28n3a176

Davies, M. (n.d.). *Corpus of Contemporary American English*. Retrieved January 7, 2022, from https://www.english-corpora.org/coca/

Delibalta, M. A. (2020). *The relationship between mindset and causal attribution in the EFL context*. (Publication No. 633897) [Master's thesis, Çağ University]. Ulusal Tez Merkezi.

DeLuca, C., Coombs, A., & LaPointe-McEwan, D. (2019). Assessment mindset: Exploring the relationship between teacher mindset and approaches to classroom assessment. *Studies in Educational Evaluation*, *61*, 159–169. https://doi.org/10.1016/j.stueduc.2019.03.012

Dulock, H. L. (1993). Research design: Descriptive research. *Journal of Pediatric Oncology Nursing*, *10*(4), 154–157.

Dweck, C. S. (2000). *Self-theories: Their role in motivation, personality, and development*. Psychology Press.

Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.

Dweck, C. S. (2012). Mindsets and human nature: Promoting change in the middle east, the schoolyard, the racial divide, and willpower. *American Psychologist*, *67*(8), 614–622. https://doi.org/10.1037/a0029783

Dweck, C. S. (2015). Growth mindset, revisited. *Education Week*, *35*(5), 20–24.

Dweck, C. S. (2016). *Mindset: The new psychology of success* (Rev. ed.). Random

House.

Dweck, C. S., Chiu, C. -y., & Hong, Y. -y. (1995). Implicit theories and their role in judgments and reactions: A word from two perspectives. *Psychological Inquiry*, *6*(4), 267–285.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*(2), 256–273. https://doi.org/10.1037/0033-295X.95.2.256

Dweck, C. S., Walton, G. M., & Cohen, G. L. (2014). *Academic tenacity: Mindsets and skills that promote long-term learning*. Bill & Melinda Gates Foundation.

Eren, A., & Rakıcıoğlu-Söylemez, A. (2020). Language mindsets, perceived instrumentality, engagement and graded performance in English as a foreign language students. *Language Teaching Research*. https://doi.org/10.1177/1362168820958400

Ergen, S. (2019). *Exploring the relationship between teachers' mindset and their technology self-efficacy among the secondary school EFL teachers*. (Publication No. 564563) [Master's thesis, Başkent University]. Ulusal Tez Merkezi.

George, D., & Mallery, M. (2010). *SPSS for Windows step by step: A simple guide and reference, 17.0 update* (10a ed.). Pearson.

Good, C., Aronson, J., & Inzlicht, M. (2003). Improving adolescents' standardized test performance: An intervention to reduce the effects of stereotype threat. *Journal of Applied Developmental Psychology*, *24*(6), 645–662. https://doi.org/10.1016/j.appdev.2003.09.002

Gouëdard, P. (2021). Can a growth mindset help disadvantaged students close the gap? In *PISA in Focus* (Vol. 112). https://doi.org/https://doi.org/10.1787/20922f0d-en

Hassanzadeh, L., Ahangari, S., & Tamjid, N. H. (2020). The relationship between EFL learners' language mindsets and English achievement: Engagement and self-regulation as mediators. *Iranian Journal of Applied Linguistics*, *23*(1), 1–28.

Hong, Y. -y., Chiu, C. -y., & Dweck, C. S. (1995). Implicit theories of intelligence: Reconsidering the role of confidence in achievement motivation. In M. H. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 197–216).

Hong, Y. -y., Dweck, C. S., Chiu, C. -y., Lin, D. M.-S., & Wan, W. (1999). Implicit theories, attributions, and coping: A meaning system approach. *Journal of Personality and Social Psychology*, *77*(3), 588–599. https://doi.org/10.1037/0022-3514.77.3.588

Hussein, H. (2018). Examining the effects of reflective journals on students' growth mindset: A case study of tertiary level EFL students in the United Arab Emirates. *IAFOR Journal of Education*, *6*(2), 33–50. https://doi.org/10.22492/ije.6.2.03

Janudom, R. (2021). Raising teachers' awareness of students' mindsets in EFL learning. *The New English Teacher*, *15*(1), 45–52.

Jonsson, A. C., Beach, D., Korp, H., & Erlandson, P. (2012). Teachers' implicit theories of intelligence: influences from different disciplines and scientific theories. *European Journal of Teacher Education*, *35*(4), 387–400. https://doi.org/10.1080/02619768.2012.662636

Khajavy, G. H., MacIntyre, P. D., & Hariri, J. (2021). A closer look at grit and language mindset as predictors of foreign language achievement. *Studies in Second Language Acquisition*, *43*(2), 379–402. https://doi.org/https://doi.org/10.1017/S0272263120000480

Khajavy, G. H., Pourtahmasb, F., & Li, C. (2021). Examining the domain-specificity of language mindset: a case of L2 reading comprehension. *Innovation in Language Learning and Teaching*, 1–13. https://doi.org/10.1080/17501229.2021.1956936

Kroeper, K. M., Fried, A. C., & Murphy, M. C. (2022). Towards fostering growth mindset classrooms: identifying teaching behaviors that signal instructors' fixed and growth mindsets beliefs to students. *Social Psychology of Education*. https://doi.org/10.1007/s11218-022-09689-4

Lee, K. (1996). A study of teacher responses based on their conceptions of intelligence. *The Journal of Classroom Interaction*, *31*(2), 1–12.

Leroy, N., Bressoux, P., Sarrazin, P., & Trouilloud, D. (2007). Impact of teachers' implicit theories and perceived pressures on the establishment of an autonomy supportive climate. *European Journal of Psychology of Education*, *22*(4), 529–545. https://doi.org/10.1007/BF03173470

Li, Y., & Bates, T. C. (2020). Testing the association of growth mindset and grades across a challenging transition: Is growth mindset associated with grades? *Intelligence*, *81*, 101471. https://doi.org/10.1016/j.intell.2020.101471

Lou, N. M., & Noels, K. A. (2016). Changing language mindsets: Implications for goal orientations and responses to failure in and outside the second language classroom. *Contemporary Educational Psychology*, *46*, 22–33. https://doi.org/10.1016/j.cedpsych.2016.03.004

Lou, N. M., & Noels, K. A. (2017). Measuring language mindsets and modeling their relations with goal orientations and emotional and behavioral responses in failure situations. *The Modern Language Journal*, *101*(1), 214–243. https://doi.org/10.1111/modl.12380

Lou, N. M., & Noels, K. A. (2019). Promoting growth in foreign and second language education: A research agenda for mindsets in language learning and teaching. *System*, *86*, 102126. https://doi.org/10.1016/j.system.2019.102126

Macnamara, B. N., & Rupani, N. S. (2017). The relationship between intelligence and mindset. *Intelligence*, *64*, 52–59. https://doi.org/10.1016/j.intell.2017.07.003

Mercer, S. (2011). The beliefs of two expert EFL learners. *Language Learning Journal*, *39*(1), 57–74. https://doi.org/10.1080/09571736.2010.521571

Mercer, S., & Ryan, S. (2010). A mindset for EFL: Learners' beliefs about the role of natural talent. *ELT Journal*, *64*(4), 436–444. https://doi.org/10.1093/elt/ccp083

Molway, L., & Mutton, T. (2020). Changing mindsets in the modern foreign languages classroom: an intervention combining intelligence theories and

reading strategies. *Language Learning Journal*, *48*(5), 598–612. https://doi.org/10.1080/09571736.2018.1554693

Muñoz-Leiva, F., Sánchez-Fernández, J., Montoro-Ríos, F., & Ibáñez-Zapata, J. Á. (2010). Improving the response rate and quality in Web-based surveys through the personalization and frequency of reminder mailings. *Quality and Quantity*, *44*, 1037–1052. https://doi.org/10.1007/S11135-009-9256-5

Mystkowska, A. (2014). The role of mindsets in foreign language learning: A person-in-context perspective. In W. Szubko-Sitarek, Ł. Salski, & P. Stalmaszczyk (Eds.), *Language Learning, Discourse and Communication. Second Language Learning and Teaching* (pp. 133–147). Springer, Cham. https://doi.org/10.1007/978-3-319-00419-8_10

Nordin, K., & Broeckelman-Post, M. A. (2019). Can I get better? Exploring mindset theory in the introductory communication course. *Communication Education*, *68*(1), 44–60. https://doi.org/10.1080/03634523.2018.1538522

Ocampo, M. B. (2017). Japanese students' mindset and motivation in studying English grammar and reading. *PEOPLE: International Journal of Social Sciences*, *3*(2), 1192–1208. https://doi.org/10.20319/pijss.2017.32.11921208

Patterson, M. M., Kravchenko, N., Chen-Bouck, L., & Kelley, J. A. (2016). General and domain-specific beliefs about intelligence, ability, and effort among preservice and practicing teachers. *Teaching and Teacher Education*, *59*, 180–190. https://doi.org/10.1016/j.tate.2016.06.004

Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., & Dweck, C. S. (2015). Mind-set interventions are a scalable treatment for academic underachievement. *Psychological Science*, *26*(6), 784–793. https://doi.org/10.1177/0956797615571017

Pishghadam, R., & Khajavy, G. H. (2013). Intelligence and metacognition as predictors of foreign language achievement: A structural equation modeling approach. *Learning and Individual Differences*, *24*, 176–181. https://doi.org/10.1016/J.LINDIF.2012.12.004

Rattan, A., Savani, K., Chugh, D., & Dweck, C. S. (2015). Leveraging mindsets to promote academic achievement: Policy recommendations. *Perspectives on Psychological Science*, *10*(6), 721–726. https://doi.org/10.1177/1745691615599383

Rau, A. (2016). Exploring the influence of teacher language on fourth grade students' mindsets: A multi-case study. *The Qualitative Report*, *21*(9), 1684–1707. https://doi.org/10.46743/2160-3715/2016.2213

Rissanen, I., Kuusisto, E., Tuominen, M., & Tirri, K. (2019). In search of a growth mindset pedagogy: A case study of one teacher's classroom practices in a Finnish elementary school. *Teaching and Teacher Education*, *77*, 204–213. https://doi.org/10.1016/j.tate.2018.10.002

Rosenthal, R. (1963). On the social psychology of the psychological experiment: the experimenter's hypothesis as unintended determinant of experimental results. *American Scientist*, *51*(2), 268–283.

Rosenthal, R., & Jacobson, L. (1968). Pygmalion in the classroom. *The Urban Review*, *3*, 16–20. https://doi.org/https://doi.org/10.1007/BF02322211

Sarshar, M. (2017). *Explorations in Type-T: Mindset, flourishing, psychological entitlement, creativity, and stress*. (Publication No. 10683365) [Doctoral dissertation, The Temple University]. ProQuest.

Sato, R. (2019). Cultivating a growth mindset in Japanese EFL learners with a presentation-practice-production-based approach. *Bulletin of Nara University of Education. Cultural and Social Science*, *68*(1), 195–202. https://doi.org/http://doi.org/10.20636/00013288

Schmidt, J. A., Shumow, L., & Kackar-Cam, H. (2015). Exploring teacher effects for mindset intervention outcomes in seventh-grade science classes. *Middle Grades Research Journal*, *10*(2), 17–32.

Seaton, F. S. (2018). Empowering teachers to implement a growth mindset. *Educational Psychology in Practice*, *34*(1), 41–57. https://doi.org/10.1080/02667363.2017.1382333

Seliger, H. W., & Shohamy, E. (1989). Second language research methods. *Qualitative Report Elana Shohamy*.

Shirvan, M. E., Lou, N. M., & Taherian, T. (2021). Where do language mindsets come from? An ecological perspective on EFL students' mindsets about L2 writing. *Journal of Psycholinguistic Research*, *50*, 1065–1086. https://doi.org/https://doi.org/10.1007/s10936-021-09787-y

Sisk, V. F., Burgoyne, A. P., Sun, J., Butler, J. L., & Macnamara, B. N. (2018). To what extent and under which circumstances are growth mind-sets important to academic achievement? Two meta-analyses. *Psychological Science*, *29*(4), 549–571. https://doi.org/10.1177/0956797617739704

Spinath, B., Spinath, F. M., Riemann, R., & Angleitner, A. (2003). Implicit theories about personality and intelligence and their relationship to actual personality and intelligence. *Personality and Individual Differences*, *35*(4), 939–951. https://doi.org/10.1016/S0191-8869(02)00310-0

Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, *69*(5), 797–811. https://doi.org/https://doi.org/10.1037/0022-3514.69.5.797

Stipek, D. J., Givvin, K. B., Salmon, J. M., & MacGyvers, V. L. (2001). Teachers' beliefs and practices related to mathematics instruction. *Teaching and Teacher Education*, *17*(2), 213–226. https://doi.org/10.1016/S0742-051X(00)00052-4

Wright, K. B. (2005). Researching internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication*, *10*(3), JCMC1034. https://doi.org/https://doi.org/10.1111/j.1083-6101.2005.tb00259.x

Yan, V. X., Thai, K.-P., & Bjork, R. A. (2014). Habits and beliefs that guide self-regulated learning: Do they vary with mindset? *Journal of Applied Research in Memory and Cognition*, *3*(3), 140–152. https://doi.org/10.1016/j.jarmac.2014.04.003

Yeager, D. S., Carroll, J. M., Buontempo, J., Cimpian, A., Woody, S., Crosnoe, R., Muller, C., Murray, J., Mhatre, P., Kersting, N., Hulleman, C., Kudym, M., Murphy, M., Duckworth, A. L., Walton, G. M., & Dweck, C. S. (2022). Teacher mindsets help explain where a growth-mindset intervention does and doesn't work. *Psychological Science*, *33*(1), 18–32. https://doi.org/https://doi.org/10.1177/09567976211028984

Yilmaz, A. (2020). *An investigation into the relationship between English preparatory teachers' mindsets and their self efficacy beliefs*. (Publication No. 640496) [Master's thesis, Istanbul Sabahattin Zaim University]. Ulusal Tez Merkezi.

Zarrinabadi, N., Lou, N. M., & Shirzad, M. (2021). Autonomy support predicts language mindsets: Implications for developing communicative competence and willingness to communicate in EFL classrooms. *Learning and Individual Differences*, *86*, 101981. https://doi.org/10.1016/j.lindif.2021.101981

Zeng, G., Chen, X., Cheung, H. Y., & Peng, K. (2019). Teachers' growth mindset and work engagement in the Chinese educational context: Well-being and perseverance of effort as mediators. *Frontiers in Psychology*, *10*, 1–10. https://doi.org/10.3389/fpsyg.2019.00839

Zilka, A., Grinshtain, Y., & Bogler, R. (2019). Fixed or growth: teacher perceptions of factors that shape mindset. *Professional Development in Education*, *48*(1), 149–165. https://doi.org/10.1080/19415257.2019.1689524

APPENDIX A

Informed Consent Form

Aydınlatılmış Onam Formu

"*Teachers' Mindsets in Foreign Language Classrooms (Yabancı Dil Sınıflarında Öğretmenlerin Zihniyeti)*" adlı çalışma, yabancı dil öğretmenlerinin zihniyetlerinin, sabit değişkenler ile olan ilişkisini ölçmek ve elde edilen bulguları ilgili alanyazın ışığında tartışmak amacıyla planlanmıştır. Çalışmanın Mart 2021 – Haziran 2021 tarihleri arasında yapılması planlanmaktadır. Nicel verilerle yapılacak bu ilişki arayıcı çalışmada Türkiye'de, kamu veya özel kurumların farklı kademelerinde görev yapan İngilizce öğretmenleri ile devlet veya vakıf üniversitelerinde İngilizce eğitimi veren öğretim görevlilerine ulaşılması hedeflenmiştir. Ölçek/anket soruları için sizden 10 dakika ayırmanız beklenmektedir. Bu çalışmaya katılmak tamamen gönüllülük esasına dayanmaktadır. Çalışmanın amacına ulaşması için sizden beklenen, bütün soruları eksiksiz, kimsenin baskısı veya telkini altında olmadan, size en uygun gelen cevapları içtenlikle verecek şekilde cevaplamanızdır. Bu formu okuyup onaylamanız, araştırmaya katılmayı kabul ettiğiniz anlamına gelecektir. Ancak, çalışmaya katılmama veya katıldıktan sonra herhangi bir anda çalışmayı bırakma hakkına da sahipsiniz. Bu çalışmadan elde edilecek bilgiler tamamen araştırma amacı ile kullanılacak olup kişisel bilgileriniz gizli tutulacaktır; ancak verileriniz yayın amacı ile kullanılabilir. Eğer araştırmanın amacı ile ilgili verilen bu bilgiler dışında daha fazla bilgiye ihtiyaç duyarsanız araştırmacıya e-posta veya telefon numarasından ulaşabilirsiniz.

"Aydınlatılmış Onam Formu"ndaki tüm açıklamaları okudum. Bana, konusu ve amacı belirtilen araştırma ile ilgili yazılı ve sözlü açıklama, aşağıda adı belirtilen kişi tarafından yapıldı. Araştırmaya gönüllü olarak katıldığımı, istediğim zaman gerekçeli veya gerekçesiz olarak araştırmadan ayrılabileceğimi ve kendi isteğime bakılmaksızın araştırmacı tarafından araştırma dışı bırakılabileceğimi biliyorum. Söz konusu araştırmaya, hiçbir baskı ve zorlama olmaksızın kendi rızamla katılmayı kabul ediyorum.

…../…../2021

Açıklamaları Yapan Araştırmacının Unvanı, Adı Soyadı ve İmzası **Arş. Gör. Betül Oldaç (Yüksek Lisans Öğrencisi)**
Gönüllünün Adı / Soyadı / İmzası / Tarih

APPENDIX B

Background Questionnaire

1. Age

_____

2. Gender

- Female
- Male

3. Highest level of education completed

- Bachelor's degree
- Master's degree
- Doctoral degree

4. The program you graduated in

- English Language Teaching
- Other Programs (Language and Literature, Translation, Linguistics, etc.)

5. Have you ever been abroad for education?

- Yes
- No

6. How many years of experience do you have in teaching English?

_____

7. Which level do you teach?

- Preschool
- Primary school (1-4th grades)
- Secondary school (5-8th grades)
- High school (9-12th grades)
- University

8. Your institution

- State/Public
- Private

9. Which in-service training programs or courses have you attended?

- I haven't attended any.
- CELTA/DELTA/TESOL/TEFL/TESL
- Other

APPENDIX C

Dweck Mindset Instrument

ITEMS	Strongly agree	Agree	Mostly agree	Mostly disagree	Disagree	Strongly disagree
1) You have a certain amount of intelligence, and you can't really do much to change it.						
2) Your intelligence is something about you that you can't change very much.						
3) No matter who you are, you can significantly change your intelligence level.						
4) To be honest, you can't really change how intelligent you are.						
5) You can always substantially change how intelligent you are.						
6) You can learn new things, but you can't really change your basic intelligence.						
7) No matter how much intelligence you have, you can always change it quite a bit.						
8) You can change even your basic intelligence level considerably.						
9) You have a certain amount of talent, and you can't really do much to change it.						
10) Your talent in an area is something about you that you can't change very much.						
11) No matter who you are, you can significantly change your level of talent.						
12) To be honest, you can't really change how much talent you have.						
13) You can always substantially change how much talent you have.						
14) You can learn new things, but you can't really change your basic level of talent.						
15) No matter how much talent you have, you can always change it quite a bit.						
16) You can change even your basic level of talent considerably.						

APPENDIX D

Approval Form Received From Istanbul Medeniyet University Educational Sciences Ethics Committee

İSTANBUL MEDENİYET ÜNİVERSİTESİ	T.C. İSTANBUL MEDENİYET ÜNİVERSİTESİ EĞİTİM BİLİMLERİ ETİK KURULU KARARI

Tarihi	Sayısı
01/03/2021	2021/03-01

ARAŞTIRMA BAŞLIĞI	Teachers' Mindsets in Foreign Language Classrooms (Yabancı Dil Sınıflarında Öğretmenlerin Zihniyeti)
ARAŞTIRMANIN TÜRÜ	Nicel Araştırma
ARAŞTIRMACI(LAR)	Arş. Gör. Betül Oldaç Prof. Dr. Selami Aydın
KARAR	Etik açıdan uygundur.

Görevi	Kurul Üyeleri	İmza
Başkan	Prof. Dr. Halil İbrahim SAĞLAM	
Üye	Prof. Dr. Ahmet AKIN	
Üye	Prof. Dr. Özlem FEDAİ	
Üye	Prof. Dr. Çiğdem KILIÇ	
Üye	Doç. Dr. Yeşim GÜLEÇ ASLAN	
Üye	Doç. Dr. Özge CENGİZ	
Üye	Doç. Dr. Özcan Erkan AKGÜN	
Üye	Av. Fevziye DOĞRUER	

APPENDIX E

Kruskal-Wallis H Test Results for Scale Items (Age as Independent Variable)

Items	Age Interval	N	Mean Rank	*H* (chi-square)	Sig. (*p*-value)
1) You have a certain amount of intelligence, and you can't really do much to change it.	20-30	79	84.53	1.13	.57
	31-40	67	76.97		
	41+	16	85.53		
2) Your intelligence is something about you that you can't change very much.	20-30	79	82.35	.55	.76
	31-40	67	78.99		
	41+	16	87.84		
3) No matter who you are, you can significantly change your intelligence level.	20-30	79	85.37	1.50	.47
	31-40	67	76.29		
	41+	16	84.22		
4) To be honest, you can't really change how intelligent you are.	20-30	79	80.70	1.55	.46
	31-40	67	79.28		
	41+	16	94.75		
5) You can always substantially change how intelligent you are.	20-30	79	82.60	.13	.94
	31-40	67	79.99		
	41+	16	82.38		
6) You can learn new things, but you can't really change your basic intelligence.	20-30	79	85.09	7.47	.02
	31-40	67	71.80		
	41+	16	104.38		
7) No matter how much intelligence you have, you can always change it quite a bit.	20-30	79	80.00	1.00	.61
	31-40	67	80.72		
	41+	16	92.16		
8) You can change even your basic intelligence level considerably.	20-30	79	82.31	.15	.93
	31-40	67	79.97		
	41+	16	83.91		
9) You have a certain amount of talent, and you can't really do much to change it.	20-30	79	84.58	6.65	.04
	31-40	67	72.64		
	41+	16	103.38		
10) Your talent in an area is something about you that you can't change very much.	20-30	79	84.18	7.73	.02
	31-40	67	72.44		
	41+	16	106.19		

Items	Age Interval	N	Mean Rank	*H* (chi-square)	Sig. (*p*-value)
11) No matter who you are, you can significantly change your level of talent.	20-30	79	79.72	.71	.70
	31-40	67	84.85		
	41+	16	76.25		
12) To be honest, you can't really change how much talent you have.	20-30	79	82.50	5.57	.06
	31-40	67	74.90		
	41+	16	104.19		
13) You can always substantially change how much talent you have.	20-30	79	82.30	1.38	.50
	31-40	67	83.53		
	41+	16	69.06		
14) You can learn new things, but you can't really change your basic level of talent.	20-30	79	86.08	9.39	.01
	31-40	67	70.36		
	41+	16	105.56		
15) No matter how much talent you have, you can always change it quite a bit.	20-30	79	81.82	1.88	.40
	31-40	67	77.90		
	41+	16	95.03		
16) You can change even your basic level of talent considerably.	20-30	79	85.58	2.26	.32
	31-40	67	80.01		
	41+	16	67.59		
Mean Mindset Score	20-30	79	80.44	2.63	.27
	31-40	67	86.52		
	41+	16	65.69		
Total		162			

APPENDIX F

Mann-Whitney U Test Results for Scale Items (Gender as Independent Variable)

Items	Gender	N	Mean Rank	*U*	Sig. (*p*-value)
1) You have a certain amount of intelligence, and you can't really do much to change it.	Female	138	83.44	1388.50	.20
	Male	24	70.35		
2) Your intelligence is something about you that you can't change very much.	Female	138	81.41	1643	.95
	Male	24	82.04		
3) No matter who you are, you can significantly change your intelligence level.	Female	138	84.83	1197	.03
	Male	24	62.38		
4) To be honest, you can't really change how intelligent you are.	Female	138	81.55	1648.50	.97
	Male	24	81.19		
5) You can always substantially change how intelligent you are.	Female	138	83.24	1415.50	.24
	Male	24	71.48		
6) You can learn new things, but you can't really change your basic intelligence.	Female	138	81.61	1641.50	.94
	Male	24	80.90		
7) No matter how much intelligence you have, you can always change it quite a bit.	Female	138	81.82	1611.50	.83
	Male	24	79.65		
8) You can change even your basic intelligence level considerably.	Female	138	80.49	1516.50	.50
	Male	24	87.31		
9) You have a certain amount of talent, and you can't really do much to change it.	Female	138	82.09	1575	.69
	Male	24	78.13		
10) Your talent in an area is something about you that you can't change very much.	Female	138	81.09	1600	.78
	Male	24	83.83		

Items	Gender	N	Mean Rank	*U*	Sig. (*p*-value)
11) No matter who you are, you can significantly change your level of talent.	Female	138	81.79	1615.50	.84
	Male	24	79.81		
12) To be honest, you can't really change how much talent you have.	Female	138	80.37	1499.50	.44
	Male	24	88.02		
13) You can always substantially change how much talent you have.	Female	138	80.55	1525	.52
	Male	24	86.96		
14) You can learn new things, but you can't really change your basic level of talent.	Female	138	81.58	1645.50	.96
	Male	24	81.06		
15) No matter how much talent you have, you can always change it quite a bit.	Female	138	81.91	1599.50	.78
	Male	24	79.15		
16) You can change even your basic level of talent considerably.	Female	138	83.22	1419	.24
	Male	24	71.63		
Mean Mindset Score	Female	138		1642	.95
	Male	24			
Total		162			

APPENDIX G

Kruskal-Wallis H Test Results for Scale Items (Highest Level of Education Completed as Independent Variable)

Items	Highest Level of Education Completed	N	Mean Rank	*H* (chi-square)	Sig. (*p*-value)
1) You have a certain amount of intelligence, and you can't really do much to change it.	Bachelor's degree	87	81.74	.36	.83
	Master's degree	62	82.66		
	Doctoral degree	13	74.35		
2) Your intelligence is something about you that you can't change very much.	Bachelor's degree	87	78.30	3.10	.21
	Master's degree	62	88.73		
	Doctoral degree	13	68.38		
3) No matter who you are, you can significantly change your intelligence level.	Bachelor's degree	87	85.13	1.40	.50
	Master's degree	62	76.19		
	Doctoral degree	13	82.54		
4) To be honest, you can't really change how intelligent you are.	Bachelor's degree	87	77.64	1.98	.37
	Master's degree	62	87.86		
	Doctoral degree	13	77.00		
5) You can always substantially change how intelligent you are.	Bachelor's degree	87	82.05	.19	.91
	Master's degree	62	79.90		
	Doctoral degree	13	85.46		
6) You can learn new things, but you can't really change your basic intelligence.	Bachelor's degree	87	80.93	.40	.82
	Master's degree	62	83.64		
	Doctoral degree	13	75.15		
7) No matter how much intelligence you have, you can always change it quite a bit.	Bachelor's degree	87	76.38	2.44	.30
	Master's degree	62	87.77		
	Doctoral degree	13	85.88		
8) You can change even your basic intelligence level considerably.	Bachelor's degree	87	81.17	.12	.94
	Master's degree	62	82.69		
	Doctoral degree	13	78.08		

Items	Highest Level of Education Completed	N	Mean Rank	*H* (chi-square)	Sig. (*p*-value)
9) You have a certain amount of talent, and you can't really do much to change it.	Bachelor's degree	87	79.90	1.60	.45
	Master's degree	62	86.16		
	Doctoral degree	13	70.00		
10) Your talent in an area is something about you that you can't change very much.	Bachelor's degree	87	78.01	2.69	.26
	Master's degree	62	88.55		
	Doctoral degree	13	71.27		
11) No matter who you are, you can significantly change your level of talent.	Bachelor's degree	87	83.22	.39	.82
	Master's degree	62	78.69		
	Doctoral degree	13	83.38		
12) To be honest, you can't really change how much talent you have.	Bachelor's degree	87	76.20	3.66	.16
	Master's degree	62	90.07		
	Doctoral degree	13	76.12		
13) You can always substantially change how much talent you have.	Bachelor's degree	87	83.01	.21	.90
	Master's degree	62	79.65		
	Doctoral degree	13	80.23		
14) You can learn new things, but you can't really change your basic level of talent.	Bachelor's degree	87	81.79	1.02	.60
	Master's degree	62	83.56		
	Doctoral degree	13	69.69		
15) No matter how much talent you have, you can always change it quite a bit.	Bachelor's degree	87	84.36	.95	.62
	Master's degree	62	79.23		
	Doctoral degree	13	73.23		
16) You can change even your basic level of talent considerably.	Bachelor's degree	87	85.53	1.87	.39
	Master's degree	62	78.24		
	Doctoral degree	13	70.04		
Mean Mindset Score	Bachelor's degree	87	82.82	1.28	.53
	Master's degree	62	77.33		
	Doctoral degree	13	92.54		
Total		162			

APPENDIX H

Mann-Whitney U Test Results for Scale Items (Department as Independent Variable)

Items	Department	N	Mean Rank	*U*	*Sig.* (*p*-value)
1) You have a certain amount of intelligence, and you can't really do much to change it.	English Language Teaching	135	83.56	1544	.20
	Other	27	71.19		
2) Your intelligence is something about you that you can't change very much.	English Language Teaching	135	81.36	1803.50	.93
	Other	27	82.20		
3) No matter who you are, you can significantly change your intelligence level.	English Language Teaching	135	80.65	1708	.60
	Other	27	85.74		
4) To be honest, you can't really change how intelligent you are.	English Language Teaching	135	81.79	1783	.85
	Other	27	80.04		
5) You can always substantially change how intelligent you are.	English Language Teaching	135	81.03	1758.50	.77
	Other	27	83.87		
6) You can learn new things, but you can't really change your basic intelligence.	English Language Teaching	135	80.71	1716	.62
	Other	27	85.44		
7) No matter how much intelligence you have, you can always change it quite a bit.	English Language Teaching	135	79.39	1537.50	.18
	Other	27	92.06		
8) You can change even your basic intelligence level considerably.	English Language Teaching	135	80.21	1648	.42
	Other	27	87.96		

Items	Department	N	Mean Rank	*U*	*Sig.* (*p*-value)
9) You have a certain amount of talent, and you can't really do much to change it.	English Language Teaching	135	81.07	1765	.79
	Other	27	83.63		
10) Your talent in an area is something about you that you can't change very much.	English Language Teaching	135	82.12	1738.50	.70
	Other	27	78.39		
11) No matter who you are, you can significantly change your level of talent.	English Language Teaching	135	80.61	1702	.57
	Other	27	85.96		
12) To be honest, you can't really change how much talent you have.	English Language Teaching	135	81.69	1796.50	.90
	Other	27	80.54		
13) You can always substantially change how much talent you have.	English Language Teaching	135	81.04	1761	.77
	Other	27	83.78		
14) You can learn new things, but you can't really change your basic level of talent.	English Language Teaching	135	81.60	1808.50	.95
	Other	27	80.98		
15) No matter how much talent you have, you can always change it quite a bit.	English Language Teaching	135	80.97	1751.50	.74
	Other	27	84.13		
16) You can change even your basic level of talent considerably.	English Language Teaching	135	79.64	1572	.24
	Other	27	90.78		
Mean Mindset Score	English Language Teaching	135	80.69	1713.50	.62
	Other	27	85.54		
Total		162			

APPENDIX I

Independent Sample T-Test Results for Scale Items (Being Abroad for Education as Independent Variable)

Items	Being abroad for education	N	Mean	Std. Deviation	*t*	Sig. (*p*-value)
1) You have a certain amount of intelligence, and you can't really do much to change it.	Yes	73	4.16	1.33	1.14	.26
	No	89	3.92	1.37		
2) Your intelligence is something about you that you can't change very much.	Yes	73	4.10	1.28	-.14	.89
	No	89	4.12	1.28		
3) No matter who you are, you can significantly change your intelligence level.	Yes	73	2.63	1.41	-1.34	.18
	No	89	2.91	1.26		
4) To be honest, you can't really change how intelligent you are.	Yes	73	4.21	1.31	1.59	.11
	No	89	3.87	1.39		
5) You can always substantially change how intelligent you are.	Yes	73	2.93	1.40	-.17	.87
	No	89	2.97	1.15		
6) You can learn new things, but you can't really change your basic intelligence.	Yes	73	3.84	1.44	1.89	.06
	No	89	3.42	1.37		
7) No matter how much intelligence you have, you can always change it quite a bit.	Yes	73	2.96	1.39	.69	.49
	No	89	2.82	1.18		
8) You can change even your basic intelligence level considerably.	Yes	73	2.79	1.44	-1.88	.06
	No	89	3.19	1,19		

Items	Being abroad for education	N	Mean	Std. Deviation	*t*	Sig. (*p*-value)
9) You have a certain amount of talent, and you can't really do much to change it.	Yes	73	4.38	1.43	.59	.55
	No	89	4.26	1.25		
10) Your talent in an area is something about you that you can't change very much.	Yes	73	4.37	1.37	.79	.43
	No	89	4.21	1.16		
11) No matter who you are, you can significantly change your level of talent.	Yes	73	2.59	1.38	-.61	.54
	No	89	2.71	1.08		
12) To be honest, you can't really change how much talent you have.	Yes	73	4.41	1.30	.57	.57
	No	89	4.30	1.12		
13) You can always substantially change how much talent you have.	Yes	73	2.62	1.25	-1.16	.25
	No	89	2.83	1.10		
14) You can learn new things, but you can't really change your basic level of talent.	Yes	73	4.19	1.31	.94	.35
	No	89	4	1.29		
15) No matter how much talent you have, you can always change it quite a bit.	Yes	73	2.81	1.32	.41	.68
	No	89	2.73	1.03		
16) You can change even your basic level of talent considerably.	Yes	73	2.51	1.25	-1.79	.08
	No	89	2.83	1.06		
Mean Mindset Score	Yes	73	2.76	.94	-1.25	.22
	No	89	2.93	.76		
Total		162				

APPENDIX J

One-Way ANOVA Test Results for Scale Items (Teaching Experience as Independent Variable)

Items	Teaching Experience	N	Mean	Std. Deviation	*F*	Sig. (*p*-value)
1) You have a certain amount of intelligence, and you can't really do much to change it.	0-5	55	4.07	1.30	1.19	.31
	6-10	64	4.17	1.33		
	11+	43	3.77	1.44		
2) Your intelligence is something about you that you can't change very much.	0-5	55	4.07	1.21	2.29	.10
	6-10	64	4.34	1.14		
	11+	43	3.81	1.48		
3) No matter who you are, you can significantly change your intelligence level.	0-5	55	2.85	1.39	.63	.54
	6-10	64	2.64	1.24		
	11+	43	2.91	1.39		
4) To be honest, you can't really change how intelligent you are.	0-5	55	3.98	1.24	.36	.70
	6-10	64	4.13	1.36		
	11+	43	3.91	1.52		
5) You can always substantially change how intelligent you are.	0-5	55	2.93	1.25	.54	.58
	6-10	64	2.86	1.22		
	11+	43	3.12	1.37		
6) You can learn new things, but you can't really change your basic intelligence.	0-5	55	3.67	1.39	.12	.89
	6-10	64	3.59	1.35		
	11+	43	3.53	1.56		
7) No matter how much intelligence you have, you can always change it quite a bit.	0-5	55	2.87	1.26	3.48	.03
	6-10	64	2.63	1.18		
	11+	43	3.28	1.37		
8) You can change even your basic intelligence level considerably.	0-5	55	3.00	1.31	1.68	.19
	6-10	64	2.83	1.25		
	11+	43	3.30	1.41		

Items	Teaching Experience	N	Mean	Std. Deviation	*F*	Sig. (*p*-value)
9) You have a certain amount of talent, and you can't really do much to change it.	0-5	55	4.36	1.31	.27	.76
	6-10	64	4.36	1.30		
	11+	43	4.19	1.42		
10) Your talent in an area is something about you that you can't change very much.	0-5	55	4.25	1.27	.02	.98
	6-10	64	4.30	1.20		
	11+	43	4.30	1.35		
11) No matter who you are, you can significantly change your level of talent.	0-5	55	2.56	1.12	.53	.59
	6-10	64	2.63	1.27		
	11+	43	2.81	1.30		
12) To be honest, you can't really change how much talent you have.	0-5	55	4.25	1.16	.29	.75
	6-10	64	4.42	1.18		
	11+	43	4.37	1.31		
13) You can always substantially change how much talent you have.	0-5	55	2.75	1.11	.27	.77
	6-10	64	2.80	1.29		
	11+	43	2.63	1.09		
14) You can learn new things, but you can't really change your basic level of talent.	0-5	55	4.07	1.32	.11	.90
	6-10	64	4.14	1.25		
	11+	43	4.02	1.37		
15) No matter how much talent you have, you can always change it quite a bit.	0-5	55	2.75	1.17	.20	.82
	6-10	64	2.72	1.12		
	11+	43	2.86	1.25		
16) You can change even your basic level of talent considerably.	0-5	55	2.78	1.17	.56	.57
	6-10	64	2.70	1.20		
	11+	43	2.53	1.08		
Mean Mindset Score	0-5	55	2.86	.90	.72	.49
	6-10	64	2.77	.75		
	11+	43	2.97	.90		
Total		162				

APPENDIX K

Kruskal-Wallis H Test Results for Scale Items (Level Taught as Independent Variable)

Items	Level Taught	N	Mean Rank	*H* (chi-square)	Sig. (*p*-value)
1) You have a certain amount of intelligence, and you can't really do much to change it.	Preschool	3	67,83	2.46	.65
	Primary school	18	93.61		
	Secondary school	37	85.68		
	High school	23	80.98		
	University	81	77.56		
2) Your intelligence is something about you that you can't change very much.	Preschool	3	63.33	2.33	.68
	Primary school	18	93.42		
	Secondary school	37	83.81		
	High school	23	75.15		
	University	81	80.27		
3) No matter who you are, you can significantly change your intelligence level.	Preschool	3	93.17	8.07	.09
	Primary school	18	56.61		
	Secondary school	37	82.45		
	High school	23	96.54		
	University	81	81.90		
4) To be honest, you can't really change how intelligent you are.	Preschool	3	75.67	2.30	.68
	Primary school	18	70.39		
	Secondary school	37	87.68		
	High school	23	75.61		
	University	81	83.04		
5) You can always substantially change how intelligent you are.	Preschool	3	97.33	5.64	.23
	Primary school	18	59.11		
	Secondary school	37	84.54		
	High school	23	89.30		
	University	81	82.28		
6) You can learn new things, but you can't really change your basic intelligence.	Preschool	3	83.50	.74	.95
	Primary school	18	77.31		
	Secondary school	37	86.30		
	High school	23	77.52		
	University	81	81.30		

Items	Level Taught	N	Mean Rank	*H* (chi-square)	Sig. (*p*-value)
7) No matter how much intelligence you have, you can always change it quite a bit.	Preschool	3	90.83	6.04	.20
	Primary school	18	61.33		
	Secondary school	37	81.22		
	High school	23	95.83		
	University	81	81.70		
8) You can change even your basic intelligence level considerably.	Preschool	3	103.67	5.15	.27
	Primary school	18	60.81		
	Secondary school	37	82.04		
	High school	23	89.28		
	University	81	82.82		
9) You have a certain amount of talent, and you can't really do much to change it.	Preschool	3	73.67	3.11	.54
	Primary school	18	90.89		
	Secondary school	37	87.51		
	High school	23	86.17		
	University	81	75.63		
10) Your talent in an area is something about you that you can't change very much.	Preschool	3	76.50	.34	.99
	Primary school	18	85.06		
	Secondary school	37	79.73		
	High school	23	84.74		
	University	81	80.78		
11) No matter who you are, you can significantly change your level of talent.	Preschool	3	73.83	8.62	.07
	Primary school	18	52.97		
	Secondary school	37	82.15		
	High school	23	84.52		
	University	81	86.97		
12) To be honest, you can't really change how much talent you have.	Preschool	3	57.33	3.88	.42
	Primary school	18	97.22		
	Secondary school	37	84.26		
	High school	23	74.83		
	University	81	79.54		
13) You can always substantially change how much talent you have.	Preschool	3	102.17	3.75	.44
	Primary school	18	68.75		
	Secondary school	37	89.26		
	High school	23	74.41		
	University	81	82.04		

Items	Level Taught	N	Mean Rank	*H* (chi-square)	Sig. (*p*-value)
14) You can learn new things. but you can't really change your basic level of talent.	Preschool	3	82.67	.56	.97
	Primary school	18	81.44		
	Secondary school	37	86.22		
	High school	23	79.07		
	University	81	80.01		
15) No matter how much talent you have, you can always change it quite a bit.	Preschool	3	101.00	8.08	.09
	Primary school	18	61.00		
	Secondary school	37	82.42		
	High school	23	99.41		
	University	81	79.83		
16) You can change even your basic level of talent considerably.	Preschool	3	121.50	5.85	.21
	Primary school	18	63.83		
	Secondary school	37	86.27		
	High school	23	86.02		
	University	81	80.48		
Mean Mindset Score	Preschool	3	106.67	4.01	.40
	Primary school	18	65.67		
	Secondary school	37	76.77		
	High school	23	87.50		
	University	81	84.54		
Total		162			

APPENDIX L

Independent Sample T-Test Results for Scale Items (Institution as Independent Variable)

Items	Institution	N	Mean	Std. Deviation	*t*	Sig. (*p*-value)
1) You have a certain amount of intelligence, and you can't really do much to change it.	State	104	3.96	1.39	-.87	.38
	Private	58	4.16	1.30		
2) Your intelligence is something about you that you can't change very much.	State	104	4.13	1.34	.31	.76
	Private	58	4.07	1.17		
3) No matter who you are, you can significantly change your intelligence level.	State	104	2.72	1.28	-.80	.42
	Private	58	2.90	1.42		
4) To be honest, you can't really change how intelligent you are.	State	104	3.98	1.43	-.47	.64
	Private	58	4.09	1.23		
5) You can always substantially change how intelligent you are.	State	104	2.90	1.25	-.63	.53
	Private	58	3.03	1.30		
6) You can learn new things, but you can't really change your basic intelligence.	State	104	3.57	1.45	-.45	.65
	Private	58	3.67	1.36		
7) No matter how much intelligence you have, you can always change it quite a bit.	State	104	2.97	1.29	1.18	.24
	Private	58	2.72	1.25		
8) You can change even your basic intelligence level considerably.	State	104	2.97	1.27	-.53	.60
	Private	58	3.09	1.41		

Items	Institution	N	Mean	Std. Deviation	*t*	Sig. (*p*-value)
9) You have a certain amount of talent, and you can't really do much to change it.	State	104	4.33	1.29	.16	.88
	Private	58	4.29	1.41		
10) Your talent in an area is something about you that you can't change very much.	State	104	4.28	1.23	-.07	.95
	Private	58	4.29	1.32		
11) No matter who you are, you can significantly change your level of talent.	State	104	2.63	1.26	-.41	.68
	Private	58	2.71	1.17		
12) To be honest, you can't really change how much talent you have.	State	104	4.41	1.23	.87	.38
	Private	58	4.24	1.16		
13) You can always substantially change how much talent you have.	State	104	2.76	1.23	.36	.72
	Private	58	2.69	1.06		
14) You can learn new things, but you can't really change your basic level of talent.	State	104	4.04	1.35	-.63	.53
	Private	58	4.17	1.20		
15) No matter how much talent you have, you can always change it quite a bit.	State	104	2.80	1.17	.62	.54
	Private	58	2.69	1.16		
16) You can change even your basic level of talent considerably.	State	104	2.61	1.14	-1.17	.24
	Private	58	2.83	1.17		
Mean Mindset Score	State	104	2.85	.87	-.01	.99
	Private	58	2.85	.81		
Total		162				

APPENDIX M

Independent Sample T-Test Results for Scale Items (Receiving In-Service Training as Independent Variable)

Items	In-service Training	N	Mean	Std. Deviation	*t*	Sig. (*p*-value)
1) You have a certain amount of intelligence, and you can't really do much to change it.	Yes	59	4.03	1.34	-.02	.98
	No	103	4.03	1.37		
2) Your intelligence is something about you that you can't change very much.	Yes	59	4.15	1.24	-.31	.76
	No	103	4.09	1.30		
3) No matter who you are, you can significantly change your intelligence level.	Yes	59	2.78	1.29	.03	.98
	No	103	2.79	1.36		
4) To be honest, you can't really change how intelligent you are.	Yes	59	4.14	1.24	-.83	.41
	No	103	3.95	1.43		
5) You can always substantially change how intelligent you are.	Yes	59	2.76	1.22	1.44	.15
	No	103	3.06	1.28		
6) You can learn new things, but you can't really change your basic intelligence.	Yes	59	3.69	1.39	-.61	.54
	No	103	3.55	1.43		
7) No matter how much intelligence you have, you can always change it quite a bit.	Yes	59	2.80	1.23	.65	.52
	No	103	2.93	1.31		
8) You can change even your basic intelligence level considerably.	Yes	59	2.80	1.31	1.58	.12
	No	103	3.14	1.31		

Items	In-service Training	N	Mean	Std. Deviation	*t*	Sig. (*p*-value)
9) You have a certain amount of talent, and you can't really do much to change it.	Yes	59	4.29	1.44	.19	.85
	No	103	4.33	1.27		
10) Your talent in an area is something about you that you can't change very much.	Yes	59	4.12	1.40	1.27	.21
	No	103	4.38	1.16		
11) No matter who you are, you can significantly change your level of talent.	Yes	59	2.64	1.26	.08	.94
	No	103	2.66	1.21		
12) To be honest, you can't really change how much talent you have.	Yes	59	4.31	1.28	.37	.71
	No	103	4.38	1.16		
13) You can always substantially change how much talent you have.	Yes	59	2.47	1.04	2.16	.03
	No	103	2.88	1.22		
14) You can learn new things, but you can't really change your basic level of talent.	Yes	59	4.15	1.34	-.49	.63
	No	103	4.05	1.28		
15) No matter how much talent you have, you can always change it quite a bit.	Yes	59	2.88	1.27	-.96	.34
	No	103	2.70	1.10		
16) You can change even your basic level of talent considerably.	Yes	59	2.54	1.09	1.19	.24
	No	103	2.77	1.19		
Mean Mindset Score	Yes	59	2.80	.80	.62	.54
	No	103	2.89	.87		
Total		162				

ÖZGEÇMİŞ

KİŞİSEL BİLGİLER

Adı Soyadı: Betül OLDAÇ

Uyruğu: T.C.

EĞİTİM

Derece	**Kurum**	**Mezuniyet Yılı**
Lisans	Boğaziçi Üniversitesi, Eğitim Fakültesi, Yabancı Diller Eğitimi Bölümü	2016
Yüksek Lisans	İstanbul Medeniyet Üniversitesi, Lisansüstü Eğitim Enstitüsü, Yabancı Diller Eğitimi Ana Bilim Dalı	Devam ediyor

İŞ TECRÜBESİ

Tarih	**Kurum**	**Görev**
2019-2020	İstanbul Üniversitesi-Cerrahpaşa, Yabancı Diller Yüksekokulu	Öğretim Görevlisi
2020-	İstanbul Medeniyet Üniversitesi, Eğitim Bilimleri Fakültesi	Araştırma Görevlisi

YABANCI DİLLER

İleri düzeyde İngilizce, başlangıç düzeyde Fransızca ve Rusça