



**THE RELATIONS BETWEEN L2  
LEARNERS' MINDSETS, L2 GRIT AND THEIR  
SOCIAL CONNECTEDNESS BELIEFS**

**2024  
MASTERS THESIS  
ENGLISH LANGUAGE AND LITERATURE**

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**Prepared as**

**Master Thesis**

**KARABUK**

**January 2024**

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## THESIS APPROVAL PAGE

I certify that in my opinion the thesis submitted by Marwa Ahmed Hasan HASAN Titled “THE RELATIONS BETWEEN L2 LEARNERS' MINDSETS, L2 GRIT AND THEIR SOCIAL CONNECTEDNESS BELIEFS” is fully adequate in scope and in quality as a thesis for Master of Arts in English literature.

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This thesis is accepted by the examining committee with a unanimous vote in the Department of English Language and Literature as a master's thesis. 12/01/2024

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Assoc. Prof. Dr. Zeynep ÖZCAN .....

Director of the Institute of Graduate Programs

## **DECLARATION**

I hereby declare that this thesis is the result of my own work and all information included has been obtained and expounded in accordance with the academic rules and ethical policy specified by the institute. Besides, I declare that all the statements, results, and materials, not original to this thesis have been cited and referenced literally.

Without being bound by a particular time, I accept all moral and legal consequences of any detection contrary to the aforementioned statement.

**Name Surname:** Marwa Ahmed Hasan HASAN

**Signature:**

## **FOREWORD**

I would like to express my sincere gratitude to the following individuals who have played a crucial role in the completion of this thesis; I am deeply indebted to my thesis supervisor Prof. Dr. Özkan KIRMIZI, for his invaluable guidance, unwavering support, and insightful feedback throughout the research process. Their expertise and encouragement have been instrumental in shaping this work.

I extend my appreciation to Turkey and Karabük University which have contributed to my education and personal growth, expertise, and constructive criticism significantly enriched the quality of the study and I aspire to the day when I will be able to give back the goodwill and recognition to both my beloved Iraq and Turkey

I would like to thank the participants of this study for their willingness to share their experiences and insights. Without their cooperation, this research would not have been possible.

My heartfelt thanks go to my family my husband Ammar, my sons Enes & Ersin and friends Maysaa Abed & Zainab VELIOĞLU for their unwavering support, understanding, and encouragement throughout this academic journey. Their belief in me has been a constant source of motivation. I am truly grateful for the collective efforts that have shaped this thesis.

## **ABSTRACT**

In order to enhance learners' ability to overcome challenges in the learning process, it is important for us to gain a deeper understanding of why some learners are more capable of maintaining a positive outlook, persevering longer, and achieving better results than others. The purpose of the current study is to investigate a model that explains how learners' beliefs about their language skills, commonly referred to as language mindsets, impact the goals they set for themselves and the consequences of these choices. The focus is on how learners respond when faced with difficult circumstances. This research explores the attitudes, perceptions, and beliefs of 250 English language learners in Kirkuk, Iraq, aged 14 to 17, throughout the academic year 2022–2023. The study aims to explore how mindset and social factors influence a person's determination to learn a second language. To gather data, the researchers used a quantitative method approach and distributed paper-based questionnaires consisting of 68 different items. These questionnaires were evenly given to a population of 250 students from three different schools. The researchers utilized the Language Mindsets Inventory, developed by Lou and Noels in 2017, which includes the general language intelligence beliefs (GLB), second language aptitude beliefs (L2B), and age sensitivity views about language learning (ASB), to measure language mindset. Additionally, the researchers will assess social connectedness using the social connectedness scale proposed by Lee and Robbins in 1998. A short grit scale (Grit-S) developed by Duckworth and Quinn (2009) was used in this study. It includes eight items, four of which measure POE (perseverance of effort). The findings reveal that students exhibit positive attitudes and unwavering determination towards mastering a second language, aligning with a growth-oriented language learning mindset. This positive mindset can enhance their perseverance, bolstering their conviction that diligent efforts will lead to success. While some students perceive linguistic intelligence as an essential factor in language learning, it is notable that many also acknowledge the malleability of language skills through dedicated effort. By integrating a growth mindset perspective, it is evident that language proficiency and intelligence can evolve over time. Furthermore, students exhibit an open-minded view that effective second language

learning is achievable at any age, rejecting the notion of age as a significant barrier. Cultivating this mindset can inspire learners of all ages to embark on their language-learning journey with confidence. Strong and positive social relationships within families, friendships, communities, and schools are closely associated with a supportive environment that nurtures a positive language learning mindset. We find that 193 of the students, 76.7%, agree that another language can be learned well, regardless of age ( $M=2.42$ ,  $SD=1.65$ ). And (81%) that students enjoy good, comfortable, and healthy friendship relationships that help them develop and learn. ( $M=1.9$ ,  $SD=0.94$ ). In conclusion, this research highlights the importance of fostering a growth-oriented mindset in language learning, with an emphasis on effort and grit. This approach can significantly enhance students' positive attitudes and determination to succeed in acquiring a second language, irrespective of perceived linguistic intelligence or age. Moreover, the creation of a supportive social environment plays a pivotal role in nurturing a positive mindset and encouraging students in their language learning endeavors. These findings underscore the significance of mindset and social factors in the realm of second language acquisition. It is imperative to address the inherent limitations and considerations that can influence the research outcomes. One significant concern is the potential lack of representation of the broader population of second language learners. Moreover, participants in research studies may not always provide entirely accurate or honest responses. Factors like social desirability bias or the desire to present oneself in a favorable light can influence the accuracy of the data collected. This potential bias could significantly impact the reliability and validity of the study.

**Keywords:** L2 learners, L2 learners' mindsets, grit, social connectedness.

## ÖZ

Öğrenenleri öğrenme sürecindeki zorluklar karşısında daha dayanıklı kılmak için, bazı öğrencilerin daha yüksek bir iyimserlik düzeyini koruyabilmelerinin, daha uzun süre ısrar edebilmelerinin ve diğerlerinden daha iyi performans gösterebilmelerinin nedenlerini daha derinlemesine anlamamız gerekir. Mevcut çalışmanın amacı, öğrencilerin genellikle dil zihniyetleri olarak bilinen dil yeterlilikleri hakkındaki fikirlerinin, takip etmeyi seçtikleri hedefleri ve bu seçimlerin sonuçlarını nasıl etkilediğini açıklayan bir modeli araştırmaktır. Bu hedefler, kendilerini çevreleyen zor koşullarla karşılaştıklarında nasıl tepki verdikleriyle ilgilidir. Bu araştırma, 2022-2023 akademik yılında Kerkük, Irak'ta yaşları 14 ila 17 arasında olan 250 İngilizce öğrencisinin tutumlarını, algılarını ve inançlarını araştırıyor. Çalışma, zihniyet ve sosyal faktörlerin ikinci dil cesareti üzerindeki etkisini araştırıyor. Araştırma nicel yöntem yaklaşımını kullanmıştır; Birincil veriler, üç farklı okuldan birine devam eden 250 öğrenciden oluşan nüfus arasında eşit olarak dağıtılan 68 farklı kağıt bazlı anket maddesi kullanılarak elde edildi. Lou ve Noels'in (2017) genel dil zeka inançları (GLB), ikinci dil yetenek inançları (L2B) ve dil öğrenmeye ilişkin yaşa duyarlılık görüşleri (ASB), dil zihniyetini ölçmek için 18 maddelik Dil Zihniyeti Envanteri kullanılmıştır. Sosyal bağlılık Lee ve Robbins (1998) tarafından önerilen sosyal bağlılık ölçeği ile ölçülecektir. Bu çalışmada Duckworth ve Quinn (2009) tarafından geliştirilen kısa cesaret ölçeği (Grit-S) kullanılmıştır. Dördü POE'yi (çabanın azmi) ölçen sekiz madde içerir. Bulgular, öğrencilerin ikinci bir dilde uzmanlaşmaya yönelik olumlu tutumlar ve sarsılmaz bir kararlılık sergilediğini ve gelişim odaklı bir dil öğrenme zihniyetiyle uyumlu olduğunu ortaya koyuyor. Bu olumlu zihniyet onların azimlerini artırabilir ve gayretli çabaların başarıya yol açacağına dair inançlarını güçlendirebilir. Bazı öğrenciler dilsel zekayı dil öğrenmede önemli bir faktör olarak algılamakta, birçoğunun da dil becerilerinin özel çabalarla şekillendirilebilirliğini kabul etmesi dikkat çekicidir. Gelişen zihniyet perspektifini entegre ederek dil yeterliliği ve zekanın zaman içinde gelişebileceği açıktır. Ayrıca öğrenciler, etkili ikinci dil öğreniminin her yaşta mümkün olabileceği konusunda açık fikirli bir görüş sergilemekte ve yaş kavramını önemli bir engel olarak

reddetmektedirler. Bu zihniyeti geliřtirmek, her yařtan öđrenciye dil öđrenme yolculuđuna güvenle ıkma konusunda ilham verebilir. Aileler, arkadařlıklar, topluluklar ve okullar iindeki gl ve olumlu sosyal iliřkiler, olumlu bir dil öđrenme zihniyetini besleyen destekleyici bir ortamla yakından iliřkilidir. Öđrencilerin 193'nn, yani %76,7'sinin, yařtan bađımsız olarak bařka bir dilin iyi öđrenilebileceđine katıldıđını gryoruz (M=2,42, SD=1,65). Ve (%81) öđrencilerin geliřmelerine ve öđrenmelerine yardımcı olan iyi, rahat ve sađlıklı arkadařlık iliřkilerinden keyif aldıklarını belirtti. (M=1,9, SS=0,94). Sonu olarak bu arařtırma, dil öđreniminde aba ve cesarete vurgu yaparak geliřim odaklı bir zihniyet geliřtirmenin nemini vurgulamaktadır. Bu yaklařım, algılanan dilsel zeka veya yařtan bađımsız olarak öđrencilerin ikinci bir dil edinmede bařarılı olma konusundaki olumlu tutumlarını ve kararlılıklarını nemli lde artırabilir. Dahası, destekleyici bir sosyal ortamın yaratılması, olumlu bir zihniyetin geliřtirilmesinde ve öđrencilerin dil öđrenme abalarında teřvik edilmesinde nemli bir rol oynamaktadır. Bu bulgular, ikinci dil edinimi alanında zihniyetin ve sosyal faktrlerin neminin altını izmektedir. Arařtırma sonularını etkileyebilecek dođal sınırlamaları ve hususları ele almak zorunludur. nemli bir endiře, ikinci dil öđrenenlerin daha geniř bir poplasyonunun temsil edilmeme potansiyelidir. Ayrıca, arařtırma alıřmalarına katılanlar her zaman tamamen dođru veya drst yanıtlar vermeyebilirler. Sosyal istenirlik yanlılıđı veya kendini olumlu bir řekilde sunma arzusu gibi faktrler, toplanan verilerin dođruluđunu etkileyebilir. Bu potansiyel nyargı, alıřmanın gvenilirliđini ve geerliliđini nemli lde etkileyebilir.

**Anahtar Kelimeler:** 2. Dil Öđrencileri, 2. Dil Öđrencilerinin Zihniyetleri, 2. Dil Becerileri, Sosyal Bađlılık

### ARCHIVE RECORD INFORMATION

<b>Title of the Thesis</b>	The Relations Between L2 Learners'mindsets, L2grit And Their Social Connectedness Beliefs
<b>Author of the Thesis</b>	Marwa Ahmed Hasan HASAN
<b>Thesis Advisor</b>	Prof. Dr. Özkan KIRMIZI
<b>Status of the Thesis</b>	Master
<b>Date of the Thesis</b>	12/01/2024
<b>Field of the Thesis</b>	English Language and Literature
<b>Place of the Thesis</b>	UNIKA / IGP
<b>Total Page Number</b>	124
<b>Keywords</b>	L2 learners, L2 learners' mindsets, grit, social connectedness.

### ARŞİV KAYIT BİLGİLERİ (in Turkish)

<b>Tezin Adı</b>	2. Dil öğrencilerinin zihniyetleri, 2. Dönem kazanç ve sosyal bağlılık inançları arasındaki ilişkiler
<b>Tezin Yazarı</b>	Marwa Ahmed Hasan HASAN
<b>Tezin Danışmanı</b>	Prof. Dr. Özkan KIRMIZI
<b>Tezin Derecesi</b>	Yüksek Lisans
<b>Tezin Tarihi</b>	12/01/2024
<b>Tezin Alanı</b>	İngilizdili ve Edebiyatı
<b>Tezin Yeri</b>	KBU/LEE
<b>Tezin Sayfa Sayısı</b>	124
<b>Anahtar Kelimeler</b>	2. Dil Öğrencileri, 2. Dil Öğrencilerinin Zihniyetleri, 2. Dil Becerileri, Sosyal Bağlılık

## **ABBREVIATIONS**

- EFL** : English as a foreign language
- FL** : Foreign Language
- L2** : Second or Foreign Language
- L2WTC** : Willingness to communicate
- LMI** : Language Mindsets Inventory
- PIE** : Proto-Indo-European language
- POE** : Perseverance of Effort
- COI** : Consistency of Interests

## **SUBJECT OF THE RESEARCH**

The study is to examine how the mindsets, grit and the social connectedness beliefs work together systematically as a cognitive affective system to shape L2 learners' outcomes, achievement and motivation.

## **PURPOSE AND IMPORTANCE OF THE RESEARCH**

This study aims to investigate learners' propensity to acquire L2, how their mindsets view it, and how their social environments affect the process.

## **METHOD OF THE RESEARCH**

The methodology of the study was described by focusing on a quantitative correlational design. It was brought to everyone's attention that there were a total of 250 middle school and high school students who participated in the study and that the information was gathered from them in one of three different locations: the Barish Preparatory School, the Barish Intermediate School for boys, and the Ulker Secondary School for girls. Following that, an explanation of the tools that were used to collect data was given. In particular, the Dweck's Mentality Scale (DMI), the Grit-S produced by Duckworth and Quinn (2009), and the Social Connection Scale established by Lee and Robbins (1998) were the tools that were used to study whether or not there was a correlation between mentality and SLA. In the research that was conducted, it was discovered that these scales were credible and applicable. At this point, the process of analysing the data has been elaborated upon, and each instrument and data analysis method that will be used to evaluate the primary research and sub-research questions has been detailed.

## **HYPOTHESIS OF THE RESEARCH / RESEARCH PROBLEM**

Although it is often believed that a person's early years are the best period for language learning, there are several exceptions to this generalization. When the values, social interactions, and beliefs of the first language clash with those of the second, a

problem occurs. The young acquaintance must decide how to balance all of his old beliefs and the new ones in his mind and inner consciousness while speaking both languages.

This study aims to explore this problem among school students in an attempt to extend the boundaries of language learning beyond the participants' native tongue and the cultural norms and customs of their families.

## **POPULATION AND SAMPLE**

This study conducted in Kirkuk, in the north of Iraq. Both genders and L2 learners were represented through random sampling. There were 250 English language learners in the study's sample. Age range: 14–17 years. During the 2022–2023 academic year,

Students are enrolled in general English classes in governorate schools. Based on their final test scores and past school outcomes, the student's language proficiency level is either low or intermediate. All of the students study the English for Iraq book (8-9-10-11) as their course book in the Iraqi educational system.

## **SCOPE AND LIMITATIONS / DIFFICULTIES**

The study's potential lack of representation of the broader second language learner population the findings may not be generalizable if participants are confined to specific demographics (e.g., students from a particular school or program). Participants may not provide entirely accurate or honest responses, influenced by social desirability bias. This will impact on data reliability and validity. Then challenges in establishing a definitive cause-and-effect relationship in second language learning studies lead to difficulty isolating specific causes due to various influencing factors.

Static surveys may not capture dynamic changes in mindset, grit, and social connectedness over time, incomplete understanding of psychological construct development. And variation in language proficiency levels among participants may not be adequately considered in analysis. It impacts on mindset, grit, and social connectedness beliefs not appropriately accounted for.

Cultural influences on mindset, grit, and social connectedness belief may introduce bias limited understanding of how constructs manifest across diverse cultural backgrounds. Last the overreliance on quantitative data may miss nuanced insights. And this limited understanding of personal experiences, motivations, and challenges.

## **PREVIOUS WORK**

Previous research has explored the concept of mindset in language learners, drawing inspiration from Carol Dweck's work on fixed and growth mindsets (Dweck, 1999). Studies have investigated how learners' beliefs about the malleability of their language abilities (L2 mindset) influence their language learning outcomes, motivation, and persistence. Yeager & Dweck (2012), Mercer (2012) Robinson (2017) Lou and Noels (2016) discovered a connection between linguistic mindsets and attitudes. Grit, a psychological construct developed by Angela Duckworth (2007), refers to a combination of passion and perseverance toward long-term goals. In the context of second language learning, studies have examined how grit influences learners' ability to sustain effort and overcome challenges. Gritty language learners are often more resilient and persistent in the face of difficulties. Social connectedness in language learning involves the extent to which learners feel connected to their language community, peers, and the culture associated with the language (Smith et al., [2008]). Previous research has explored the impact of social connectedness on language learners' motivation, engagement, and overall well-being. Telford (2014) makes a further argument for the significance of the English language in social relations by pointing out the various causes that have propelled the English language. Young people's social acceptance is determined by their language abilities according to Maynard and Perakyala (2003).

## 1. INTRODUCTION

Second language learning, often known as SLL, refers to both the process and the study of how humans acquire a second language, which is also referred to as L2 or the target language in some contexts. First language learning, also known as L1L, examines how individuals come to own their native language (also known as the native language) and stands in contrast to this approach. For the purposes of this conversation, the term "second language" can refer to any language (including a third or fourth language) that is acquired by a person in addition to their mother tongue. In spite of this, the phrase is most frequently utilised to refer to a language that is learned in addition to the individual's mother tongue. On the other side, the process of acquiring a second language would be contrasted with bilingual learning, which is when a child learns both English and another language at the same time. This is an example of when parents speak different languages. The learning of a second language is only referred to as "second language acquisition" if the first language was learned before the second language was taught.

In the course of their learning, students regularly find themselves in situations that challenge their capabilities, whether the setting is one of formal or informal learning. Educational setting or in the ordinary social encounters that occur throughout their personal or professional lives. It is not unheard of for a conversation to end with a conclusion that is less than pleasant in any of these settings; in fact, it is rather common.

These "failures," whether defined according to objective standards (for example, getting a low grade on a test) or according to subjective standards (like a difficult social encounter), which are part and parcel of the situation, are part and parcel of the process of acquiring a language. However, many people find that as a result of these encounters, they lack self-assurance and motivation, which in turn leads to disengagement and withdrawal from the learning process.

In order to make learners more resilient in the face of challenges like these, we need to have a deeper understanding of the reasons why certain learners are able to retain a higher level of optimism, persist for longer, and do better than others. The current study's objective is to investigate a model that describes how learners' ideas about their language competence, often known as language mindsets, influence the

goals they choose to pursue and the ramifications of those choices. These objectives are for how they react when confronted with difficult circumstances.

Both qualitative "Mercer & Ryan, 2009" and quantitative "Ryan & Mercer, 2012" methods of analysis on the data acquired from (Mercer & Ryan, 2009) have been used in previous studies on the mindsets of language learners. According to Scheidler and Weisz (2016), teaching students about development and fixed mindsets can be a useful strategy for reducing their anxiety and sadness. According to a section of this theory, a person's worldview or core beliefs about the malleability of people's personalities affect their behaviour. Their anxiety and stress levels are significantly impacted by these traits (Schleider & Weisz, 2016).

Youth who adopt a growth mentality are less likely to react helplessly to social stress than students who have a fixed mindset and believe that their character traits are unchangeable (Schleider et al., 2015). Additionally, people with fixed mindsets shun failure and hence more difficult tasks, whereas people with growth mindsets take on more difficult tasks because their goal is personal advancement (Lou & Noels, 2020). Additionally, learners with fixed mindsets dislike effort because they see it as a sign of low potential, whereas students with development mindsets applaud effort (Rattan et al., 2015).

The grit value of sandpaper refers to how rough of a texture it has; different grit levels are appropriate for different jobs, from coarse sanding to fine finishing. Woodworkers are aware that using coarse sandpaper leaves a little debris behind. There has to be some polishing done because the research on grit in second language acquisition (SLA) has also made a bit of a mess. Every language teacher and student is aware that learning a language takes time and that conversing in a foreign tongue can occasionally be uncomfortable and even embarrassing. For all of these and many more reasons, it is legitimate to use the term "grit" in SLA to describe the passion, persistence, and determination that students show when overcoming learning and communication obstacles. This special issue seeks to address issues with grit research and offer workable solutions for the future.

Duckworth and associates (Duckworth, Peterson, Matthews, & Kelly, 2007) popularized the idea of grit, defining it as "perseverance and enthusiasm for long-term goals" (p. 1087). Numerous research in the world of education have looked at how grit

affects various emotional, motivational, and achievement results. "e.g., Muenks et al., 2017; Steinmayr et al., 2018; Wolters & Hussain, 2015" . Demonstrating grit, with a focus on sustaining consistency in interest and tenacity in effort, can encourage language learners to keep going for their goals, as acquiring a second language takes time and language learners often face failure and discouragement. Researchers that study second language acquisition (SLA) seem to be becoming more and more interested in this subject in second language classes. "Feng & Papi, 2020; Khajavy et al., 2021; Sudina & Plonsky, 2021; Teimouri et al., 2020".

Ajzen (2005) describes SN as a person's perception of social pressure to do or not do a behaviour under review from sources such as school administrators, coworkers, parents, and classmates. A comprehensive collection of available normative determinants relating to the expectations of powerful referents is intended to govern SN, which is the perceived social pressure to engage in or refrain from an action. The desire to conform (mc) to the referent in question weighs the strength of each normative belief (nb), and the resulting products are added together as shown in the equation  $SN = (mc) + (nb) s$ .

Ajzen (2005) asserts that, depending on the person and the behaviour under investigation, nbs represents the perceived behavioural expectations of influential individuals or groups, such as a person's spouse, family, friends, teachers, supervisors, or coworkers. The idea is that these normative criteria affect the primary SN together with a person's acquaintance with numerous referents. In particular, the MC with each individual increases the SN in direct proportion to the individual's subjective assessment of the referent's propensity to think that the referent should engage in the in-question activity. SN is made up of two parts: (a) beliefs about one's own preferences and (b) notions about how important referents expect a person to behave (e.g., "I feel the pressure from my parents to study English"). And (b) the positive or unfavourable assessments of each belief (for instance, "Regarding my decision to study English, my parents believe that doing specific acts is important or unimportant").

## **1.1. Problem**

Language mindsets are like other mindsets: most people have both developmental and fixed mindsets. Because they absorb knowledge and cultural

assumptions that support both theories in different domains, most people hold a combination of both (Lou & Noels, 2020). Thus, a student with a growth mentality is more likely to express this belief than a fixed one. It doesn't mean he or she thinks linguistic achievement is all about work and heredity.

Language learning sometimes requires many beliefs; therefore, people's mindsets may be more complex than in other areas "Lou & Noels, 2020; Mercer & Ryan, 2009". Apart from the notions of overall verbal proficiency in the mother tongue (e.g., "people either have the talent in language-based abilities or not; they can't change it"), views about the ability to speak a second language (e.g., "the ability to learn a foreign language is innate; it is immutable"), as well as assumptions on linguistic proficiency and age (e.g., "people's ability to learn languages is fixed by a certain age") are comparable to the intelligence mindset paradigm developed by Dweck.

It is generally accepted that a person's formative years are the optimal time for the acquisition of a language, but there are certain exceptions to this rule. The issue arises when the values, social relationships, and beliefs of the first language are in conflict with those of the second language, and how the young acquaintance would strike a balance in his head and inner consciousness between all of the previously held beliefs and the new ones when speaking both languages. The purpose of this study is to investigate this issue among kids in middle school in an effort to broaden the scope of linguistic acquisition apart from the participants' home tongue and the cultural norms and practices of their families.

## **1.2. Aims**

The interest in "mindsets" among language educators has grown due to its connections to various educational and motivational outcomes. Recent research in second language acquisition (SLA) has focused on defining and measuring language mindsets, establishing a link between these mindsets and learners' motivation. This study aims to demonstrate the significance of the mindset framework in understanding language learners' motivation. Despite some skepticism about the complexity of the relationship between mindsets and academic success, this research emphasizes the need to thoroughly examine the role of mindsets in language learning, integrating

insights from psychology and education. Exploring mindsets in SLA offers an opportunity for evidence-based practices to enhance learners' motivation and language proficiency both in and out of the classroom.

The primary goal of this study is to investigate how learners' inclination to acquire a second language (L2) is influenced by their mindsets and how their social environments impact the language acquisition process. Specifically, the study seeks to understand the interaction among learners' mindsets, levels of grit, and perceptions of social connectedness within a cognitive-affective system, influencing outcomes, achievement levels, and motivation.

While scholars in psychology and education have extensively studied mindsets, the exploration of learners' beliefs in the context of foreign and second language acquisition is relatively recent. Mindsets, categorized as fixed (unchangeable) or growth (malleable), shape individuals' views on human characteristics like intelligence and linguistic ability. Previous research indicates that fixed and growth mindsets significantly influence learners' approaches to language learning, yet there is a lack of information on how these mindsets relate to the acquisition of grammatical knowledge. Most language attitude research has focused on second language contexts.

In the field of SLA, Kramer, McLean, and Martin (2017) examined the connection between grit and two L2-related outcomes, revealing a positive correlation between a vocabulary exam and consistency of interest (COI). However, there was no correlation between the vocabulary reading test and grit subscales. A subsequent study by Teimouri et al. (2020) introduced a domain-specific grit scale, evaluating students' dedication and persistence in learning a second language. Duckworth's grit concept, emphasizing long-term stamina and confidence in one's abilities, distinguishes itself from other psychological factors like perseverance and industriousness. Recognizing grit's malleability, the U.S. Department of Education (2013) underscores its importance in schools to enhance academic achievement. In the realm of SLA, incorporating grit can benefit instructors in preparing students for challenges and setbacks they may encounter in their language learning journey.

Social connectivity is the third issue that I think is interesting to investigate because it focuses on the relationships that exist between them. Because of the pioneering research that has been conducted on the subject, the idea of connectivity

has become a well-established topic in the realm of psychology. According to research conducted by McWhirter (1990) and Zachariah (1994), the individual's relationship with society is an essential factor in the process of psychological adjustment. According to Lee and Robbins (1995), one kind of relational scheme that represents patterns in interpersonal connections is called social connectedness. According to Lee and Robbins (2000), it was also defined as an idea that refers to a persistent and common sense of self in interactions with the outside world. People are able to identify with those they are drawn to and feel like members of the human race thanks to their sense of self in connection to the outside environment (Lee & Robbins, 1995). A person's perspective of himself in relation to the networks and interactions he is a part of, as well as how he interacts with others, may be summarized as his social connection.

## **1.2. Hypothesis**

It is hypothesized that:

- Second language learners get affected by the norms, social behaviours, and grits of their mother language.
- Language acquisition is more vibrant if obtained at an early age.

## **1.3. The Significance of the Study**

This research will be significant in the field of L2 learners' mindsets, and it may serve researchers in the study of social connectedness beliefs. Additionally, the findings of this study may have an impact on future studies of L2 learning and teaching. It may be helpful for researchers to know whether students who endorse different language mindsets might have different levels of grit because there is no prior research that has been done on this topic.

## **1.4. Study Setting and Scope**

The northern Iraqi city of Kirkuk will be the site of this investigation. Both genders and L2 learners will be represented in the participation pool through random sampling. There will be 250 English language learners in the study's sample. Age range: 14–17 years. During the 2022–2023 academic year, the students are enrolled in general English classes in governorate schools. One week before to the commencement of data collection, a test will be given to participants to ensure their level of competence. Based on their final test scores and past school outcomes, the students' language proficiency level is either low or intermediate. The final grades at the conclusion of the semester will be used to evaluate the students' L2 success. A variety of tests including reading comprehension, grammar, vocabulary, writing, speaking, listening, and reading comprehension were required of them. The course book for all of the students is the English for Iraq book (8-9-10-11). Each semester's grade in the Iraqi educational system is assigned a number between 0 and 50, where 50 represents the highest attainable score. For them to pass the course, they need to receive at least a 25. We opted to use course grades as a substitute for L2 achievement, given their frequent use in L2 research "Brown, Plonsky, & Teimouri, 2018," and their closer association with motivational and personality factors than standardized tests "Arens, Morin, & Watermann, 2015." Additionally, explicit informed consent will be obtained from both parents and students.

The language mindset assessment developed by Lou and Noels (2017) was employed to evaluate participants' fixed and growth language mindsets, with the scale translated into the learners' mother tongue. Of the 18 items on this scale, nine assess developing linguistic mentality (e.g., "You can always substantially change your language intelligence"), and nine measure fixed-language mentality (e.g., "It is difficult to change how good you are at foreign languages").

For the assessment of grit, Duckworth and Quinn's short grit scale (Grit-S) (2009) was utilized, consisting of eight items in total. Four items gauge perseverance of effort (POE) (e.g., "Setbacks don't discourage me"), while the remaining four measure consistency of interest (COI) (e.g., "New ideas and projects sometimes distract me"). Various metrics are employed in this study, including the social connectedness scale developed by Lee and Robbins (1998) to quantify social connectivity.

### **Primary Data**

Primary data will be collected through 68 items of paper-based and online (closed-ended) questionnaires (Dillman et al., 2014).

- **Secondary Data**

The data for this research will be collected using the secondary sources of doing research, which include journals, articles, magazines, and various government publications.

### **1.5. Research Design: Quantitative Research**

The goal of the research is to examine the relationship between L2 learners' mindsets, L2 grit, and their social connectedness beliefs. The project, therefore, finds the articulate nature of the research to demonstrate the goal.

### **1.6. Sample Size**

This research aims to examine the relationships between L2 learners' mindsets, L2 grit, and their social connectedness beliefs in secondary schools through a sample size of 250 students (14–17 years old). The sample was split into an experimental group and a control group.

## **2. LITRATURE REVIEW**

## 2.1. Introduction

In recent years, positive psychology has started to gain traction in the realm of second language teaching, with numerous studies focusing on exploring worry and boredom as significant negative emotions. Positive psychology, built on the pillars of positive emotions, positive personality traits, and positive institutions, seeks to uncover human characteristics and understand how individuals develop emotional resources for effective task performance. While research on positive institutions remains limited, substantial work has been conducted on positive personality traits and individual, subjective, and collective positive feelings. Considering positive emotions in language processing can enhance learners' ability to process language consciously, facilitating goal achievement in the language learning process. People tend to be more productive and engaged in their work when they attend to the positive emotions they experience.

Second language learners are likely to encounter setbacks and moments of despair during the extensive process of achieving fluency. However, learners respond differently to these challenges. Some may perceive failure as a sign of insufficient intelligence and competence, leading them to avoid investing additional effort. Others view errors as an inherent part of language acquisition, motivating them to exert more effort in mastering the second language. Therefore, an L2 learner's perception of their ability to acquire a new language is closely tied to the effort they invest in the learning process. The concepts of linguistic mentality and grit play crucial roles in explaining the connection between these perceptions and the amount of effort dedicated to second language learning. Language mindset, as described by "Lou & Noels, 2017a; Mercer & Ryan, 2009; Ryan & Mercer, 2012a," refers to individuals' beliefs about their language learning capacity. Grit, defined as persistence and passion for long-term goals "Duckworth, Peterson, Matthews, & Kelly, 2007, p. 1087," complements language mindset by emphasizing perseverance and dedication in the pursuit of language proficiency.

Lately, there has been a growing interest among L2 scholars in exploring two non-cognitive elements "Banse & Palacios, 2018; Ebadi, Weisi, & Khaksar, 2018; Feng & Papi, 2020; Lou & Noels, 2017a; Mercer & Ryan, 2009; Sudina & Plonsky, in press; Teimouri, Plonsky, & Tabandeh, 2020; Wei, Gao, & Wang, 2019." Despite a

limited number of studies, further investigation is needed to fully comprehend the roles played by these components in the context of second language learning. Several studies suggest that distinct language mindsets lead to different language learning objectives and anxiety levels (Lou & Noels, 2016, 2017a). However, the question of whether children supporting various language mindsets may exhibit varying levels of grit remains unexplored in prior research. A fixed mindset, emphasizing fixed characteristics, might hinder perseverance in overcoming language barriers. Therefore, we hypothesize a positive correlation between grit and a growth mindset, while a fixed mindset may be adversely associated with grit. Previous studies have indicated that both grit "Akos & Kretchmar, 2017" and mentality "Mouratidis, Michou, & Vassiou, 2017" are associated with academic success. The relationship between language mentality and L2 achievement has not been extensively researched, but some studies suggest a favorable relationship between grit and L2 achievement "Sudina & Plonsky, in press; Teimouri et al., 2020; Wei et al., 2019." This study aims to predict L2 accomplishment based on these two concepts, further defining the roles of grit and linguistic mentality in L2 achievement.

Additionally, scholars have recently explored whether grit plays a more significant role in academic achievement compared to other relevant predictors "Steinmayr, Weidinger, & Wigfield, 2018, 2018; Usher et al., 2018." The following sections briefly review the concepts of grit and linguistic mindset, presenting relevant empirical research on both. Weiner (1985) notes that in educational contexts, success is often attributed to high capability and hard work, while failure is linked to low capability and lack of effort. Elizondo (2013) finds that students with lower language competency often attribute their inability to acquire the target language successfully to external factors (Saunders, 2013). Numerous studies have investigated the connection between motivation, grit, and their impact on the development mindset. According to Duckworth and colleagues (2007), grit comprises two lower-order components: perseverance of effort and consistency of interests. Perseverance of effort refers to an individual's ability to sustain effort over an extended period despite obstacles, while consistency of interests relates to maintaining interests over time despite setbacks.

Different measures, such as the Grit Scale and the Short Grit Scale by Duckworth et al. (2007), distinguish between these two unique notions of grit. Grit is increasingly emphasized in education and is considered a crucial characteristic for success (Tough, 2012). It has been studied in psychology "Sharkey et al., 2018; Vela et al., 2018; Fosnacht et al., 2019." Motivation, identified by Dornyei (2001) as a crucial mental state influencing success in learning a foreign language, has been extensively studied in its various types and their effects on academic achievement "Arabmofrad et al., 2019; Karabatak and Polat, 2020; Mammadov et al., 2021."

Mindset, as defined by Plaks and Stecher (2007), refers to learners' beliefs in either dynamic or static states of intelligence during knowledge acquisition. Researchers have focused on learners' emotional states in language learning environments and their impact on performance. Emotional states, including motivation, mentality, and tenacity, play crucial roles in the process of learning a foreign language. Further research on positive psychology theories, particularly those related to grit and emotional states during language acquisition, is warranted, given the challenges involved in language learning. Language mindset and grit are particularly relevant as they depend on the perseverance of language learners, which is adjustable and variable, unlike intellectual talents. This study is crucial for raising awareness among both students and teachers about the significant role emotional states play in academic success.

## **2.2. Theoretical foundations of the Study**

### **2.2.1. Language Mindset**

Mindset, as defined by Robinson (2017), is an emotional component that reflects attitudes about the adaptability of one's intelligence, talents, or capacities to perform skills. Yeager and Dweck (2012) further elaborate that people's underlying assumptions about their qualities are what constitute mindsets. In the context of foreign language learning, Mercer (2012) defines foreign language mentality as the belief in whether language learning ability is dependent on innate talent or controllable factors such as effort and conscious hard work.

The significance of learners' mindsets has been underscored by Dweck (2008), who argues that attitudes play a crucial role in shaping the cognitive processes occurring in learners' minds. She posits that individuals' understanding is influenced by their mindsets, where people have different attitudes depending on whether they believe their traits are flexible or stable. This distinction results in a growth mindset or a fixed mindset, respectively. Students with a fixed mindset believe that their capacity for learning is innate and cannot be developed through experience in educational contexts, while those with a growth mindset see their capability as flexible and developable through diligence and operational approaches, as noted by Lou and Noels (2016). Additionally, learners' mindsets regarding language acquisition influence their assumptions about general language intelligence, age sensitivity in language learning, and proficiency in foreign languages. Their beliefs about whether their native and foreign language abilities are static or dynamic are encompassed by their broader beliefs about general language intelligence and foreign language aptitude.

The term "mindsets" refers to people's beliefs about whether human characteristics are fixed (fixed mindset or entity theory) or malleable (growth mindset or incremental theory; Dweck, 1999; Mercer & Ryan, 2010). These are implicit beliefs about intelligence and/or personality. Research suggests that mindset is domain-specific, varying across diverse academic subjects such as science, math, sports, and music (Burnette et al., 2013).

Based on these findings, Lou and Noels (2016) put out the idea of language attitude, a notion that looked at how people felt about learning a language. The three main components of language thinking were as follows. "The first component was general language intelligence beliefs, which, like general intelligence views, were ideas regarding whether language intelligence was fixed or flexible (Dweck, 2006). The ability to learn a second or foreign language, and whether it was pliable or fixed, comprised the second component. Beliefs regarding age sensitivity and language learning, or if it can be developed up to a particular age and then fixed afterward, made up the third component. According to this model", Lou and Noels (2016) discovered a connection between linguistic mindsets and attitudes (such as fear of failure) and behaviours (such as the intention to continue learning the target language).

It is important to take into account the subtleties of attitude with regard to different components of language acquisition because the process of language development comprises a variety of abilities and aspects (such as reading, writing, and speaking). For instance, "Mercer and Ryan (2010) conducted a qualitative study with first-year English as a foreign language (EFL) learners at universities in Austria and Japan to examine the importance of mentality in the context of language learning". This study showed that an EFL learner may have distinct perspectives about certain linguistic concepts. For instance, a student may have a fixed attitude when it comes to pronunciation yet a progressive mindset when it comes to vocabulary. There is, however, little research on how learners' mindsets affect their communication and speaking abilities. Furthermore, because mindsets are domain-specific, additional study is needed to better understand how mindsets related to learning foreign languages relate to various language learning processes rather than how people's general mindsets affect their ability to learn languages as a whole.

For instance, Zarrinabadi et al. (2021) looked at how linguistic attitude influenced 392 Iranian EFL learners' assessments of their communicative competence and L2WTC (Willingness to communicate). "The path analysis results suggested that language mindset indirectly predicted L2WTC through perceived communicative competence. This meant that EFL learners who endorsed higher levels of growth language mindset felt more competent to communicate in English and as a result were more willing to do so as well".

Research indicates that mindsets can be subject-specific, meaning a student may have a growth mindset for one subject, such as mathematics, and a fixed mindset for another, like English (Burnette et al., 2013). This domain-specificity of mentality has led to numerous studies expanding mindset theory to various academic and non-academic contexts. In the field of second language learning, researchers have applied mindset theory, recognizing the differences in language mindsets compared to mindsets in other academic areas (Mercer & Ryan, 2009; Lou & Noels, 2017a; Ryan & Mercer, 2012a).

Language mentality, conceptualized as individuals' attitudes regarding language learning, has been explored with two distinct hypotheses aligned with Dweck's mindset operationalization (Mercer & Ryan, 2009; Lou & Noels, 2017; Ryan

& Mercer, 2012a). Learners with a fixed language mindset perceive language acquisition as requiring a fixed and innate "gift" or "natural talent." In contrast, learners with a growth mindset believe that language learning intelligence is flexible and can be improved through effort and perseverance. Failure, according to a fixed mindset, signals a lack of inherent capability, while success implies the need for increased effort.

A qualitative study by Mercer and Ryan (2009) identified language mindsets as a distinct type, further breaking them down into sub-skills like speaking mindset and reading mindset. Their findings suggest that language mindsets are crucial for effective goal-setting, strategy utilization, and language learning. Ryan and Mercer (2012a, 2012b) found that linguistic mentality comprises both fixed and growth features and is domain-specific. They also suggested that factors like age and circumstances may impact language thinking.

Lou and Noels (2016, 2017a, 2017b) conducted empirical investigations on linguistic mindsets, creating the Language Mindset Inventory to assess language-specific attitudes. This scale operationalized growth and fixed language mindsets based on three dimensions: beliefs about general language intelligence, second language aptitude, and age sensitivity. Their studies revealed that a fixed language mentality was associated with performance-approach goals, leading to more helpless reactions, while a growth language mindset was linked to learning goals, resulting in more mastery responses and fewer helpless reactions. Additional studies by Lou and Noels (2016, 2017b) explored how language mindsets influence migrants' intercultural experiences, finding that individuals with more rigid ideas were more afraid of rejection by native speakers, leading to tense intergroup interactions and a diminished sense of cultural fit.

By concentrating on implicit theories of writing intelligence and examining their connections to writing motivation and orientations towards written corrective feedback, Waller and Papi (2017) further specialized language mentality. They discovered that writing intelligence with a growth mentality was connected with a feedback-seeking orientation and writing motivation, but writing intelligence with a fixed mindset was correlated with a feedback-avoidance orientation and uncorrelated with writing motivation.

Another point is related to how mindset is conceptualized. According to Mercer and Ryan (2009), the nature of linguistic mentality is more complicated than a straightforward fixed vs development mindset binary. This demonstrates that learners could have a fixed mindset and a growth mindset, rather than just one or the other. The disagreement around the general nature of mindsets can be used to explain this finding. While Dweck and colleagues considered fixed and development mindsets as the two extremes of a continuum (e.g., Dweck & Leggett, 1988; Blackwell et al., 2007), there are other research that have criticised this operationalization (e.g., Bodil & Roberts, 2013; Lüftenegger & Chen, 2017) .

Some researchers have treated fixed and growth mindsets as independent elements rather than two ends of a continuum, as indicated in the qualitative study by Mercer and Ryan (2009) (e.g., Bodil & Roberts, 2013; Brten & Stromso, 2004, 2005; Chen & Pajares, 2010; Day & Cromley, 2014). Lüftenegger and Chen (2017) argue for representing the two mindsets independently, especially when they are not strongly inversely coupled. In the current study, the relationship between fixed and growth mindsets will be examined. If there is a strong negative relationship, only one of them will be used; if not, both will be treated as separate constructs.

A fixed mindset or a growth mindset is the belief that one's qualities, such as personality and intellectual ability, are either fixed or malleable (Blackwell, Trzesniewski, and Dweck 2007; Burnette et al., 2013; Dweck and Leggett 1988). These mindsets, also known as implicit theories, have significantly influenced motivation research in psychology and educational practices over the past 30 years (Dweck, 2006; Yeager et al., 2019). Recent research from the Programme for International Student Assessment (PISA) indicates a consistent link between growth mindset and achievement. Students with a growth mindset outperformed those with a fixed mindset in arithmetic, reading, and science across 74 countries (Goudard, 2021). Additionally, individuals with a growth mindset are more resilient and likely to continue improving in challenging situations, in contrast to those with a fixed mindset who tend to shy away from challenges (Dweck, 2012).

While these mindsets are prevalent in second- and foreign-language learning (e.g., the belief that only some people have the capacity to become good at L2 learning), they were not widely considered until recently (Mercer and Ryan, 2010).

Growth mindsets in language learning have gained attention from teachers in the last decade, particularly through the Language Mindset Meaning System proposed by Lou and Noels. This motivational framework systematically summarizes the relationships between language mindsets and related motivational concepts, including attribution, achievement goals, effort beliefs, fear of failure, and language anxiety (Lou & Zarrinabadi, 2022). Research supports how linguistic attitudes influence learners' perceptions of effort and learning objectives. Language learners with a growth mindset believe that effort is an effective strategy to improve their competence and prioritize learning-process-focused goals. On the other hand, those with a fixed mindset tend to focus on learning outcomes or avoiding criticism due to their belief that effort may indicate a lack of natural talent. These mindset concepts are crucial for helping individuals interpret and respond to mistakes in intercultural communication and language learning (Lou and Noels, 2016; Lou and Noels, 2019). Educators can also encourage students to adopt growth mindsets to help them cope with setbacks (Papi et al., 2019).

#### **2.2.1.1. Fixed Mindset**

Entity theorists, characterized by a fixed mindset, hold the belief that intelligence is an innate talent and, therefore, remains constant and unchangeable. In a fixed mindset, individuals perceive their fundamental qualities, such as intelligence or talent, as fixed traits that do not evolve over time, as stated by Dweck (2005). They tend to spend their time documenting their perceived brilliance or talent rather than actively working to develop and improve it. Furthermore, individuals with a fixed mindset believe that success is solely determined by innate skill and that hard work is not essential. However, this belief is incorrect.

Individuals with a fixed mindset do not believe in the possibility of changing or enhancing their current intelligence, viewing it as a constant and inherent trait. This perspective may lead them to avoid challenges or learning opportunities for fear of failure, as highlighted by Mueller and Dweck (1998, quoted in Dweck, 2008). Additionally, individuals with a fixed mindset tend to give up easily when faced with difficulties or obstacles, often concealing errors or wrongdoings instead of addressing them (Nussbaum and Dweck, 2008). They may also dismiss constructive criticism or

take it personally, failing to use feedback as a tool for learning due to the belief that hard work cannot lead to success.

Contrary to the growth mindset, individuals with a fixed mindset believe that intrinsic skill determines their level of success. They fear failure because it implies limitations or constraints that they perceive as challenging to overcome. Moreover, witnessing their peers succeed may evoke feelings of fear rather than inspiration in individuals with a fixed mindset.

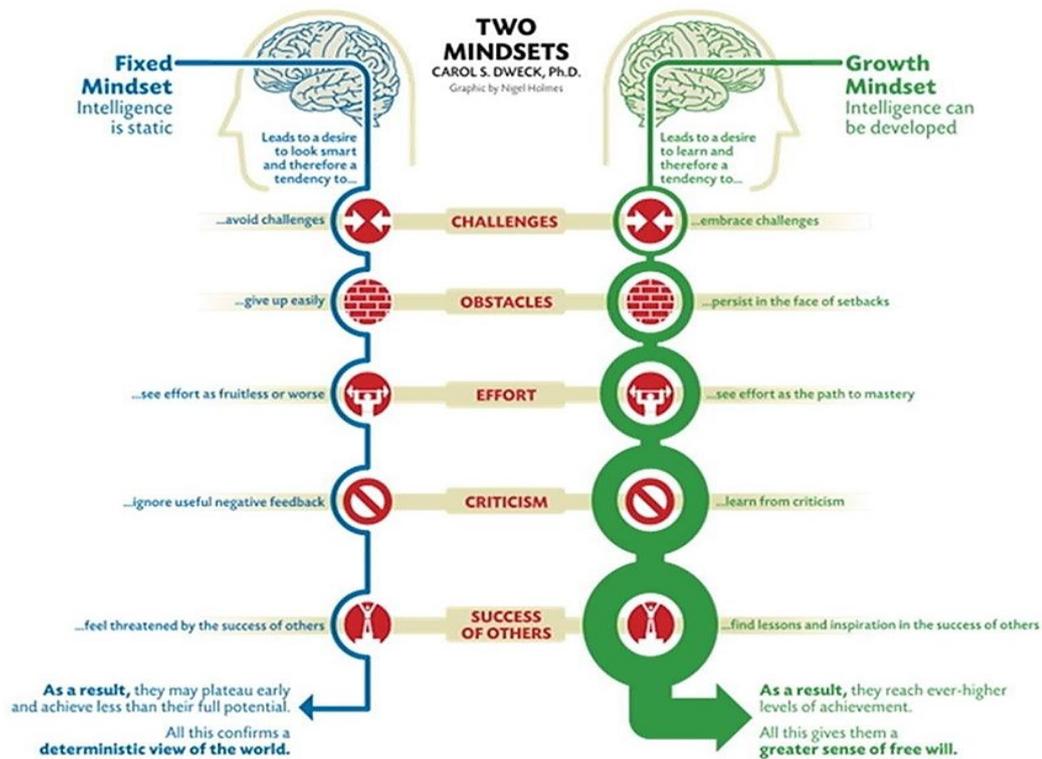
#### **2.2.1.2. Growth Mindset**

Growth mindset, as outlined by Dweck (1999), differs from a fixed mindset in several key ways. Individuals with growth mindsets, often referred to as incremental theorists, believe that self-improvement and perseverance play a crucial role in shaping intelligence (Elliott and Dweck, 1988). This belief is grounded in the concept of neuroplasticity, which refers to the brain's ability to reconfigure itself and form new connections through repeated practice, ultimately strengthening cognitive abilities. According to Dweck (2015), individuals with a growth mindset believe that their fundamental abilities can be developed through dedication and hard work, viewing brains and talent as mere starting points. This perspective fosters the curiosity and resilience necessary for exceptional achievement, a trait observed in many accomplished individuals. In essence, those embracing a growth mindset fundamentally believe that talent stems from effort. They hold the conviction that with commitment, persistence, and sufficient training, individuals can further develop their abilities, and intelligence is inherently improvable (Bandura and Dweck, 1985; Dweck and Molden, 2007). Dweck (2015) clarifies that individuals with a growth mindset do not assert that everyone can become exceptionally intellectual or brilliant, but rather, they emphasize that everyone has the potential to become more intelligent through hard work and dedicated effort.

Dweck (2015) highlights the distinction between fixed and growth mindsets, explaining that in a fixed mindset, the focus is primarily on the outcome. Success is deemed significant, and failure or not being the best is seen as rendering all efforts futile. On the other hand, a growth mindset places importance on the process, emphasizing the value of learning, improvement, and development over mere

outcomes. People with a growth mindset can value what they're doing regardless of the result. They are solving difficulties, setting new directions, and working on significant problems. Even if they haven't discovered a cancer cure, the search was very meaningful. Furthermore, whereas those with a fixed mindset are concerned with how others would see them, those with a growth mindset are more interested in their own learning. They embrace criticism as a way to get better rather than avoiding or ignoring it. Furthermore, students with a growth mentality aim to repair errors right away, in contrast to those with a fixed perspective. Failures are only short-term setbacks for those who have a development mindset; they are viewed as opportunities for growth-minded students to receive illuminating feedback, so their errors actually improve their learning (Dweck, 2006). As a result, when faced with failure, individuals frequently exhibit more adaptive behaviours and psychological characteristics like resilience". Their peers' achievement inspires them and teaches them some valuable lessons. When all of these factors are taken into account, learners who feel that talents are fixed are less likely to advance than those who think that abilities can be improved.

According to Dweck and Molden (2007), there is another category comprising individuals who do not strongly adhere to either of the two mindsets—fixed or growth. Their research suggests that approximately 40% of both adults and youngsters lean towards a growth mindset, while an equal percentage opts for a fixed mindset. The remaining 20% falls somewhere in the middle of the applied scale points, representing individuals who do not strongly align with either mindset. It's worth noting that Mercer (2012) contradicts Dweck's (2006) assertion by stating that a fixed mindset prevails in language learning. Figure 1 below, from Dweck's well-known book (2006), visually illustrates the two mindsets.



**Figure 1:** Mindset Graphic from *Mindset: The New Psychology of Success* (Dweck, 2006)

### 2.2.1.3. Intervention-Based Growth Mindset Development

An essential point to consider regarding the concept of "mindset" is that individuals can transition from a fixed mindset to a growth mindset, indicating that the initially chosen mindset is not set in stone. Dweck (2006) provides four straightforward methods to cultivate a growth mindset:

- Recognize the voice of your entrenched attitude.
- Realize that you have a choice in step two.
- Respond to it in a way that reflects a growth mindset.
- Take the development attitude action in Step 4.

Several intervention studies have been conducted to assess the impact of encouraging students to adopt a growth mindset. These studies demonstrate that teaching and developing a growth mindset can lead to increased motivation and levels of success among students (Blackwell, Trzesniewski, and Dweck, 2007; Aronson et al., 2002). For instance, Aronson et al. (2002) investigated how African-American

undergraduates, after undergoing a growth mindset intervention for thirty days, exhibited higher grade point averages (GPAs) and more positive opinions toward their academic competence by the end of the semester.

**Table 1:** Summary of main mindset intervention studies published between 2010 and 2020

Study	Population	Research Aims	Method and Nature of the Intervention	Main Findings
Sriram 2014	105 high-risk first year students in a private university in the United States; intervention group (n=60) and control group (n=45).	To examine the effectiveness of a mindset intervention in changing the view of intelligence for high-risk college students, and the effect of this on their academic effort and achievement.	Experimental design with pre- and post-measures. Web-based activities delivered in 4 sessions of 15 minutes (one per week) during a month-period. Participants were randomly allocated to groups. The intervention group was taught the concept of intelligence malleability (using videos, articles and messages on mindset and brain malleability) whilst the control group was taught some study skills.	T-tests revealed a significant increase in growth mindset beliefs for the intervention group only. The intervention group reported significantly higher levels of academic effort and study skills than the control group at post-test. No significant difference in achievement was found between the two groups at post-test.
Mills & Mills 2018	Low achieving college math students, divided almost equally into 8 treatment groups (N = 98) and 4 control groups (N = 57).	To examine if a mindset intervention would increase the possibility of passing a math course among college students	The study was three-semester-long. Pre-intervention mindset beliefs were measured for all participants. The intervention was 30-minute per session 4 times a week during math classes the first month of the semester. It involved explanation of mindsets, intelligence malleability and the capacity to increase brain connections with challenges, emphasizing the idea that ability improves by effort and downplaying the idea of innate math ability. Ideas reinforced by the teachers toward the end of the semester. No intervention for the control group. Math scores and retention rate were measured the following semester.	Correlational analysis revealed a significant correlation between participants' mindset beliefs and final grades. T-tests also revealed a significant difference between the two groups grades with the intervention scoring higher than the control. Similarly, participants with higher mindset beliefs scored significantly higher than those with low mindset beliefs. However, the retention rate between the intervention and control group was not significantly different, nor was it significant between participants with high and low mindset scores.
Beatty, et al. 2019	University students enrolled in algebra and calculus-based courses in three public universities in the US. The study was repeated with three samples each in a	develop and validate a scalable intervention that promotes STEM self-efficacy by endorsing growth mindset beliefs, and	Large-scale quasi-experimental study with participants from three distinct universities divided into intervention and control groups. The intervention involved introduction of the topic, two videos showing the main ideas and classroom discussion. Online questionnaire	Results revealed a significant effect of the intervention on participants' mindset beliefs which showed a highly significant increase in learners growth mindset beliefs after the intervention compared to before. No significant increase reported in their self-efficacy or perceived academic control.

	different semester (N = 265, 201, 387)	developing a sense of control over academic success	was distributed three times: before, a few weeks after the intervention and the following semester. It measured learners' mindset beliefs, STEM self-efficacy and perceived academic control.	
Burnette et al. 2019	Students enrolled in an introductory entrepreneurship course (N = 238) in a large public university. They were randomly allocated to either a mindset intervention group (N=120) or a matching control group (N=118)	To develop and test the effectiveness of a mindset intervention on promoting entrepreneurial self-efficacy and career development which involves includes academic interest, career interest, persistence and performance.	The two groups received different content but were matched in time and style. The intervention consisted of 3 online modules (45 minutes in total). All had an identical structure including an article or video on the malleability of entrepreneurial ability, a video on mindset research, a multiple-choice quiz and a writing activity communicating with a struggling student in entrepreneurship research. Participants were given pre-intervention survey and a week to complete each module. Post-intervention surveys were completed 2 weeks following the end of the last module.	T-tests revealed a significant effect of the intervention showing greater mindset beliefs, entrepreneurial self-efficacy and task persistence of participants in the intervention group compared to the control. As predicted, the mindset intervention was a significant indirect predictor of academic interest through entrepreneurial self-efficacy. The entrepreneurial self-efficacy was a significant predictor of career interest.
Smith & Capuzzi 2019	75 undergraduate psychology majors taking statistics divided into an intervention group (N=45) and a control group (N=30).	To alter students' mindset beliefs about their ability in statistics to reduce students' statistics anxiety and improve course grades.	The intervention consists of an interactive presentation for 75 minutes introducing the concept of mindset and related variables, how mindsets are formed and how the brain works and responds differently with each mindset, supporting these ideas with previous research results and providing effective study strategies.  Students were asked to create a one-page mindset reminder including the information they learned and, in another task, respond to a fictional struggling learner. Student knowledge, anxiety, and mindsets were	Growth mindset beliefs of the intervention group increased significantly post the intervention as well as their performance, with a non-significant decrease in anxiety as opposed to the control group whose change in mindset beliefs was not significant and was associated with an increase in anxiety. Growth mindset beliefs after intervention were negatively correlated with anxiety and positively correlated with academic performance.
Burnette, et al. 2020	Participants (N=491) were collected from 16 introductory computer science classes in 7 universities, 143 women and 348 men	To examine the effectiveness of a growth mindset intervention in improving academic achievement and interest in computer science.	4-sessions online mindset intervention (total time 25 minutes) including: research on mindsets, a message on "You can improve your computer science ability, successful tips by a role model and a writing task adopting the growth mindset message. The control group was matched in length and style but focused on health issues. Pre and post intervention surveys were distributed measuring growth mindset in computer science and career interest.	Students in the intervention group reported significantly stronger growth mindset beliefs and greater career interest than the control group when controlling for pre-test scores. However, there was no significant effect of the intervention on students' grades and no effect of gender in moderating the relation between the intervention and other outcomes.
Nallapothula et al. 2020	1,208 undergraduate students registered in an introductory biology course	To develop and assess a mindset and locus of control intervention to encourage university students endorse growth mindset and internal locus of control.	The intervention consisted of 5 modules involving videos on growth mindset and internal locus of control, reflective and content questions. Participants rated their mindset and locus of control after each module.	Students reporting a growth mindset after the intervention (81.2%) were more than before (58%). Likewise, those reporting internal locus of control post-intervention (78.4%) were greater than pre-intervention (56.1%), indicating that the intervention was effective in changing learners' mindset beliefs and internal locus of control regardless of demographic information. A significant correlation was found between learners' mindset and internal locus of control prior to the intervention and this increased after the intervention.
Ng, et al. 2020	120 first year university students enrolled in a psychology course randomly assigned to either a growth mindset group or a fixed mindset group.	To promote a growth mindset and develop cognitive, academic and behavioural skills of university students through a brief online growth mindset	Participants accessed the introductory online mindset course in which the intervention group was primed with growth mindset beliefs (Presented with information that elicits growth beliefs) while the control group was primed with fixed beliefs. They completed a pre- and post-intervention online survey	There was a positive effect of growth mindset intervention on participants' mindset beliefs in which they showed a significant increase in their growth beliefs and a significant decrease in fixed beliefs after the intervention. They also showed a significant increase in mastery approach and

#### **2.2.1.4. Advantages of a Growth Mindset**

When all the previously covered topics are taken into account, it is critical to realise that developing a development mindset has several advantages. The following list of some of them is an overview:

- According to Blackwell et al. (2007), students' test results can rise more when they receive growth mindset instruction.
- Students that adopt a growth mindset use more efficient learning techniques, which ultimately results in lower marks (Grant and Dweck, 2003).
- As a result of having a growth mentality, students' achievement differences eventually close. (2009); Good et al. (2003); Dweck, 2010b.

#### **2.2.1.5. Dimensions and Measurement of Language Mindsets**

Early research on mindsets often utilized a binary framework, classifying individuals as either having a fixed mindset or a growth mindset. Some teachers might oversimplify and categorize their students into these two groups, but this binary characterization doesn't accurately capture the complexity of learners' thoughts (Mercer & Ryan, 2010). Language learners, for example, often exhibit a combination of both fixed and growth mindsets (Mercer, Ryan, & Williams, 2012). Categorizing language mindsets into two groups can simplify measurement and research designs but may lead to reduced validity, reliability, and individual variations, introducing biases in effect sizes and statistical significance (MacCallum et al., 2002).

There are recurring elements in both fixed and growth language mindsets, including beliefs about general language intelligence, L2 aptitude beliefs, and age-sensitivity beliefs. These elements parallel discussions in second language acquisition (SLA) research. General-language-intelligence beliefs align with theories of linguistic intelligence, where some argue that language proficiency is determined by a fixed linguistic IQ, while others believe it can be developed through effort. L2-aptitude beliefs relate to the debate on whether one's aptitude for learning a second language is fixed or can be changed. Age-sensitivity beliefs align with discussions on the critical/sensitive period theory, which posits that the ability to acquire a second language declines with age due to neurobiological changes. However, some argue that

learning is not biologically limited by age but is influenced by social factors (Marinova-Todd et al., 2000).

It's crucial to understand that linguistic mindsets are not categorical or one-dimensional. The Language Mindsets Inventory (LMI), as developed by Lou and Noels (2017, 2018a), was tested with students who speak English as their second language and learners of various foreign languages, considering these nuanced perspectives.

**Table 2:** A revised version of language mindsets inventory (LMI)

<b>Instructions:</b> Please rate how much you personally agree or disagree with these statements. There is no right or wrong answer.					
1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

The Language Mindsets Inventory (LMI) supported the basic theoretical framework and confirmed learners' beliefs about general language intelligence, L2 aptitude, and age sensitivity (Lou & Noels, 2017). The findings revealed a hierarchy of diverse beliefs, further divided into two types representing fixed and growth mindsets. Interestingly, factor studies did not support the idea that fixed and growth mindsets were a single construct, despite being negatively associated. This suggests that individuals can hold both entity and growth theories simultaneously, indicating a flexibility and dialectical thinking where they can accept seemingly opposing notions without being forced to choose (Kruglanski, 1989). The research suggests that considering linguistic mindsets as a single bipolar factor may oversimplify their nuances. Although it may be convenient and justified depending on the study's goals, recognizing the coexistence of fixed and growth mindsets provides a more accurate representation of learners' cognitive perspectives (Lou & Noels, 2017).

Language mindsets are conceptually similar but distinct from other mindsets. The study found only a tenuous relationship between language attitudes and mindsets on general intelligence and other specific abilities like math and athleticism (Lou & Noels, 2017). This supports the notion that attitudes are domain-specific (Dweck, Chiu, & Hong, 1995). Therefore, an individual may have a weak growth mindset in

terms of language but a strong growth mindset in other intellectual areas. Importantly, within the same domain, learners' motivation, being context-specific, correlates better with attitudes. For instance, language mindsets are found to be a more direct and powerful predictor of language motivation than general intelligence mindsets (Lou & Noels, 2017). Hence, assessing learners' language mindsets is more relevant for understanding language motivation than their intelligence mindsets.

### **2.2.2. Grit**

The origins of the word "grit" can be found in the Proto-Indo-European (PIE) language, which was in use between 4,500 and 2,500 BCE. The verb \*ghreu2, which means "to rub, grind," was the source of today's "grit" in those ancient times (Harper, 2021a). The PIE root gave rise to Proto-Germanic \*greutan, meaning "tiny particles of crushed rock," and Old English grot, meaning "sand, earth, gravel." German Gries, Old Saxon griot, and Old Norse grjot, all of which mean "rock, stone" (Harper, 2021a). The word "grit" continues to have a physical definition that refers to sand, gravel, a sharp granule, or an abrasive material. It also has a connection to the structure of a stone that makes it suitable for grinding. In the late 16th century, the meaning of the word "gritty" was "resembling or containing sand or grit" (Harper, 2021b; Merriam-Webster, 2021a). When appropriate, the term "grit" is still used to refer to the physical qualities of sand and gravel, but it has also been adopted to describe human traits.

Grit, as defined by Duckworth and Quinn (2009), is the capacity to persevere through difficulties while maintaining a belief in long-term goals. It involves working hard towards challenges, sustaining effort and interest over time despite facing failure, adversity, and plateaus in progress. The concept of grit is characterized by constancy in pursuits and persistence in resolve in the face of challenges.

Duckworth and Quinn (2009) highlighted the need to address the conceptual question of the domain specificity of grit in further research. They pointed out the implicit assumption in the research community that the tendency to pursue long-term goals with passion and perseverance is relatively domain-general. However, they acknowledged the possibility that individuals may show high levels of grit in certain domains of their lives (e.g., professional life, personal relationships, hobbies) but not in others.

The researchers suggested that future studies should explore whether individuals integrate their behaviors over different domains when indicating their grit levels on existing self-report instruments. They emphasized the importance of understanding whether grit is domain-specific or domain-general and how individuals perceive and express grit in various aspects of their lives. This recognition of the potential domain specificity of grit has implications for how researchers and educators conceptualize and measure this non-cognitive characteristic.

Resilience, caution, self-discipline, and perseverance are some of the concepts that make up grit and are previously stated as being essential for academic success. Resilience has been defined in a learning setting as the capacity to create positive coping mechanisms in the face of terrible circumstances. This capacity is seen to be the key factor motivating student accomplishment. Furthermore, they found that some difficult resources decreased teacher resilience in their analysis of the resilience of EFL teachers in China and Iran. Their findings showed that EFL teachers from China and Iran understood that personal qualities are the important factors in sustaining instructor resilience. System-based, environmental-based, and process-based aspects were among the other problems deemed to be less difficult for educator resilience.

The scientific appropriation of grit started in 2007 with colleagues of Duckworth, a social psychologist by training but passionate about education. The study of grit has become increasingly popular in psychology and education. The words "studies," "research," "investigation," "laboratory," "measurement," "individual differences," "construct validity," "results," and "findings" were used in conjunction with the word "grit" in scientific contexts. In an interview with the New York Times in 2016, Duckworth (Scelfo) described how grit "beat the pants off IQ, SAT scores, physical fitness, and a bazillion other measures." She described the goal of grit measures, i.e., to show "which individuals will be successful in some situations," and her scientific serenity returned.

Grit is a non-cognitive personality trait that is vital to one's success and is defined as "perseverance and passion for long-term goals" (Duckworth et al., 2007, p. 1087). (Duckworth and Quinn, 2009; et al., 2007). Perseverance of effort (POE) and consistency of interests (COI) are two fundamental subconstructs that make up grit, according to Duckworth et al. (2007). While COI is the enthusiasm for pursuing long-

term goals, POE is the consistent effort over time towards those goals. Gritty people are known for their ability to set long-term goals for themselves and stick to them in the face of obstacles (Duckworth and Gross, 2014).

"Growth mindset and grit are linked in a favourable way, according to earlier research. For instance, Teimouri et al. (2020) found a positive correlation between grit and growth mindset and a negative correlation between grit with fixed mindset".

The relationship between grit and language learning attitudes, particularly language growth attitude and fixed language attitude, has been explored in research. According to Khajavy et al. (2021a), individuals with higher levels of grit tend to believe that they can become smarter by putting in more effort. Language growth attitude had a positive impact on one aspect of grit, Persistence of Effort (POE), but had no direct impact on the other aspect, Consistency of Interest (COI). On the other hand, a fixed language attitude was a poor predictor of COI. The connection between grit and language mindset, as per Khajavy et al. (2021a), seems to be influenced by how failure is interpreted. A fixed mindset interprets failure as evidence of incompetence or lack of talent, indicating a lack of necessary abilities for successful language learning. In contrast, a growth mindset sees failure as a natural part of language learning, offering an opportunity for improvement.

The relationship between grit and academic success has yielded contradictory results in previous studies. Some studies, such as those by Duckworth and Quinn (2009) and Akos and Kretchmar (2017), found a positive connection between grit and academic achievement. In the field of language acquisition, L2 grit has been positively associated with linguistic success (Teimouri et al., 2020). Sudina and Plonsky (2021) found that L2-specific Persistence of Effort (POE) significantly predicted linguistic success, while Lee (2020) reported that POE substantially predicted students' Willingness to Communicate (WTC). Studies by Wei et al. (2019) and Liu and Wang (2021) also revealed a positive correlation between grit and foreign language performance among Chinese middle and high school students.

Grit, defined as perseverance and passion for long-term goals, has gained attention in both academic and public discourse. Duckworth et al. (2007) described grit as the ability to work hard towards challenges, maintaining effort and interest over the years despite failure, adversity, and plateaus in progress. It has been recognized as an important characteristic for achieving higher-order and long-term goals. Grit, including lower-order elements like persistence of effort and consistency of interest, is considered equally important as talent in predicting success.

Furthermore, grit is viewed as a characteristic that can be developed and is not limited by factors like gender, race, academic background, physical well-being, or general intellect. It may also grow with age, as individuals come to appreciate perseverance and hard effort more over time to achieve specific goals. This recognition of the importance of grit in various contexts, including language learning, emphasizes its potential role in predicting success and overcoming challenges.

Grit is distinct from the desire for success. McClelland (1961) claimed that a person's drive for achievement is reflected in their propensity to finish projects, especially those that provide them with immediate (positive) feedback on how they performed and are neither too simple nor too demanding. However, persistent individuals consciously create long-term objectives for themselves and adhere to them in the face of difficulties and disappointments "Duckworth et al., 2007". Resilience should be distinguished from grit. Grit is the quality of strong commitments that you stick with over an extended period of time, in addition to being resilient in the face of setbacks "Perkins-Gough, 2013, p. 16". While resilience and grit both encompass an inclination to resist failure, those with grit stick with a long-term objective for a considerable amount of time. Grit and self-control, one of the Big Five conscientiousness subcomponents, have been found to be highly associated "Crédé et al., 2017" , has furthermore been asserted to be distinct from grit. "While grit and self-control both involve defending one's goals against desires and temptations, Duckworth et al. (2007) contend that the nature of goals is what sets them apart: Grit is focusing on one's long-term goals, whereas self-control entails safeguarding one's comparatively short-term objectives".

The concept of grit, defined as perseverance and passion for long-term goals, has been explored in various contexts, including education and language learning. Grit is distinguished from conscientiousness, despite a strong correlation, by emphasizing persistence towards a long-term objective, and the ability to stay passionate about that goal in the face of challenges and disappointments. The literature on grit has shown that it is a reliable indicator of success outcomes in different areas. Grittier individuals tend to complete more education, make fewer career changes, perform better in academic competitions, and have higher GPAs.

In the educational setting, research has indicated that students with higher levels of grit tend to perform better on achievement exams, receive higher course grades, and exhibit stronger educational aspirations. However, the relationship between grit and academic success has been a topic of debate. Credé et al.'s (2017) meta-analysis, including 88 independent samples of 66,807 people, raised questions about the measurement and importance of grit. They argued that persistence in effort, rather than consistency in interest, is a more potent predictor of performance. Additionally, they questioned the importance of grit given its ambiguous associations with performance and retention. The authors concluded that grit research may be a repackaging of conscientiousness or one of its facets, questioning the scientific validity of grit.

In the context of language learning (L2), some studies have investigated the role of grit. Lake (2013) found that students with higher levels of grit were more passionate about devoting time and effort to studying English and were more self-assured of their English proficiency. Changlek and Palanukulwong (2015) discovered that grit was adversely correlated with students' linguistic anxiety and favorably correlated with their motivation. Kramer et al. (2017) found a favorable relationship between students' grit and their vocabulary learning and reading habits.

Other studies exploring the connection between grit and total language proficiency in language learners have yielded less conclusive results. For example, Wei et al. (2019) found a weak but positive correlation between grit and English language course grades in Chinese middle school students. Robins (2019) found a

weak but positive correlation between grit and language achievement in an online setting with ESL learners. Yamashita (2018) discovered no correlation between grit and grades in Japanese language courses, but a sub-sample suggested an adverse correlation between perseverance of effort and course grades.

The discrepancies in these findings could be attributed to the global-local discrepancy between the grit and language achievement measures used in the studies. Despite this, research on grit continues to explore its impact on learners in various educational settings, emphasizing the need for careful consideration of measurement and interpretation of grit in different contexts.

### **2.2.3. Grit and Language Mindset**

The connection between grit and language attitude is illuminated by the relationship between a growth mindset and grit. Individuals with a growth mindset perceive their traits as flexible and developable through effort and hard work. This mindset fosters mastery-oriented goals, perseverance in the face of setbacks, and sustained interest even when encountering difficulties. As suggested by Dweck, Walton, and Cohen (2014), students with a growth mindset about intelligence may exhibit more grit in their academic work.

The definition of failure plays a crucial role in linking grit and language attitude. For those with a fixed mindset, failure implies a lack of innate talent or intelligence, suggesting an inability to learn the language successfully. In contrast, individuals with a growth mindset view failure as an integral part of the language learning process and an opportunity for improvement. Therefore, understanding how grit is related to attitudes in language learning may depend on how individuals attribute failure.

Empirical research supports the relationship between grit and a growth mindset. Several studies have found a positive prediction of grit by a growth mindset or its components, such as perseverance of effort (POE) and consistency of interest (COI). The link between grit and a growth mindset has also been supported by research using brain imaging. Functional connectivity between bilateral prefrontal networks and the ventral striatal network, as revealed by fMRI studies, has been associated with both growth mindset and grit.

It's worth noting that while there is evidence supporting the connection between grit and a growth mindset, there are discrepancies in the neural correlates of these two variables. This suggests that while they may share some common features, there are also unique aspects to each concept that are reflected in their neural underpinnings.

### **2.2.3.1. The Role of English as a Foreign Language Learners' Language Mindset in Their Grit**

Several studies have looked into the connection between grit and language mindset in EFL learners. Yeager and Dweck (2012) found in their research that grit and language attitude are connected with one another and significantly impact students' achievement in educational settings. They claimed that students' growth mindsets help them persevere and be resilient in the face of obstacles in their schooling. According to Murphy and Dweck (2015), adopting a growth mindset can help students develop their views of effort and demonstrate their wellbeing when dealing with setbacks and issues. Furthermore, they contended that the elements of academic success are perseverance and adaptability, which are fostered by a development mindset. A substantial positive association between grit, hope, "growth mindset, and self-directed learning was discovered by Lee and Jang (2018). They also discovered that the relationship between grit and growth mindset might be mediated by hope. In a study", Wang et al. (2018) found a strong correlation between grit and a growth attitude.

The connection between growth mindset and grit, as well as their impact on academic success, has been explored in various studies. Bahnk and Vranka (2017) suggested that growth mindset is linked to error monitoring areas, while grit is associated with regions related to anticipated rewards. However, their research did not find significant correlations between growth mindset, grit, and academic success.

Similarly, Bazelais et al. (2018) reported that mindset and grit were not significantly connected with academic achievement. They emphasized the role of students' grade point averages (GPAs), which heavily influence academic success and intersect with both grit and mindsets. Gender differences in the association between growth mindset and grit were identified by Sigmundsson et al. in 2020. Kannangara et

al. (2018) found that learners with higher levels of grit also exhibited better resilience and self-control, and they tended to have a growth mindset.

Kench et al. (2016) investigated the relationship between grit and mindset in children and adolescents, discovering a strong connection between grittiness and growth mindsets. Duckworth (2016) suggested that students with a growth mindset are persistent and dedicated to achieving their goals, emphasizing the positive impact of a growth mindset on students' tenacity. Khajavy et al. (2020) proposed a strong connection between a growth mindset and perseverance as a component of grit. Additionally, Myers et al.'s (2016) neuroscience-based study found that a growth mindset mediates the relationship between grit and brain structures. While there may be variations in findings across studies, the overall consensus suggests a complex interplay between growth mindset, grit, and academic success, with potential moderating factors such as gender and individual differences.

#### **2.2.4. Social Connectedness**

It seems to reason that social connectivity will improve mental health if social isolation and the accompanying sense of loneliness damage it. In fact, this claim is supported by studies. The term "social capital" was used to describe research on social engagement and connectedness. It is often defined as a type of "capital" that arises from interpersonal social connections and consists of aspects such as perceptions of wellbeing, life skills, mental and physical health. Despite disagreements concerning its true meaning and viability as a single conceptual construct, it is employed in research.

Research has been done on the connection between social capital and mental health at work. Gao et al. (2014), for instance, examined 2796 employees from 35 distinct Shanghai enterprises. Social capital was measured using an 8-item validated and tested questionnaire, "while mental health was measured using the World Health Organization's Five Well-Being Index. Workers in the highest quartile of social capital had considerably reduced odds of having poor mental health than those in the lower quartiles, even after controlling for variables including sex, age, marital status, education level, occupation, smoking, physical activity, and workplace stress" . When Pattussi et al. (2016) researched female chicken line workers in Brazil, a similar finding came to light. They discovered that greater workplace social capital was

associated with better health-related behaviours, less common mental health issues like sadness and anxiety, and lower levels of stress.

Most social connection research focuses on group activities, such as the study conducted by Jones et al. (2013) to assess the South West Well-Being program in England., which included 10 organisations that offered social activities like befriending, cooking, exercise, and arts and crafts. Six hundred eighty-seven adults of various ages were evaluated both before and after the programme. The outcomes showed a noteworthy increase in self-reported mental health and social and mental wellness both before and after the designated social activity. Although the activity's nature had no bearing on the result, structured practitioner support was highly linked to better mental health after the particular activity. This finding lends credence to the idea that meaningful social interaction promotes mental wellness. Social connection was one of the major themes in the Activity chapter's discussion of the benefits of art and hobbies for mental health.

According to Pearce et al. (2016), who longitudinally assessed both relational (one-to-one) bonding and communal bonding within singing and creative writing or crafts groups, the former can be more important than the latter. At the 1, 3, and 7-month assessments, "84 participants in four singing groups were compared to 51 participants in three writing or craft classes. The 7-item Generalised Anxiety Disorder Scale and the 9-item Patient Health Questionnaire were used to evaluate mental health at baseline and at each follow-up period, while the Flourishing and Satisfaction with Life scores were used to assess wellbeing. Collective bonding was measured using the visual Inclusion of Other in Self scale, and relational bonding was evaluated by having participants make a list of all the names of other group members they could recall and how connected they felt to each. Bonding to individuals inside the groups (relational bonding) had no discernible effects at 7 months but was linked to better wellbeing and decreased anxiety. The fact that the study's participants' mental health was extremely poor made it difficult to evaluate improvements in both group and individual bonding", but the favourable findings for the former certainly illustrate the importance of group bonding. According to a study by Van Dyck et al. (2015), who looked at 3965 middle-aged and older persons as part of the Wellbeing, Eating and Exercise for a Long Life project in Victoria, Australia, social connectivity can also be thought of in terms of social cohesiveness. Life quality in terms of mental health was correlated with

neighbourhood social cohesion. Societal networks are associated with societal cohesion. According to relationship status, network size, contact frequency, and activity involvement, Windsor et al. (2016) evaluated the social networks of 2001 midlife and older individuals for diversity. Even after accounting for the effects of age, sex, education, and employment position, social network diversity was still linked to self-reported mental health and confined social networks to those with poor mental health.

What about younger people? The research that has been evaluated so far has primarily focused on adults. In connection with the Harvard School of Public Health's College Health Behavior Study, VanKim and Nelson (2013) evaluated 14,706 college students from 94 undergraduate institutions across the United States. Social connection was measured using two questions: having close friends (five or more and fewer than five) and socializing time (two hours or more and less than two hours per day). For both male and female students, low socialising was linked to higher risks of poor mental health and felt stress. Rethon et al. (2012) investigated 15,770 randomly selected homes in 2004 when the primary participants were 13–14 years old, as part of the Longitudinal Study of Young People in England, and 13,539 households during the follow-up one year later, with an emphasis on even younger people. Mental health was evaluated using the 12-item General Health Questionnaire; depression and/or anxiety were indicated by a score of 4 or above. Social capital served as the foundation for social involvement, and family social capital was determined by the strength of parent-child bonds and adult interest in the child, as well as parental surveillance, which refers to how frequently parents know where their children are in the evenings and establish curfews on school nights. Parental social networks, teenage sociability, and adolescent participation in extracurricular activities made up the community social capital. For both male and female adolescents, family social capital but not community social capital resulted in a third fewer chance of mental illness. These findings imply that social closeness to parents, at least for young to middle-aged teenagers, is crucial for mental health.

Both young people and elderly people use social media, and although this is a fiercely discussed topic right now, it seems that having strong social media connections is beneficial for mental health. Bessiere et al. (2010) discovered that social media is actually related with less depression than other forms of online

communication with friends and family. In a review published in 2014, Pantic came to the conclusion that while the evidence is still preliminary, there is no solid proof that social media negatively affects mental health. Social connectedness in many forms has been proved to improve mental health, so it stands to reason that social media will do the same.

The impact of early social bonding on mental health serves as a reminder of how crucial social connection is. The two basic categories of attachment (bonding) styles are secure and insecure, with the former resulting from nurturing, perceptive, and responsive parenting (Bee and Boyd, 2004). Insecure attachment happens when cares are unresponsive, inconsistent, and fail to support the young kid, leading to questions about one and others (Atwool, 2006). Secure attachment gives a person a sense of being socially worthy and the confidence to trust that others will be trustworthy. There is seemed to be some correlation between early attachment style and later-life mental health outcomes, even though it can be shaky (Gittleman et al., 1998). Palitsky et al. (2013) discovered that insecure attachment is linked to higher risks of suicide thoughts, suicide attempts, and all analysed mental disorders after analysing data from the National Comorbidity Survey Replication comprising 5692 adults over the age of 18. These mental disorder characteristics are less likely to occur when there is a secure attachment. After adjusting for any confounding factors, both the insecure and secure attachment results remained consistent. According to Beatson and Taryan's 2003 evaluation of the pertinent data, stable connection lowers the hypothalamic-pituitary-adrenal axis' activation during a crucial developmental period, which lowers the risk of depression in later life.

According to Yeh and Inose (2003: 1), social connection pertains to interpersonal interactions and their benefits for both individuals and society. Being socially connected is deemed crucial for productivity and moral participation in any society. Yeh and Inose (2003: 1) suggest that healthy family relationships and individuals possessing opportunities and skills to make friends foster social connectedness. Consequently, feelings of safety, belonging, good health, and employment opportunities are enhanced. Language plays a role in maintaining social cohesiveness in societies.

The language abilities of young people influence their social acceptance. Identity, a central theme in discursive psychology according to Maynard and Perakyala (2003: 244), involves speakers presenting themselves, those they converse with, and those they discuss as having specific identities through conversation. The social connectedness of teenagers transitioning into early adulthood is a crucial component of their lives. Duru (2008) highlights the significance of social ties in addressing adjustment issues, loneliness, social support, and connectivity during the critical period between high school and college. Telford (2014) emphasizes the role of the English language in social relations, citing various factors that have propelled English outside English-speaking nations, driven by increasing global interconnectedness.

Participation in social interactions often requires a common language, with English frequently serving this purpose for individuals from diverse linguistic backgrounds. Adeyemi (2012) argues that English is particularly essential for young Motswana in Botswana, referencing Recommendation 31 of the Revised National Policy on Education. English is considered a tool for effective communication, study, and work, facilitating access to technology and information services in Botswana. Proficiency in English is seen as crucial in the country's socioeconomic structure and educational system, influencing employment opportunities and social advancement. Adeyemi suggests that in Botswana, where a pass in English is a requirement for admission to postsecondary institutions, young individuals likely place high value on linguistic capital, and parents may encourage their children to master the English language

#### **2.2.4.1. Concluding Remarks**

It is clear that more research is needed in this area as the study of language learners' mindsets is still in its early stages. It can be assumed that there is a relationship because a substantial relationship between learners' thinking beliefs and their motivation in numerous domains was discovered.

Exploring the potential connection between L2 motivation and linguistic mindsets reveals promising preliminary results, suggesting that applying the mindset theoretical framework is pertinent to second language learning. These findings may contribute to shaping improved beliefs and behaviors among second language learners.

The prevailing notion that language acquisition requires a special talent might be challenged by the success of mindset interventions, promoting the adoption of a growth mindset that emphasizes anyone's capacity to learn a language. However, questions persist about the generalizability of these findings across different contexts. Despite the promising results in mindset intervention studies showing significant shifts in learners' mindsets and increased motivation and achievement, concerns remain. One notable issue is the limited depth of research experience in mindset interventions. Many interventions have been relatively basic, such as reading an article supporting growth mindset views, potentially resulting in only a modest and transient shift. Another concern involves the reliance on multiple-scale items to measure learners' mindsets, categorizing them into two groups (entity or incremental mentality) based on Likert scales or forced choices. This approach confines students' perceptions to abstract categories, restricting their ability to express their intellectual strengths and weaknesses. Furthermore, previous studies on mindsets have predominantly utilized quantitative research methods. To gain a more comprehensive understanding of learners' beliefs and their relationship to learning behavior, employing multiple data collection techniques is recommended. This approach aims to provide a fuller picture of learners' beliefs and behaviors, allowing educators and researchers to grasp a more nuanced understanding of the interplay between mindset and language learning.

### **2.3. Research objectives and questions of the present study**

In the same setting as the current study, Albalawi (2018) discovered that more than half of foundation university students have fixed mindset views about their capacity for and success in learning foreign languages. These points to an immediate requirement for a growth mindset intervention, which I think will positively affect their levels of motivation and productivity. Just one recent intervention study on linguistic thinking beliefs was carried out with secondary students (Lanvers, 2020). However, it was previously stated that this intervention had several shortcomings that might have had an impact on the outcomes (Section 2.5.4). To increase L2 motivation and enhance learners' L2 experiences, no intervention study has been carried out that specifically focuses on altering learners' mindset beliefs.

By implementing a language mindset intervention on middle foreign language (FL) learners, the current study intends to close this gap by examining its impact on altering their language learning beliefs, which in turn has an impact on their FL motivation and adaptive behaviors. Our goal is to examine learners' own perceptions of their language mindsets and achievement attitudes by listening to them speak about their personal language learning experiences. In order to obtain a more complete picture of how the intervention may have affected learners' beliefs and learning behaviors', interviews will also be conducted after the intervention in addition to surveys to assess learners' mindset beliefs.

This project will make a major contribution to the literature as the first attempt to change learners' views about language acquisition through an intervention study that employs materials particularly designed for enhancing learners' attitudes about FL learning and assessing the impact of this on FL motivation.

This study will be important for understanding the mindsets of L2 learners and may be useful to those researching social connectivity views. The results of this study could also affect future research on teaching and learning L2. Since no prior research has been done on this subject, it could be useful for academics to understand whether students who support various language mindsets might have varying levels of grit. Social connectedness is another subject that this study examines in relation to Language learning. Since groundbreaking investigations have been devoted to it, the idea of connectedness has become well-known in the field of psychology. Based on the previously mentioned review, the hypotheses of this study are formed as follows:

Question 1 : Do Second language learners get affected by the norms, social beliefs and grits of their mother language?

Questions 2: What's the relationship between second language acquisition and early age?

## **2.4. Conclusion**

In this chapter, a review of the relevant literature is presented in a manner that is thematically organized and is driven by the aims of the research. After providing an in-depth explanation of this study's major ideas and factors, the authors next evaluated

previous research that had produced results that were comparable to those of the present investigation. In the first place, we went through some explanations of implicit theories, and then moved on to talk about the notion of mentality and its two subcategories, fixed and growth mindset. Following that, we looked at some important research on states of consciousness. In subsequent steps, the means of cultivating a growth mindset as well as various mindset intervention experiments that have been published in the literature were elaborated. After that, grit and social connectedness were discussed, as significant research was presented.

### **3. METHODOLOGY**

#### **3.1. Introduction**

This chapter provides an overview of study design, participants, and data collection tools. First, the current study's research approach will be separated into its component sections. The environment in which the data was collected and the participants will both be covered in the second section of this study. An extensive overview of the data collection procedure will next follow. After that, a report will be made on the instruments that were utilised in this investigation. In conclusion, the data analysis process will be discussed when the section is complete.

### **3.2. Plan for the Study**

The current research adopts a quantitative research approach, characterized by the collection of numerical data for the analysis of phenomena using mathematically based methods, particularly statistics (Aliaga and Gunderson, 2002, p. 1). According to Hopkins (2008), the primary objective of quantitative studies is to establish whether a connection exists between a dependent variable and an independent variable within a given population, considering various variables.

This study is descriptive in nature, as data were collected without altering the conditions or the environment during the collection process. Survey research, as defined by Balnaves and Caputi (2001), involves collecting data from individuals about their characteristics, thoughts, and behaviors through methods like surveys or questionnaires. It is a quantitative research method that provides insights into the attitudes, opinions, and features of a specific population (Creswell, 2005).

The survey method is favored by researchers due to its ability to represent a sizable population, cost and time efficiency, and versatility in data collection methods such as direct surveys, web-based surveys, interviews, and phone surveys (Cresswell, 2005; Fraenkel et al., 2012; Mertens, 2005). Cross-sectional studies, which collect data and make comparisons at a single moment in time, are distinguished from longitudinal studies, which follow subjects over time with repeated measurements. This study employs a cross-sectional design as it does not involve repeated observations over time. Cross-sectional designs are often preferred for their efficiency, simplicity, and cost-effectiveness, while longitudinal studies are known for their expense and time-consuming nature.

### **3.3. Setting**

This study was conducted in Kirkuk, in the north of Iraq. Both genders and L2 learners will be represented in the participation pool through random sampling. The sample of the study will include 250 English language learners. Age = 14–17 years. The students are studying general English courses at governorate schools in the 2022–23 academic years. All of the students study (English for Iraq, book 8-9-10-11), as their course book. The students study English language alongside the rest of their

lessons at school, with one lesson consisting of 35-45 minutes per day. The curriculum book maintains the inclusion of all language skills, and oral and written tests are conducted within the time specified for learning on a monthly and seasonal basis.

### 3.4. Participants

In the northern Iraqi city of Kirkuk, this study was carried out. Participants were chosen by random sampling from L2 learners of both sexes. There were 250 English language learners in the study's sample. 14 to 17 years old. In the academic years 2022–2023, the students are enrolled in general English courses at governorate schools. One week prior to the commencement of data collection, a test will be given to participants to determine their level of proficiency. Based on their performance on the final exam, the students' language proficiency level is low to intermediate. Their final marks at the end of the semester were used to gauge their L2 achievement. They were required to complete an exam that covered several reading, comprehension, grammar, vocabulary, writing, listening, and speaking assessments. (English for Iraq Book 8-9-10-11) is the required text for all students. The highest attainable grade in the Iraqi educational system is 100, with grades ranging from 0 to 100 for each semester. They need to earn at least a 50 in order to pass a course. Because course grades—rather than standardized tests—have been demonstrated to be more strongly correlated with motivational and personality characteristics "Arens, Morin, & Watermann, 2015" and because they are frequently used in L2 research (Brown, Plonsky, & Teimouri, 2018), we chose them as a measure of L2 achievement. Additionally, parents and children provided their informed consent.

**Table 3:** Demographic Distribution of the Sample

		<b>Numbers</b>
<b>Gender</b>	Female	85
	Male	165
<b>Languages spoken</b>	Turkish	Mother tongue
	English	Second Language
<b>Schools involved</b>	Barish Preparatory School for Boys	110 males
	Barish Intermediate School for boys	55 males
	Ulker Secondary School for girls	85 females
<b>Age range</b>	(14–17) years	

### 3.5. Data Collection

To conduct the investigation, approval was sought and obtained from the University Ethics Commission, necessitating the completion of required paperwork, including securing consent forms from the developers of the scales used in the study. After a few weeks, the Ethics Commission granted the necessary approval for the study to proceed. A proficiency test was administered one week prior to data collection to assess participants' competency. Based on their final exam scores, students demonstrated low to intermediate language competency, and their semester grades will be indicative of their L2 achievements. The assessment covered reading comprehension, grammar, vocabulary, writing, listening, and speaking skills. All students utilized the "English for Iraq book 8-9-10-11." Iraqi semester grades, ranging from 0 to 100 with 100 as the highest, are crucial for passing a study year, requiring a minimum score of 50. In L2 research, course grades are preferred over standardized tests as they exhibit a closer relationship to motivational and personality factors (Arens, Morin, & Watermann, 2015). Students and parents gave informed consent. Primary data were obtained through the use of 68 different items of paper-based and online (closed-ended) questionnaires, which were disseminated evenly among the population of 250 students who attended one of three different schools. The data for this research was also gathered through the secondary source of doing research, which consists of things like journals, articles, magazines, and various publications from the government.

**Table 4:** Data collection tools

<b>Subject 1: language mindset</b>	Dweck's mindset instrument 2009 (DMI)
<b>Subject 2: Grit</b>	(Grit-S), "developed by Duckworth and Quinn" (2009)
<b>Subject 3: Social connectedness</b>	Social connectedness scale; Lee and Robbins (1998)

### 3.6. Instruments

### **3.6.1. Dweck's mindset instrument (DMI)**

The Language Mindsets test, a tool developed by Lou and Noels (2017), comprises 18 items assessing beliefs in general language intelligence (GLB), second language aptitude (L2B), and attitudes about age sensitivity in language acquisition (ASB). Social closeness was measured using the Lee and Robbins (1998) Social Connectivity Scale, and a brief Grit Scale (Grit-S) from Duckworth and Quinn (2009) was employed, consisting of eight questions, with four focusing on perseverance of effort (POE).

For the Language Mindsets scale, a total of nine items were used, three for each sub-dimension, with three items being inverted. Prior research suggesting that reversed items could lead to cognitive strain and increased measurement error led to the elimination of these nine reversed items (Eifermann, 1961; Krosnick & Presser, 2010; Wilson, 1961). Participants used a scale from strongly disagreeing (1) to strongly agreeing (5) to express their agreement level with the statements, where higher scores indicated a stronger growth mentality. The scale demonstrated a reliable Cronbach's alpha value of 0.86.

The instrument incorporated both fixed- and incremental-item statements. Fixed-item statements (items 1, 2, 4, and 6) consider intelligence as static and unalterable, while incremental statements (items 3, 5, 7, and 8) propose that intellect is malleable. Incremental item ratings were flipped to ensure that disagreeing with a fixed item statement equated to agreeing with an incremental item statement (e.g., 1 becomes 6, 2 becomes 5, etc.). Scores between 1 and 3 were indicative of a fixed mindset, scores between 4 and 6 indicated a growth mindset, and scores between 3 and 4 suggested an ambiguous mindset, indicating a tendency towards both fixed and growth mindsets. Growth mentality items are substantially and adversely associated (-0.69 and -0.86) with fixed mindset items suggesting that a person will disagree with the fixed mentality items if they agree with the development mindset things. (Dweck, 1999). The researcher translated this instrument into the participants' native language, Turkish, taking into account their language proficiency. The participants were therefore given the Turkish translation rather than the original version. Due to the presence of several native English and Turkish speakers among the team, translation

and back-translation processes were used to ensure that there were no differences between the two versions.

### **3.6.2. (Grit-S), developed by Duckworth and Quinn (2009)**

The Grit Scale (short) assesses an individual's capacity to maintain focus and interest in long-term goals, measuring their perseverance in pursuing those goals. Developed by Duckworth and Quinn (2009) as a derivative of the Grit-O scale, the Grit-S scale underwent testing across various samples, including adults and adolescents. After eliminating items with poor or negative correlations with the latent construct grit, the reliability ( $\alpha$ ) of total, interest, and effort scale scores ranged from 0.73 to 0.83, 0.73 to 0.79, and 0.60 to 0.78 across the four samples, respectively.

Research on grit as a personality trait associated with achievement and aspirations has utilized various measures. Grit has been linked to academic outcomes such as performance, retention, and final ranking, as well as life satisfaction, well-being, and happiness. Additionally, personality traits like hardiness and characteristics from the Big Five model have shown connections to grit. The construction of items for the Grit Scale considered both theoretical foundations and empirical findings on grit and persistence, incorporating expert evaluations. Exploratory and confirmatory factor analysis supported a second-order factor model with a general grit factor and two specific components: perseverance of effort and consistency of interests. This model, proposed by Duckworth et al. (2007) and Duckworth & Quinn (2009), demonstrated that the overall grit score accounted for approximately 4% of the variance in various measures of individual accomplishment, including educational attainment, academic achievement, and school retention. Notably, the total grit score did not exhibit a positive correlation with IQ but showed a significant association with a conscientiousness measure derived from a Big Five personality inventory.

MacIntyre & Khajavy (2021) stated that there are cautions to be considered in grit research:

1. Examine if a certain study's grit and its associated variables are relatively broad (based on what Teimouri et al. refer to as domain-general grit) or domain-specific, which is the way that SLA grit research is going. Researchers should think

about combining domain-general scales with L2-specific grit measures until more data is available to examine how they connect to one another and determine whether a more domain-specific measure would have different correlations with L2-specific variables. There are other challenges that highlight the necessity to very precisely define the ideas and take into account the processes under research, even while the relative breadth or specificity of the grit notion is a problem. To be clear, consistency of interest is not the same as passion, as Oxford and Khajavy's paper demonstrates, to use Duckworth's definition. The relationship between grit and emotions in SLA needs to be conceptualised more precisely.

2. Utilise the methodologies that are most pertinent to the result being looked at while measuring the idea.

3. Describe how grit helps people overcome different sorts of adversity. Grit is a quality that manifests itself under hard or difficult circumstances when a rational person could give up. Although it is essential to understanding what grit is, research projects don't always directly address the challenge issue. According to the study by Thorsen et al., 'rest and relaxation' conditions during language learning do not necessarily involve grit or its subcomponents in the same way that difficult subjects do.

### **3.6.3. Social connectedness scale; Lee and Robbins (1998)**

As a sort of relational schema, social connectedness was defined by Lee and Robbins (1998) as "the subjective awareness of being in close relation with the social world" (p. 338). The social connection measure evaluates how much young people feel a part of their social surroundings. Its target demographic is young people, ages 14 to 18. The tester can select from 1 (strongly disagree) to 6 (strongly agree) for each of the eight things. A higher score denotes a stronger sense of social connectivity. Items are totaled. The scale is quite dependable. (internal consistency >.92).

Cronbach's alpha coefficient to measure the stability of the axes of the study tool.

**Table 5:** Source: prepared by the researcher based on SPSS results.

<b>The axis</b>	<b>Number of phrases</b>	<b>Alpha Cronbach</b>
<b>Social c. scale</b>	41	73.2%
<b>Mindset scale</b>	18	70.7%
<b>Grit scale</b>	9	69.5%

It is clear from the previous table that Cronbach's alpha coefficient for all axes of the questionnaire is high, ranging between (0.695 and 0.732), which is greater than 0.06, which indicates the existence of internal consistency within these axes. It is noted that the closer the Cronbach's alpha coefficient is to one, the more this indicates a high internal consistency and stability. Therefore, the questionnaire has a high degree of stability and can be relied upon applied study and analysis of its results.

**Table 6:** Tests of Normality for the Questionnaire

<b>Tests of Normality</b>	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
<b>total_Mindset_scale</b>	.114	252	.000	.952	252	.000
<b>total_Grit_scale</b>	.091	252	.000	.977	252	.000
<b>total_Social_scale</b>	.078	252	.001	.959	252	.000

### 3.7. Data Analysis

In the quantitative correlational study presented, both descriptive and inferential statistical analyses were conducted using SPSS Statistics 21.0 to analyze the collected data. Parametric tests were applied to variables with a normal distribution, while non-parametric tests were used for variables lacking a normal distribution. Preliminary analyses included a proficiency level test for the sample and an exploratory factor analysis of the DMI (Dynamic Mindset Inventory) to establish its underlying factor structure, considering the translation of the DMI questionnaire into Turkish by the researcher. The DMI's reliability was also assessed to ensure its accuracy in measuring the intended construct.

Upon revisiting the research topics, Spearman Brown emerged as the most suitable method for the core research question. Given the aim of investigating the connection between Second Language Acquisition (SLA) and mindset, correlation analysis, suitable for exploring the strength of the relationship between continuous variables, was chosen. A positive correlation would indicate a simultaneous increase in

both variables, while a negative correlation would suggest an inverse relationship. Descriptive statistics, including mean and standard deviation calculations, were employed for sub-research topics to assess students' motivation levels in language acquisition.

### **3.8. Conclusion**

In this chapter, the methodology of the study was comprehensively discussed, encompassing the research design, research environment and participants, instruments, data collection, and data analysis. The study was characterized as a non-experimental survey-based research with a quantitative correlational design. The participants, comprising a total of 250 middle and high school students, were drawn from three different locations: the Barish Preparatory School, the Barish Intermediate School for boys, and the Ulker Secondary School for girls. The data were collected using tools such as Dweck's Mentality Scale (DMI), Grit-S by Duckworth and Quinn (2009), and the Social Connection Scale developed by Lee and Robbins (1998), which were found to be credible and applicable in the research. A detailed explanation of the data analysis process was provided, outlining the instruments and methods employed to assess both the primary research and sub-research questions. The ensuing chapter will present the outcomes of the data analysis.

## **4. RESULTS**

### **4.1. Introduction**

This chapter reports the statistical results of the current thesis and helps to illustrate the statistical analysis of the data. Tables display the quantitative data collected by surveys, and a detailed presentation of the qualitative data coding results follows. Furthermore, all of the results are presented in a manner that responds to the study's research questions, which are listed below:

- Second language learners get affected by the norms, social believes, and grits of their mother language.
- Language acquisition is more vibrant if obtained at an early age.

## 4.2. General Attitude towards Grit

The results regarding what participants think about their general attitudes towards in L2 Mindsets, L2 Grit, and Social Integration in this part. The percentages are demonstrated in Table 7.

**Table 7:** Descriptive Statistics of “Grit Scale”

Item	Very much like me	Mostly like me	Somewhat like me	Not much like me	Not like me at all	Mean	S.D
<b>1. I will not allow anything to stop me from making progress in learning a foreign language.</b>	86 34.1%	56 22.2%	51 20.2%	30 11.9%	29 11.5%	2.44	1.36
<b>2. I am a diligent foreign language learner.</b>	41 16.3%	44 17.5%	75 29.8%	41 16.3%	51 20.2%	3.07	1.34
<b>3. Now that I have decided to learn a foreign language, nothing can prevent me from reaching this goal.</b>	86 34.1%	47 18.7%	61 24.2%	35 13.9%	23 9.1%	2.45	1.32
<b>4. When it comes to a foreign language, I am a hard-working learner.</b>	52 20.6%	62 24.6%	75 29.8%	37 14.7%	26 10.3%	2.69	1.24
<b>5. I put much time and effort into improving my weaknesses in learning a foreign language.</b>	52 20.6%	69 27.4%	44 17.5%	37 14.7%	50 19.8%	2.86	1.42
<b>Consistency of Interest.</b>							
<b>6R. I think I have lost my interest in learning a foreign language.</b>	27 10.7%	34 13.5%	51 20.2%	57 22.6%	83 32.9%	3.54	1.35
<b>7R. I have been obsessed with learning a foreign language in the past but later lost interest.</b>	41 16.3%	33 13.1%	60 23.8%	55 21.8%	63 25.0%	3.26	1.39

<b>8R. My interests in learning a foreign language change from year to year.</b>	51 20.2%	61 24.2%	75 29.8%	47 18.7%	18 7.1%	2.68	1.19
<b>9R. I am not as interested in learning a foreign language as I used to be.</b>	47 18.7%	38 15.1%	46 18.3%	55 21.8%	66 26.2%	3.22	1.45

Referring to Table 7, it is evident that the item "I will not allow anything to stop me from making progress in learning a foreign language" received the highest percentage of agreement (M=2.44, SD=1.36), while the item "I think I have lost my interest in learning a foreign language" garnered the lowest percentage of agreement (M=3.54, SD=1.35). In terms of Consistency of Interest, students generally express agreement with their level of interest (M=2.86, SD=1.42). In summary, the mean scores from the overall scale indicate that a majority of the students agree with each item in Section 2.

### **4.3. General Attitude towards Language Mindsets**

The results regarding what participants think about their general attitudes towards in language mindsets in this part. The percentages are demonstrated in Table 8 & 9&10.

#### **4.3.1. Linguistic Intelligence**

In this section of the current chapter the essential items in the questionnaire were distinguished so that they could be presented more clearly, as seen in Table 8 below.

**Table 8:** Descriptive statistics of students' opinions regarding linguistic intelligence

	<b>Strongly agree</b>	<b>Moderately agree</b>	<b>Slightly agree</b>	<b>Slightly disagree</b>	<b>Moderately disagree</b>	<b>Strongly disagree</b>	<b>Mean</b>	<b>S.D</b>
<b>1. You have a certain amount of language intelligence, and you can't really do much to change it.</b>	27 10.7%	36 14.3%	23 9.1%	23 9.1%	25 9.9%	118 46.8%	4.34	1.87
<b>2. Your language intelligence is something about you that you can't change very much.</b>	40 15.9%	20 7.9%	19 7.5%	30 11.9%	56 22.2%	87 34.5%	4.2	1.84
<b>3. To be honest, you can't really change your language intelligence.</b>	26 10.3%	35 13.9%	28 11.1%	28 11.1%	35 13.9%	100 39.7%	4.23	1.81
<b>4. No matter who you are, you can significantly change your language intelligence level.</b>	146 57.9%	26 10.3%	29 11.5%	10 4.0%	13 5.2%	28 11.1%	2.21	1.75
<b>5. You can always substantially change your language intelligence.</b>	137 54.4%	30 11.9%	31 12.3%	24 9.5%	19 7.5%	11 4.4%	2.17	1.55
<b>6. No matter how much language intelligence you have, you can always change it quite a bit.</b>	106 42.1%	43 17.1%	17 6.7%	22 8.7%	24 9.5%	40 15.9%	2.74	1.92

Based on Table 8, it is observed that 82 students (31.9%) strongly agree that linguistic intelligence plays a crucial role in language learning and may be challenging to change ( $M=3.32$ ,  $SD=1.79$ ). On the other hand, 46.8% of the students ( $N=118$ ) strongly disagree with the statement "You have a certain amount of language intelligence, and you can't really do much to change it" ( $M=4.34$ ,  $SD=1.87$ ). Additionally, 57.9% of the students ( $N=146$ ) strongly agree with the idea that "No matter who you are, you can significantly change your language intelligence level" ( $M=2.21$ ,  $SD=1.75$ ). Despite the students concurring on the significance of linguistic intelligence in language learning, 106 of them (42.1%) strongly agree that, regardless of linguistic intelligence, it can always be changed to some extent ( $M=2.74$ ,  $SD=1.92$ ).

#### **4.3.2. The Ability to Learn a New Language**

## Attitudes towards the Integration of the ability to learn a new language

In this section of the current chapter the pertinent elements in the questionnaire were isolated from the others so that they could be presented more clearly, as seen in Table 9 below.

**Table 9:** Descriptive statistics of students' opinions of the ability to learn a new language.

	<b>strongly agree</b>	<b>moderately agree</b>	<b>slightly agree</b>	<b>slightly disagree</b>	<b>moderately disagree</b>	<b>strongly disagree</b>	<b>Mean</b>	<b>S.D</b>
<b>7. To a large extent, a person's biological factors (e.g., brain structures) determine his or her abilities to learn new languages.</b>	60 23.8%	58 23.0%	40 15.9%	27 10.7%	37 14.7%	30 11.9%	3.05	1.72
<b>8. It is difficult to change how good you are at foreign languages.</b>	44 17.5%	31 12.3%	58 23.0%	32 12.7%	41 16.3%	46 18.3%	3.53	1.72
<b>9. Many people will never do well in foreign languages even if they try hard because they lack natural language intelligence.</b>	11 4.4%	22 8.7%	45 17.9%	33 13.1%	47 18.7%	94 37.3%	4.45	1.55
<b>10. You can always change your foreign language ability.</b>	116 46.0%	45 17.9%	23 9.1%	19 7.5%	16 6.3%	33 13.1%	2.5	1.81
<b>11. In learning a foreign language, if you work hard at it, you will always get better.</b>	169 67.1%	32 12.7%	1 0.4%	16 6.3%	10 4.0%	24 9.5%	1.96	1.68
<b>12. How good you are at using a foreign language will always improve if you really work at it.</b>	162 64.3%	20 7.9%	15 6.0%	6 2.4%	19 7.5%	30 11.9%	2.17	1.83

According to Table 9, two hundred and two students (80.1%) agree that diligence in learning the language always helps to develop it (M=1.96, SD=1.68). and one hundred and ninety-seven students (78%) agree that the extent of proficiency in using the language will always improve if work is done on it(M=2.17, SD=1.83), Also,

158 of the students (62.7%) agree that biological factors, such as brain structure, largely determine the ability to learn new languages.(M=3.05 , SD=1.72)

### 4.3.3. The ability to learn with age

In this section of the chapter, attitudes towards the integration of the ability to learn with age are presented more distinctly by isolating relevant items from the questionnaire. These items are showcased in Table 10 below.

**Table 10:** Descriptive statistics of students' opinions of the ability to learn with age

	<b>strongly agree</b>	<b>moderately agree</b>	<b>slightly agree</b>	<b>slightly disagree</b>	<b>moderately disagree</b>	<b>strongly disagree</b>	<b>Mean</b>	<b>S.D</b>
<b>13. How well a person speaks a foreign language depends on how early in life he/she learned it.</b>	72 28.6%	31 12.3%	57 22.6%	27 10.7%	27 10.7%	38 15.1%	3.08	1.78
<b>14. People can't really learn a new language well after they reach adulthood.</b>	20 7.9%	29 11.5%	36 14.3%	49 19.4%	31 12.3%	87 34.5%	4.2	1.67
<b>15. Even if you try, the skill level you achieve in a foreign language will advance very little if you learn it when you are an adult.</b>	25 9.9%	30 11.9%	53 21.0%	51 20.2%	40 15.9%	53 21.0%	3.83	1.6
<b>16. Everyone could do well in foreign language if they try hard, whether they are young or old.</b>	98 38.9%	48 19.0%	32 12.7%	26 10.3%	22 8.7%	26 10.3%	2.62	1.73
<b>17. How well a person learns a foreign language does not depend on age; anyone who works hard can be a fluent speaker in that language.</b>	107 42.5%	47 18.7%	22 8.7%	33 13.1%	24 9.5%	19 7.5%	2.51	1.69
<b>18. Regardless of the age at which they start, people can learn another language well.</b>	109 43.3%	49 19.4%	35 13.9%	19 7.5%	18 7.1%	22 8.7%	2.42	1.65

According to Table 10, it is observed that 193 students, constituting 76.7%, agree that learning another language can be accomplished effectively regardless of age (M=2.42, SD=1.65). Additionally, 67% of the students disagree with the statement, “People cannot learn a new language well after they reach adulthood” (M=4.2, SD=1.73). Furthermore, 70.7% of the students agree that anyone can master a foreign language if they put in their best effort, regardless of their age (M=2.62, SD=1.73).

From the above findings, the answer to the second research question suggests that there is no significant impact on language acquisition being more crucial if acquired at an early age.

#### 4.4. General Attitude towards Social Connectedness

The findings pertaining to the participants' overall perceptions of social integration in this section. The percentages are demonstrated in Table 11 & 12 & 13 & 14.

##### 4.4.1. The relationship with their friends

Attitudes towards the Integration of students' opinions of their relationships with their friends the relevant items were separated and demonstrated in this part of the current chapter in Table 11 below.

**Table 11:** Descriptive statistics of students' opinions of their relationships with their friends

	All of the time	Most of the time	Sometimes	Not at all	Mean	S.D
<b>1. I feel comfortable when I am with my friends.</b>	141 56.0%	41 16.3%	64 25.4%	6 2.4%	1.74	0.92
<b>2. I feel like I belong with my friends.</b>	74 29.4%	46 18.3%	68 27.0%	64 25.4%	2.48	1.16
<b>3. My friends and I share the same values.</b>	74 29.4%	78 31.0%	87 34.5%	13 5.2%	2.15	0.91
<b>4. I feel valued by my friends.</b>	110 43.7%	79 31.3%	41 16.3%	22 8.7%	1.9	0.97
<b>5. My friends understand me.</b>	105 41.7%	81 32.1%	52 20.6%	14 5.6%	1.9	0.92
<b>6. My friends really listen to what I have to say</b>	100 39.7%	55 21.8%	80 31.7%	17 6.7%	2.06	0.99

<b>7. I feel pride when I think about my friends.</b>	87 34.5%	86 34.1%	38 15.1%	41 16.3%	2.13	1.06
<b>8. My friends and I have a similar sense of humour.</b>	113 44.8%	71 28.2%	46 18.3%	22 8.7%	1.91	0.988
<b>9. I usually know how my friends are feeling.</b>	70 27.8%	84 33.3%	80 31.7%	18 7.1%	2.18	0.92
<b>10. I have fun when I am with my friends.</b>	163 64.7%	41 16.3%	41 16.3%	7 2.8%	1.57	0.86
<b>11. I feel safe when I am with my friends.</b>	111 44.0%	80 31.7%	54 21.4%	7 2.8%	1.83	0.86
<b>12. I share similar interests with my friends.</b>	69 27.4%	85 33.7%	75 29.8%	23 9.1%	2.21	0.95
<b>13. My friends help me if I need it.</b>	152 60.3%	69 27.4%	17 6.7%	14 5.6%	1.58	0.85
<b>14- I respect my friends.</b>	143 56.7%	63 25.0%	35 13.9%	11 4.4%	1.66	0.88
<b>15. I have a friend that I trust with my deepest secrets.</b>	141 56.0%	59 23.4%	30 11.9%	22 8.7%	1.73	0.98

According to Table 11. 182 students (72.3%) feel comfortable when they are with their friends ( $M=1.74$ ,  $SD=0.9$ ). Two hundred and four students (81%) are having fun with their friends ( $M=1.57$ ,  $SD=0.8$ ). Also, 88% of students receive help and support from their friends ( $M=1.58$ ,  $SD=0.81$ ). We find that 80.7% respect their friends as well ( $M=1.66$ ,  $SD=0.81$ ).

In general, we find (81%) that students enjoy good, comfortable, and healthy friendship relationships that help them develop and learn. ( $M=1.9$ ,  $SD=0.94$ ).

#### **4.4.2. The relationship with their Families**

Attitudes towards the Integration of students' opinions of their relationships with their families to present them more distinctly were separated from the others in the questionnaire and demonstrated in Table 12 below.

**Table 12:** Descriptive statistics of students' opinions of their relationships with their families

	All of the time	Most of the time	Sometimes	Not at all	Mean	S.D
<b>16. I feel like I belong in my family.</b>	156 61.9%	45 17.9%	17 6.7%	34 13.5%	1.72	1.07
<b>17. I feel valued in my family.</b>	165 65.5%	25 9.9%	48 19.0%	14 5.6%	1.65	0.97
<b>18. I feel that I am respected in my family.</b>	135 53.6%	60 23.8%	44 17.5%	13 5.2%	1.74	0.92
<b>19. There are people at home who care about my wellbeing.</b>	146 57.9%	45 17.9%	48 19.0%	13 5.2%	1.71	0.95
<b>20. I feel pride when I think about being a member of my family.</b>	173 68.7%	32 12.7%	30 11.9%	17 6.7%	1.57	0.94
<b>21- I feel safe at home.</b>	157 62.3%	50 19.8%	30 11.9%	15 6.0%	1.62	0.91
<b>22. I have people in my family that I trust who I can confide in.</b>	179 71.0%	41 16.3%	11 4.4%	21 8.3%	1.5	0.92
<b>23. My family spends time together.</b>	133 52.8%	51 20.2%	54 21.4%	14 5.6%	1.8	0.96
<b>24. I usually know where members of my family are and what they are doing.</b>	115 45.6%	71 28.2%	37 14.7%	29 11.5%	1.92	1.03

According to Table 12. We find that 220 students, 87.3%, have people in their family whom they trust ( $M=1.57$ ,  $SD=0.91$ ). We note, according to the table data, that 82.1% of students feel safe at home ( $M=1.62$ ,  $SD= 0.91$ ).

In general, we find that 62% of the students felt that they almost always feel a comfortable, safe, and healthy relationship with their family. ( $M=1.69$ ,  $SD=0.96$ ).

#### **4.4.3. The relationship with their Community**

Attitudes towards the Integration of students' opinions of their relationships with their community demonstrated in Table 13 below.

**Table 13:** Descriptive statistics of students’ opinions of their relationships with their community

	All of the time	Most of the time	Sometimes	Not at all	Mean	S.D
25. I volunteer through an organization in my community.	118 46.8%	41 16.3%	34 13.5%	59 23.4%	2.13	1.24
26. Some people in my neighborhood know my name.	108 42.9%	76 30.2%	55 21.8%	13 5.2%	1.89	0.92
27. There are people in my street who will say hello to me when I walk past.	114 45.2%	64 25.4%	52 20.6%	22 8.7%	1.93	1.01
28. I help out people in my community who need a hand.	87 34.5%	75 29.8%	50 19.8%	40 15.9%	2.17	1.07
29. I think that some of the people in my street think I am a nice person.	137 54.4%	61 24.2%	50 19.8%	4 1.6%	1.69	0.85
30. I know the names of some of the people in my street.	86 34.1%	59 23.4%	91 36.1%	16 6.3%	2.15	0.97
31. I do volunteer activities with my friends in my community.	75 29.8%	55 21.8%	76 30.2%	46 18.3%	2.37	1.09
32. I spend time socially with people in my local community.	68 27.0%	68 27.0%	76 30.2%	40 15.9%	2.35	1.04
33- . I participate in a community club or organization (e.g., sporting club, interest group or religious group).	90 35.7%	50 19.8%	75 29.8%	37 14.7%	2.23	1.09

According to Table 13. 184 of the students, 73%, agree that “Some people in my neighborhood know my name” (M=1.89, SD=0.92). And 78% of the students agreed that “I think that some of the people in my street think I am a nice person” (M=1.69, SD=0.85). Also, 55% had participated in a social activity such as a sports club or community organization (M=2.23, SD=1.09).

In general, 63.2% of students, according to their opinions, have good and healthy social relationships. (M=2.1 /SD=1.03).

#### 4.4.4. The relationship with their School and their Classmates

**Table 14:** Descriptive statistics of students' opinions about their relationships with school and their classmates

	All of the time	Most of the time	Sometimes	Not at all	Mean	S.D
<b>34. I feel comfortable about how to behave at my school.</b>	75 29.8%	39 15.5%	103 40.9%	35 13.9%	2.39	1.06
<b>35. I feel pride when I think about being a part of my school.</b>	86 34.1%	60 23.8%	82 32.5%	24 9.5%	2.17	1.01
<b>36. I feel like I belong at my school.</b>	79 31.3%	58 23.0%	68 27.0%	47 18.7%	2.33	1.11
<b>37. I feel valued at my school.</b>	79 31.3%	78 31.0%	61 24.2%	34 13.5%	2.2	1.03
<b>38. I respect my teachers at school.</b>	105 41.7%	58 23.0%	49 19.4%	40 15.9%	2.1	1.12
<b>39. I feel safe at school.</b>	88 34.9%	71 28.2%	64 25.4%	29 11.5%	2.13	1.02
<b>40. I am treated fairly at school.</b>	95 37.7%	56 22.2%	45 17.9%	56 22.2%	2.25	1.18
<b>41- I work well with others in my class.</b>	109 43.3%	91 36.1%	47 18.7%	5 2.0%	1.79	0.81

According to Table 14. 163 students (64.7%) said they had respect for teachers at school. (M=2.1, SD=1.1) Also, of 200 students (79.4%) of their opinions agreed with “I work well with others in my class.” (M=1.79, SD=0.81)

In general, we find that 61% of students feel comfortable at school and their relationship is good. (M=2.17, SD=1.04). From the previous tables, we find that the students' opinions agreed that they enjoy and they have good family, friendship, and social relationships.

#### 4.5. Results

Based on the data and results presented in the research, they can be integrated as follows:

The results indicate that students hold positive attitudes towards learning and are determined to succeed in second language acquisition. These attitudes can be viewed as aspects of a growth-oriented language learning mindset. Emphasizing a

positive mindset towards learning a second language can further enhance their determination and persistence, reinforcing the belief that their efforts will lead to success.

Students in this study perceive linguistic intelligence as a significant factor influencing their language learning abilities. This perception aligns with a fixed mindset that emphasizes inherent abilities. However, it's notable that many students also believe in the malleability of language skills through hard work and dedication. Integrating a growth mindset perspective here, we can emphasize that intelligence and language proficiency can be developed over time with effort and persistence.

The research highlights that students believe effective second language learning is achievable regardless of age, suggesting an open-minded and growth-oriented view. This aligns with a growth mindset that rejects the notion of age as a significant barrier to language learning. Encouraging this mindset can motivate learners of all ages to invest in their language learning journey with confidence.

The strong positive social relationships that students enjoy within their families, friendships, communities, and schools can be linked to the idea of a supportive environment fostering a positive language learning mindset. A nurturing social environment can contribute to a growth-oriented mindset by providing encouragement, support, and belief in the learner's potential to succeed in language acquisition.

In conclusion, integrating the concept of second language mindsets into the research results suggests that fostering a growth-oriented mindset in language learning, focusing on effort and persistence, can further enhance students' positive attitudes and determination to succeed in second language acquisition, irrespective of their perceived linguistic intelligence or age. Additionally, cultivating a supportive social environment can play a vital role in nurturing a positive mindset and encouraging students in their language learning endeavors.

#### 4.6. Correlation Between the study Variables

		grit	Social Connectedness	Linguistic intelligence	New language	Learning age	mindset
<b>grit</b>	Pearson Correlation	1	-0.086	-0.038	0.076	0.002	0.018
	Sig. (2-tailed)		0.176	0.547	0.231	0.975	0.778
	N	252	252	252	252	252	252
<b>Social Connectedness</b>	Pearson Correlation	-0.086	1	-0.006	-0.009	0.001	-0.007
	Sig. (2-tailed)	0.176		0.923	0.884	0.986	0.917
	N	252	252	252	252	252	252
<b>Linguistic intelligence</b>	Pearson Correlation	-0.038	-0.006	1	0.302**	0.499**	0.781**
	Sig. (2-tailed)	0.547	0.923		0.000	0.000	0.000
	N	252	252	252	252	252	252
<b>New language</b>	Pearson Correlation	0.076	-0.009	0.302**	1	0.431**	0.755**
	Sig. (2-tailed)	0.231	0.884	0.000		0.000	0.000
	N	252	252	252	252	252	252
<b>Learning age</b>	Pearson Correlation	0.002	0.001	0.499**	0.431**	1	0.800**
	Sig. (2-tailed)	0.975	0.986	0.000	0.000		0.000
	N	252	252	252	252	252	252
<b>mindset</b>	Pearson Correlation	0.018	-0.007	0.781**	0.755**	0.800**	1
	Sig. (2-tailed)	0.778	0.917	0.000	0.000	0.000	
	N	252	252	252	252	252	252

**Table 15: (Correlation is significant at the 0.01 level (2-tailed)).**

The result of testing the correlation shows a strong correlation between the studied variables (Grit, Social Connectedness, Linguistic intelligence, New language, Learning age, and mindset) the correlation observed variable is a significantly positive correlation.

The provided correlation examines the relationships between various variables, including Grit, Social Connectedness, linguistic intelligence, new language, learning age, and mindset. Each cell in the matrix shows the Pearson correlation coefficient ( $r$ ) between the corresponding pairs of variables, along with the associated p-value to indicate the statistical significance of the correlation.

- Grit:

1. Grit has a very weak negative correlation with social (-0.086), but this correlation is not statistically significant ( $p = 0.176$ ).
  2. Grit has very weak positive correlations with New Language (0.076) and Learning age (0.002), and a very weak positive correlation with mindset (0.018). None of these correlations are statistically significant (all  $p > 0.05$ ).
- Social Connectedness:
    1. Social has a very weak negative correlation with grit (-0.086), which is not statistically significant ( $p = 0.176$ ).
  - Linguistic Intelligence:
    2. Linguistic Intelligence has a weak negative correlation with grit (-0.038), but this correlation is not statistically significant ( $p = 0.547$ ).
    3. Linguistic Intelligence has a strong positive correlation with New Language (0.302) and Learning age (0.499), and a very strong positive correlation with mindset (0.781). All these correlations are highly statistically significant ( $p < 0.01$ ).
  - New Language:
    4. New Language has a very weak positive correlation with grit (0.076), but this correlation is not statistically significant ( $p = 0.231$ ).
    5. New Language has a strong positive correlation with Linguistic Intelligence (0.302), Learning age (0.431), and mindset (0.755). All of these correlations are highly statistically significant ( $p < 0.01$ ).
  - Learning Age:
    6. Learning Age has very weak positive correlations with grit (0.002), social (0.001), and New language (0.431), but all these correlations are not statistically significant ( $p > 0.05$ ).
    7. Learning age has a very strong positive correlation with Linguistic Intelligence (0.499) and mindset (0.800). Both of these correlations are highly statistically significant ( $p < 0.01$ ).
  - Mindset:

8. Mindset has a very weak positive correlation with grit (0.018), but this correlation is not statistically significant ( $p = 0.778$ ).
9. Mindset has a very strong positive correlation with Linguistic Intelligence (0.781), New language (0.755), and Learning age (0.800). All of these correlations are highly statistically significant ( $p < 0.01$ ).

The most notable findings are the strong positive correlations between linguistic intelligence, New language, Learning age, and mindset. These relationships are statistically significant at the 0.01 level, suggesting that changes in one of these variables are associated with predictable changes in the others. The lack of significant correlations between some variables indicates that they are not strongly related in this dataset.

## 4.7. Regression

### 4.7.1. Linear Regression Between learning age and Constant new Language

**Table 16:** a. Dependent Variable: Learning age

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	2.063		0.147		14.079	0.000	1.774 2.352
NEWLANG	0.356		0.047	0.431	7.543	0.000	0.263 0.449

The coefficient for Learning age ( $\beta_1$ ) shows a positive significance ( $p < 0.05$ ), indicating that there is a significant relationship between the age at which language learning begins and the level of newly acquired language proficiency.

The positive sign of the coefficient indicates the direction of the relationship it suggests that as learning age increases, new language also increases.

The Linear regression analysis show a significant relationship between Learning age and New language, indicating that the age at which language learning begins is an important factor in predicting language proficiency. These findings have implications for language education and may inform language acquisition policies.

#### 4.7.2. Linear Regression Between Learning age and Constant Linguistic Intelligence

**Table 17:** b. (constant linguistic intelligence)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
<b>1</b> (Constant)	1.742	0.157		11.110	0.000	1.433	2.051
linguistic intelligence	0.413	0.045	0.499	9.107	0.000	0.323	0.502

Linear Regression between learn age and constant linguistic intelligence show a positive coefficient, it suggests that there is a positive relationship between Learning age and constant linguistic intelligence. In other words, as the age at which language learning begins learning age increases, the constant level of linguistic intelligence (constant linguistic intelligence) also tends to increase.

## **5. DISCUSSION**

### **5.1. Introduction**

The objective of the present study is to investigate a model that elucidates how learners' perceptions of their language proficiency, known as language mindsets, influence the goals they choose to pursue and the outcomes of those choices in the face of challenging situations. The results indicate that students demonstrate optimistic attitudes and unwavering determination toward mastering a second language, reflecting a growth-oriented language learning mindset. This positive mindset can positively impact their persistence, reinforcing their belief that diligent efforts will lead to success. While some students recognize linguistic intelligence as a crucial factor in language learning, it is noteworthy that many also acknowledge the adaptability of language skills through dedicated effort. By integrating a growth mindset perspective, it is evident that language proficiency and intelligence can evolve over time. Furthermore, students exhibit an open-minded view that effective second language learning is achievable at any age, rejecting the notion of age as a significant barrier. Cultivating this mindset can inspire learners of all ages to embark on their language-learning journey with confidence. Strong and positive social relationships within families, friendships, communities, and schools are closely associated with a supportive environment that nurtures a positive language learning mindset.

In this section, we delved deeper into the multifaceted aspects of second language acquisition (SLA) by analyzing the interplay between linguistic intelligence, determination, perseverance, and social interaction. We drew insights from recent studies, providing both a broader perspective and a comparative analysis of the findings of our research.

#### **5.1.1. Linguistic Intelligence and Mindsets**

The role of linguistic intelligence in SLA has been a topic of considerable interest. Our research, in line with Nourollah Zarrinabadi and Elnaz Afsharmehr (2022), found that students often perceive linguistic intelligence as a crucial factor influencing their language learning capabilities. However, as our study suggests, a

growth mindset can significantly influence how linguistic intelligence is perceived. Students with a growth mindset tend to believe that their language skills can be improved through dedication and effort, regardless of their initial linguistic intelligence. This aligns with the “Growth Mindset” pattern identified by Zarrinabadi and Afsharmehr (2022) among language teachers.

### **5.1.2. Grit (Determination and Perseverance)**

Determination and perseverance are key drivers in the pursuit of language proficiency. In our research, students demonstrated a strong determination to succeed in their SLA journey, echoing the findings of Majid Elahi Shirvan, Tahereh Taherian, Mojdeh Shahnama, and Elham Yazdanmehr (2021). Their study emphasizes the positive impact of grit on language learning, highlighting how learners with high grit levels tend to enjoy the learning process more and maintain their commitment even when faced with challenges.

### **5.1.3. Age and Language Learning**

An intriguing aspect we explored was the role of age in SLA, aligned with the research by Zarrinabadi and Afsharmehr (2022). Our findings echoed theirs, suggesting that students, irrespective of age, remain steadfast in their language learning endeavors. This finding challenges the notion that age acts as a significant barrier to language acquisition. Instead, it underscores the power of determination and perseverance, a point similarly reinforced by our study.

### **5.1.4. Social Interaction and Connectedness**

Social interactions are of paramount importance in the language learning process. Our research is consistent with the findings of Y. Teimouri, E. Sudina, & L. Plonsky (2021), highlighting that students' social connectedness and their perception of the language learning environment are impacted by their determination and grit. Individuals with elevated levels of grit are inclined to be more actively involved in social interactions involving the target language. This aligns with our findings that

students generally enjoy positive social relationships, whether with family, friends, or within their language learning communities.

### **5.1.5. Classroom Environment Support**

Teachers are instrumental in shaping the language learning experience. Our study suggests that teachers who foster a growth mindset can significantly impact students' motivation, paralleling the findings of Zarrinabadi and Afsharmehr (2022). Additionally, as highlighted by Majid Elahi Shirvan et al. (2021), teacher support and a positive classroom environment can enhance students' enjoyment of learning and their determination to excel in SLA.

### **5.1.6. Implications and Future Directions**

Incorporating the findings from our research and the selected studies, it is evident that linguistic intelligence, determination, perseverance, and social interaction are interconnected facets of successful SLA. Understanding the dynamics between these elements can inform more effective language teaching practices and curriculum development.

Future research in this domain should continue to explore the interplay of these factors over an extended period, using rigorous longitudinal methodologies, as advocated by Teimouri, Sudina, and Plonsky (2021). Additionally, investigating the specific strategies and interventions that can nurture a growth mindset and grit among language learners should be a focus of subsequent research.

## **5.2. Conclusion**

In the course of this study, we have undertaken a comprehensive exploration into the intricate interplay between mindset, grit, and social connectedness belief among second language learners. Our investigation into these constructs has yielded invaluable insights into the determinants of the language acquisition journey. The findings of this study suggest that a growth mindset, characterized by the belief in the malleability of language proficiency, is closely linked to language learners'

perseverance and resilience. Those who embrace challenges as opportunities for growth exhibit higher levels of grit, demonstrating their capacity to sustain effort and maintain long-term commitment to language learning goals. Furthermore, the study underscores the pivotal role played by social connectedness belief in the language learning process. Those who perceive a strong sense of belonging and support within their language learning communities tend to exhibit heightened motivation and engagement in their learning pursuits. Nevertheless, we remain cognizant of the study's limitations. The cross-sectional nature of our research hinders the definitive establishment of causality, necessitating the recognition of the influence of contextual and individual factors on our results. In light of these findings and limitations, the study carries substantial implications for educational practices and future research directions. Educators and policymakers should recognize the critical role of mindset, grit, and social connectedness in shaping language learners' experiences and outcomes. Strategies to nurture these factors in language education hold the potential to enhance language acquisition. As we gaze into the horizon of future research, the study beckons us toward longitudinal inquiries that delve deeper into the development of mindset, grit, and social connectedness belief over time. Exploring cultural variations and age-related differences in these constructs offers a promising avenue for further investigations. Additionally, the design and evaluation of interventions aimed at enhancing these factors in language learners could significantly benefit the field of language education. In conclusion, our study underscores the necessity of adopting a holistic approach to language learning, one that acknowledges the synergy between psychological factors and social dynamics. By fostering a growth mindset, nurturing grit, and cultivating a sense of social connectedness, we empower language learners to navigate the challenges of acquiring a second language with resilience and determination, ultimately contributing to their success in the diverse and interconnected world of today.

### **5.3. Implications of the Study**

In light of the comprehensive examination of second language learning and its associated factors, several significant implications for educational practice, curriculum

development, social support, further research, engagement with parents and peers, psychological support, and technology integration emerge.

Firstly, within the realm of educational practice, the study underscores the potential benefits of fostering a growth mindset among second language learners. It suggests that cultivating this mindset can significantly influence and enhance language learning outcomes. Educational institutions and teachers are encouraged to implement strategies aimed at instilling a growth mindset, thereby positively impacting the language learning journey of students.

Moreover, if grit is identified as a significant factor in language learning, educators should consider incorporating grit-building activities and establishing support mechanisms within their teaching approaches. Recognizing and nurturing perseverance and determination in learners can play a pivotal role in achieving language proficiency.

In the domain of curriculum development, the study advocates for the integration of activities and exercises that promote grit and a growth mindset within language curricula. By doing so, educational programs can better equip learners with the psychological tools essential for effective language acquisition.

The role of social support in language learning cannot be understated. Schools and institutions should acknowledge the influence of social connectedness and interaction among learners. Implementing support systems that facilitate peer interaction and collaboration can create a conducive environment for enhanced language learning experiences.

Looking towards the future, the study emphasizes the necessity for additional research, particularly in the form of longitudinal studies. Understanding how factors such as mindset, grit, and social connectedness evolve over time and their enduring impact on language proficiency is crucial. Additionally, delving into cross-cultural analyses can provide valuable insights into the cultural nuances affecting these psychological constructs in language learning.

Engagement with parents and peers emerges as a key strategy. Educational institutions are encouraged to actively promote family involvement and peer support

initiatives, recognizing the vital role they play in a learner's language acquisition journey.

Acknowledging the psychological dimensions of language learning, institutions are prompted to consider providing psychological support services. Recognizing and addressing the emotional well-being of learners concerning mindset, grit, and social connectedness is fundamental to fostering a conducive and supportive learning environment.

Lastly, in this digital age, technology integration plays a pivotal role. Online language learning platforms and tools should be designed to incorporate features that support the development of a growth mindset, grit, and social connections among users. Leveraging technology in this manner can enhance the efficacy and engagement of language learners, fostering a holistic learning experience.

In summary, this study offers multifaceted implications that can revolutionize the landscape of second language learning. By heeding these suggestions, educational stakeholders can collectively work towards optimizing the language learning journey for all learners, laying the foundation for a more inclusive and effective educational system.

#### **5.4. Recommendations for Future Research**

One major source of worry is the potential underrepresentation of the larger community of second language learners. To provide a full understanding of second language learners in varied circumstances, including different socioeconomic backgrounds, educational institutions, and language programs, it is critical to diversify the pool of participants. Factors such as social desirability bias or the desire to display oneself favorably can have an impact on the veracity of the data collected. This potential bias could have a major impact on the study's reliability and validity. To counteract this, researchers should attempt to provide a welcoming and non-judgmental environment, emphasizing anonymity and confidentiality in responses in order to encourage more honest and authentic input. To ensure correct representation and understanding of results, researchers should use culturally sensitive research techniques and interpretation procedures. Integrating qualitative methods alongside

quantitative ones is quite advantageous for deepening understanding of the constructs under inquiry. While surveys provide valuable quantitative data, qualitative methods, such as interviews and open-ended questions in questionnaires, can offer in-depth insights into the nuances of mindset, grit, and social connectedness beliefs. Furthermore, the static form of a survey may not properly reflect the dynamic changes and developments in second language learners' attitude, grit, or social connectedness views over time. These psychological constructs evolve and adapt as a result of varied educational experiences and life circumstances. To fully appreciate the scope of these constructs and their evolution, researchers should explore using a longitudinal method, tracking individuals over time and gathering data at different intervals to precisely observe changes and trends. Another important consideration in research involving second language learners is cultural bias. Cultural norms, beliefs, and attitudes influence the ideas of mindset, grit, and social connectedness belief. The variability of participants' proficiency levels might not always be adequately accounted for in the analysis. Therefore, it's crucial to categorize participants based on proficiency levels and consider this factor when drawing conclusions. And considering our expertise in the various sides of our research and having established a strong association between the dimensions of the study and its subjects, we suggest that researchers should explore the subject of passion further. Specifically, they should seek to identify shared elements with culture, particularly in relation to the multilingual backgrounds within the learners' homes, families, and surrounding environments.

### **5.5. Limitation of the Study**

In the study of second language learners, it is imperative to acknowledge and address the inherent limitations and considerations that can influence the research outcomes. One significant concern is the potential lack of representation of the broader population of second language learners. If the study confines its participants to a specific demographic, such as students from a general school or language program, the findings might not be generalizable to a more diverse range of contexts. It is crucial to diversify the pool of participants to ensure a comprehensive understanding of second language learners in various settings, encompassing different socio-economic backgrounds, educational institutions, and language programs.

Moreover, participants in research studies may not always provide entirely accurate or honest responses. Factors like social desirability bias or the desire to present oneself in a favorable light can influence the accuracy of the data collected. This potential bias could significantly impact the reliability and validity of the study. To mitigate this, researchers should strive to create a comfortable and non-judgmental environment, emphasizing anonymity and confidentiality in responses to encourage more truthful and genuine feedback.

Establishing a definitive cause-and-effect relationship can prove to be challenging in studies involving second language learners. Various factors, both seen and unseen, may interplay and influence the outcomes, making it difficult to isolate one specific cause for a given effect. For instance, a study might observe an improvement in language proficiency in a group of learners after implementing a particular teaching methodology. However, other variables, such as motivation, prior language exposure, or external influences, could also be contributing factors. Acknowledging and exploring this complexity is essential for a nuanced interpretation of research findings.

Furthermore, the static nature of a survey may not effectively capture the dynamic changes and developments in the mindset, grit, or social connectedness beliefs of second language learners over time. These psychological constructs are subject to evolution and adaptation, influenced by various educational experiences and life events. To grasp the full scope of these constructs and their development, researchers should consider employing a longitudinal approach, tracking participants over an extended period, and gathering data at multiple intervals to observe changes and trends accurately.

In considering the applicability of findings, researchers must recognize that different demographic factors, such as age groups, language proficiency levels, and cultural backgrounds, can significantly influence the interpretation of results. Language proficiency, in particular, plays a pivotal role. The proficiency levels of participants can vary widely, impacting their mindset, grit, and social connectedness beliefs, but this variability might not always be adequately accounted for in the analysis. Therefore, it's crucial to categorize participants based on proficiency levels and consider this factor when drawing conclusions.

Cultural bias is another critical aspect to be mindful of in research involving second language learners. The concepts of mindset, grit, and social connectedness belief are influenced by cultural norms, values, and attitudes. Different cultural backgrounds may have varying perspectives on education, language acquisition, and motivation. Hence, including participants from diverse cultural backgrounds is essential to comprehensively understand how these constructs manifest and are perceived across various cultures. Researchers should employ culturally sensitive research methods and interpretation strategies to ensure accurate representation and interpretation of results.

To deepen the understanding of the constructs under investigation, incorporating qualitative methods alongside quantitative approaches is highly beneficial. While surveys provide valuable quantitative data, qualitative methods, such as interviews and open-ended questions in questionnaires, can offer in-depth insights into the nuances of mindset, grit, and social connectedness beliefs. Qualitative data can reveal personal experiences, motivations, and challenges faced by second language learners, enriching the analysis and shedding light on the human aspect of the study.

In conclusion, researching second language learners requires a meticulous examination of limitations and various factors. Acknowledging and addressing these aspects can enhance the validity, applicability, and depth of research findings, ultimately contributing to a more comprehensive understanding of second language acquisition and the influencing factors.

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## APPENDIX

### Questionnaire

- Dweck's mindset instrument (DMI)
- (Grit-S), developed by Duckworth and Quinn (2009)
- Social connectedness scale; Lee and Robbins (1998)

Name: Armine imat

Age: 16

Name of the School: Ülker K.2 lisesi

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
	Kesinlikle Katılmıyorum	Orta Derecede Katılmıyorum	Biraz Katılmıyorum	Biraz Katılıyorum	Orta Derecede Katılıyorum	Kesinlikle Katılıyorum
1. You have a certain amount of language intelligence, and you can't really do much to change it. 1. Belirli bir miktarda dil zekanız var ve bunu değiştirmek için pek bir şey yapamazsınız.			✓			
2. Your language intelligence is something about you that you can't change very much. 2. Dil zekanız, sizinle ilgili çok fazla değiştiremeyeceğiniz bir şeydir.	✓					
3. To be honest, you can't really change your language intelligence. 3. Bir yabancı dilde elde ettiğiniz beceri düzeyi, denerseniz bile, onu yetişkinken öğrenirseniz çok az ilerleyecektir.	✓					
4. No matter who you are, you can significantly change your language intelligence level. 4. Genç ya da yaşlı herkes çok çalışırsa yabancı dilde başarılı olabilir.						✓
5. You can always substantially change your language intelligence. 5. Bir kişinin bir yabancı dili ne kadar iyi öğrendiği yaşa bağlı değildir; çok çalışsan herkes o dili akıcı bir şekilde konuşabilir.						✓

Name: -----

Age: -----

Name of the School: -----

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
	Kesinlikle Katılmıyorum	Orta Derecede Katılmıyorum	Biraz Katılmıyorum	Biraz Katılıyorum	Orta Derecede Katılıyorum	Kesinlikle Katılıyorum
1. You have a certain amount of language intelligence, and you can't really do much to change it. 1. Belirli bir miktarda dil zekanız var ve bunu değiştirmek için pek bir şey yapamazsınız.						
2. Your language intelligence is something about you that you can't change very much. 2. Dil zekanız, sizinle ilgili çok fazla değiştiremeyeceğiniz bir şeydir.						
3. To be honest, you can't really change your language intelligence. 3. Bir yabancı dilde elde ettiğiniz beceri düzeyi, denesenez bile, onu yetişkinen öğrenirseniz çok az ilerleyecektir.						
4. No matter who you are, you can significantly change your language intelligence level. 4. Genç ya da yaşlı herkes çok çalışırsa yabancı dilde başarılı olabilir.						
5. You can always substantially change your language intelligence. 5. Bir kişinin bir yabancı dili ne kadar iyi öğrendiği yaşa bağlı değildir; çok çalışsan herkes o dili akıcı bir şekilde konuşabilir.						

	Strongly Disagree Kesinlikle Katılmıyorum	Moderately Disagree Orta Derecede Katılmıyorum	Slightly Disagree Biraz Katılmıyorum	Slightly Agree Biraz Katılıyorum	Moderately Agree Orta Derecede Katılıyorum	Strongly Agree Kesinlikle Katılıyorum
<p>6. No matter how much language intelligence you have, you can always change it quite a bit.</p> <p>6. İnsanlar hangi yaşta başlarsa başlasınlar başka bir dili iyi bir şekilde öğrenebilirler.</p>						
<p>1. To a large extent, a person's biological factors (e.g., brain structures) determine his or her abilities to learn new languages.</p> <p>1. Bir kişinin biyolojik faktörleri (örneğin beyin yapıları) büyük ölçüde onun yeni dil öğrenme yeteneklerini belirler.</p>						
<p>2. It is difficult to change how good you are at foreign languages.</p> <p>2. Yabancı dilde ne kadar iyi olduğunuzu değiştirmek zordur.</p>						
<p>3. Many people will never do well in foreign languages even if they try hard because they lack natural language intelligence.</p> <p>3. Pek çok insan, doğal dil zekasından yoksun oldukları için çok uğraşsalar bile yabancı dillerde asla başarılı olamazlar.</p>						
<p>4. You can always change your foreign language ability.</p> <p>4. Yabancı dil becerinizi her zaman değiştirebilirsiniz.</p>						
<p>5. In learning a foreign language, if you work hard at it, you will always get better.</p> <p>5. Bir yabancı dil öğrenirken, üzerinde çok çalışırsanız, her zaman daha iyi olursunuz.</p>						

	Strongly Disagree Kesinlikle Katılmıyorum	Moderately Disagree Orta Derecede Katılmıyorum	Slightly Disagree Biraz Katılmıyorum	Slightly Agree Biraz Katılıyorum	Moderately Agree Orta Derecede Katılıyorum	Strongly Agree Kesinlikle Katılıyorum
6. How good you are at using a foreign language will always improve if you really work at it. 6. Bir yabancı dili kullanmakta ne kadar iyi olduğunuz, üzerinde gerçekten çalışırsanız her zaman gelişecektir.						
1. How well a person speaks a foreign language depends on how early in life he/she learned it. 1. Bir kişinin bir yabancı dili ne kadar iyi konuştuğu, onu ne kadar erken yaşta öğrendiğine bağlıdır.						
2. People can't really learn a new language well after they reach adulthood. 2. İnsanlar yetişkinliğe ulaştıktan sonra gerçekten yeni bir dil öğrenemezler.						
3. Even if you try, the skill level you achieve in a foreign language will advance very little if you learn it when you are an adult. 3. Bir yabancı dilde elde ettiğiniz beceri düzeyi, denerseniz bile, onu yetişkinken öğrenirseniz çok az ilerleyecektir.						
4. Everyone could do well in foreign language if they try hard, whether they are young or old. 4. Genç ya da yaşlı herkes çok çalışırsa yabancı dilde başarılı olabilir.						
5. How well a person learns a foreign language does not depend on age; anyone who works hard can be a fluent speaker in that language.						



	Not at all Hiç	Sometimes Bazen	Most of the time Çoğu zaman	All of the time Her zaman
I feel comfortable when I am with my friends. Arkadaşlarımla birlikteyken kendimi rahat hissediyorum.				
I feel like I belong with my friends. Kendimi arkadaşlarıma ait hissediyorum.				
My friends and I share the same values. Arkadaşlarım ve ben aynı değerleri paylaşıyoruz.				
I feel valued by my friends. Arkadaşlarım tarafından değerli hissediyorum.				
My friends understand me. Arkadaşlarım beni anlar.				
My friends really listen to what I have to say. Arkadaşlarım gerçekten söyleyeceklerimi dinliyorlar.				
I feel pride when I think about my friends. Arkadaşlarımı düşündüğümde gurur duyuyorum.				
My friends and I have a similar sense of humour. Arkadaşlarım ve ben benzer bir mizah anlayışına sahibiz.				
I usually know how my friends are feeling. Genelde arkadaşlarımla nasıl hissettiğini bilirim.				
I have fun when I am with my friends. Arkadaşlarımla birlikteyken eğlenirim.				
I feel safe when I am with my friends. Arkadaşlarımla birlikteyken kendimi güvende hissediyorum.				
I share similar interests with my friends. Arkadaşlarımla benzer ilgi alanlarımı paylaşıyorum.				
My friends help me if I need it. İhtiyacım olursa arkadaşlarım bana yardım eder.				
I respect my friends. arkadaşlarıma saygı duyuyorum. arkadaşlarıma saygı duyuyorum..				
I have a friend that I trust with my deepest secrets. En derin sırlarımla güvendiğim bir arkadaşım var.				
I feel like I belong in my family. Kendimi aileme ait hissediyorum.				
I feel valued in my family. Kendimi aileme ait hissediyorum.				
I feel that I am respected in my family. Aileme bana saygı duyulduğunu hissediyorum.				

	Not at all Hiç	Sometimes Bazen	Most of the time Çoğu zaman	All of the time Her zaman
There are people at home who care about my wellbeing. Evde sağlığını düşünen insanlar var.				
I feel pride when I think about being a member of my family. Ailemin bir üyesi olmayı düşündüğümde gurur duyuyorum				
I feel safe at home. Evde güvende hissediyorum				
I have people in my family that I trust who I can confide in. Ailemde güvenebileceğim, güvenebileceğim insanlar var.				
My family spends time together. Ailem birlikte vakit geçiriyor.				
I usually know where members of my family are and what they are doing. Genelde ailemin üyelerinin nerede olduklarını ve ne yaptıklarını bilirim.				
I volunteer through an organization in my community. Topluluğumdaki bir kuruluş aracılığıyla gönüllü olarak çalışıyorum.				
Some people in my neighborhood know my name. Mahallemdeki bazı insanlar adımlı biliyor.				
There are people in my street who will say hello to me when I walk past. Sokağımda yanımdan geçtiğimde bana merhaba diyecek insanlar var.				
I help out people in my community who need a hand. Topluluğumda yardıma ihtiyacı olan insanlara yardım ediyorum.				
I think that some of the people in my street think I am a nice person. Sokağımdaki bazı insanların benim iyi bir insan olduğumu düşündüğünü düşünüyorum.				
I know the names of some of the people in my street. Sokağımdaki bazı insanların isimlerini biliyorum.				
I do volunteer activities with my friends in my community. Topluluğumdaki arkadaşlarımla gönüllü faaliyetler yapıyorum.				
I spend time socially with people in my local community. Yerel topluluğumdaki insanlarla sosyal olarak zaman geçiriyorum.				

	Not like me at all Bana hiç benzemiyor	Not much like me Bana pek benzemiyor	Somewhat like me Bana biraz benziyor	Mostly like me Çoğunlukla bana benziyor	Very much like me Bana çok benziyor
1. I will not allow anything to stop me from making progress in learning a foreign language. 1. Hiçbir şeyin beni yabancı dil öğrenmede ilerlemekten alıkoymasına izin vermeyeceğim.					
2. I am a diligent foreign language learner. 2. Çalışkan bir yabancı dil öğrencisiyim.					
3. Now that I have decided to learn a foreign language, nothing can prevent me from reaching this goal. 3. Artık bir yabancı dil öğrenmeye karar verdiğim için, hiçbir şey beni bu hedefe ulaşmaktan alıkoymaz.					
4. When it comes to a foreign language, I am a hard-working learner. 4. Yabancı dil söz konusu olduğunda, çalışkan bir öğrenciyimdir.					
5. I put much time and effort into improving my weaknesses in learning a foreign language. Consistency of Interest. 5. Bir yabancı dil öğrenirken zayıf yönlerimi geliştirmek için çok zaman ve çaba harcıyorum. İlgi Tutarlılığı.					
6R. I think I have lost my interest in learning a foreign language. 6R. Yabancı dil öğrenmeye olan ilgimi kaybettiğimi düşünüyorum.					
7R. I have been obsessed with learning a foreign language in the past but later lost interest. 7R. Geçmişte bir yabancı dil öğrenmeye takıntılıydım ama sonra ilgimi kaybettim.					
8R. My interests in learning a foreign language change from year to year. 8R. Yabancı dil öğrenmeye olan ilgim yıldan yıla değişir.					
9R. I am not as interested in learning a foreign language as I used to be. 9R. Yabancı dil öğrenmeye eskisi kadar ilgi duymuyorum.					

	Not at all Hiç	Sometimes Bazen	Most of the time Çoğu zaman	All of the time Her zaman
I participate in a community club or organization (e.g., sporting club, interest group or religious group). Bir topluluk kulübüne veya organizasyonuna katılıyorum (örn. spor kulübü, ilgi grubu veya dini grup).				
I feel comfortable about how to behave at my school. Okulumda nasıl davranacağım konusunda kendimi rahat hissediyorum.				
I feel pride when I think about being a part of my school. Okulumun bir parçası olmayı düşündüğümde gurur duyuyorum.				
I feel like I belong at my school. Kendimi okulumda ait hissediyorum.				
I feel valued at my school. Okulumda değerli hissediyorum.				
I respect my teachers at school. Okuldaki öğretmenlerime saygı duyuyorum.				
I feel safe at school. Okulda kendimi güvende hissediyorum.				
I am treated fairly at school. Okulda bana adil davranılıyor.				
I work well with others in my class. Sınıftaki diğer kişilerle iyi çalışırım.				

## **CURRICULUM VITAE**

Marwa Ahmed Hasan HASAN received her BA in English Language from Kirkuk University, Iraq in 2008. She works as an English teacher in Iraq. Her research interests include linguistics and research methods. In 2021, she joined Karabuk University to pursue her master's degree in Methodology.