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BRIDGING THE GAP: A STUDY ON THE RELATIONSHIP BETWEEN MINDSET AND FOREIGN LANGUAGE ANXIETY

Research Article

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Abstract

This study aimed to investigate the relationship between mindset and foreign language anxiety (FLA) of EFL learners at both a private and a state university in Turkey. Quantitative methods were used and two Likert-scales, Foreign Language Classroom Anxiety Scale (FLCAS) and Dweck's Mindset Instrument (DMI) were administered to collect a set of data. Turkish versions of both scales were used during this phase. As well as foreign language anxiety, its three sub-dimensions, which are communication apprehension, test anxiety, and fear of negative evaluation, were also taken account. The study was conducted at the preparatory school of Gazi University and Atılım University, with a total of 203 participants. The findings revealed that there was no statistically significant correlation between mindset and foreign language anxiety. Moreover, EFL learners' foreign language anxiety was found at a moderate level, and it was also explored that they mostly adopted a growth mindset rather than a fixed mindset.

Keywords: mindset, foreign language classroom anxiety, EFL learners

1. Introduction

Foreign language anxiety (FLA), also known as xenoglossophobia, is considered as one of the most powerful predictors of language achievement and has long been the focus of teachers and educators in the world. Some specific factors that lead to foreign language anxiety have been identified in various studies, and it is commonly believed that foreign language anxiety impairs language learning (e.g., Horwitz, 2001; MacIntyre and Gardner, 1994b; Woodrow, 2006). Another strong predictor of language achievement is the mindset that learners adopt, fixed vs. growth mindset, a famous and broadly embraced concept suggested by Dweck (2006). According to her, students who carry fixed mindset view the source of intelligence is a virtue we are born with, stable and unchangeable whereas those with a growth mindset believe that intelligence is malleable, changeable and can be improved with persistence. The current study sought to find out the relationship, if any, between mindset and foreign language anxiety. Fairly limited empirical research has been carried out in this particular issue, therefore, the study will contribute to the elimination of a gap in the relevant literature.

2. Literature Review

2.1. Mindset

Not all the learners are the same and their beliefs, behaviors, needs and skills highly differ from each other. However, there is one more point which is not all the same in learners: their mindset. Mindset refers to implicit beliefs about the malleability of personal attributes (Dweck, 1999). Based upon research studies regarding implicit theories of intelligence, achievement and success, Dweck (2006) has come up with a new concept named 'mindset',



which makes all the difference in learning and teaching. This new and broadly embraced idea suggests that one can possess one of these two mindsets: fixed mindset or growth mindset. More specifically, Mercer (2012) asserts that the mindset in foreign language education “*reflects the extent to which a person believes that language learning ability is dependent on some immutable, innate talent or is the result of controllable factors such as effort and conscious hard work.*” (p.22).

Those who carry a fixed mindset —entity theorists—support that the possessed intelligence level is stable and unable to change since it is an innate ability. According to Dweck (2005), “*In a fixed mindset, people believe their basic qualities, like their intelligence or talent, are simply fixed traits. They spend their time documenting their intelligence or talent instead of developing them. They also believe that talent alone creates success—without effort. They’re wrong.*” In other words, in a fixed mindset, students do not believe that they can indeed change and improve their existing intelligence since they view it as a stable and inborn quality. It is also worth mentioning that students avoid challenges or opportunities to learn if they feel that they may make mistakes (Mueller and Dweck, 1998, cited in Dweck, 2008). If they make mistakes or something wrong, instead of correcting them, they tend to hide it (Nussbaum and Dweck, 2008) because they can easily give up when they face challenges and obstacles. Moreover, they are apt to ignore useful feedback, or even can take it personally. Since they don’t believe that they become successful as long as they put enough effort, they do not use the feedback to learn, either. Rather, they believe that the higher innate ability they have, the more successful they will be. For this reason, they are afraid of failures as it means constraints or limits that they cannot readily overcome. Furthermore, if they witness the success of their peers, they may feel threatened rather than admiring.

Contrary to the fixed mindset, the growth mindset is met with different characteristics (Dweck, 1999). Those have a growth mindset – incremental theorists- support that one's intelligence is fully shaped by self- improvement and determination (Elliott and Dweck, 1988). This is possible because of neuroplasticity – the brain's ability to restructure itself and to form new connections with more repetitive practices, making it stronger in turn. Dweck (2015) suggests that “*In a growth mindset, people believe that their most basic abilities can be developed through dedication and hard work—brains and talent are just the starting point. This view creates a love of learning and a resilience that is essential for great accomplishment. Virtually all great people have had these qualities.*” To put it differently, the ones who adopt a growth mindset fundamentally believe that talent comes through effort, and their abilities can be further developed when they are dedicated, perseverant and well-trained enough, therefore, intelligence is indeed improvable (Bandura and Dweck, 1985; Dweck and Molden, 2007). As a result, they do not believe that everyone can be very intelligent or genius, but they believe that everyone can be more intelligent when they work harder and put enough effort into what they aim to achieve. The difference between the fixed and growth mindset is summarized by Dweck (2015) as follows: “*In the fixed mindset, everything is about the outcome. If you fail—or if you’re not the best—it’s all been wasted. The growth mindset allows people to value what they’re doing regardless of the outcome. They’re tackling problems, charting new courses, working on important issues. Maybe they haven’t found the cure for cancer, but the search was deeply meaningful*”. Moreover, despite the fact that individuals with a fixed mindset care how they are judged by others, those with a growth mindset focus on their own learning. They welcome feedback as a means to improve rather than ignoring or avoiding it. Furthermore, unlike students with a fixed mindset, if those with a growth mindset make any mistakes, they try to correct it immediately. Failures are just temporary setbacks for growth mindset holders, and they are seen as potential chances for

growth-minded students for instructive feedback and thus their mistakes make indeed their learning better (Dweck, 2006). For this reason, they tend to demonstrate more adaptive behaviors and psychological traits such as resilience in response to failure. The success of their peers makes them inspired and gives them some lessons. Taking all these into consideration, learners who are of the opinion that abilities are fixed are less likely to progress better than others who believe that abilities can be improved.

Dweck and Molden (2007) state that there is also one more category where those who do not strongly hold either of these two mindsets—fixed vs growth- compose. Their work indicated that among children and adults, approximately 40% of them endorse a growth mindset whereas another 40% adopt a fixed mindset. The remaining 20% is undecided, in other words, they fall into somewhere in the middle of the applied scale points. As opposed to Dweck's (2006) argument, Mercer (2012) asserts that a fixed mindset prevails in language learning.

2.2. Foreign Language Anxiety

Among all the affective variables for language achievement such as motivation, attitudes, language aptitude and so on, it has been proved that one of the most important barriers in language achievement is anxiety (Horwitz et al., 1986). Spielberger (1983) defines anxiety as “the subjective feelings of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system”. Scovel (1991) also states that “Anxiety is a psychological construct, commonly described by psychologists as a state of apprehension, a vague fear that is only indirectly associated with an object” (p.18). Besides, it is also seen as “a threat to some value that the individual holds essential to his existence as a personality” (May, 1977, p. 205).

When learning a new language triggers the feeling of anxiety among learners, it is named foreign language anxiety, which is defined as “a distinct complex of self-perceptions, beliefs, feelings, and behaviours related to classroom language learning that arise from the uniqueness of the foreign language learning process” (Horwitz et al., 1986). According to MacIntyre and Gardner (1994b, p. 284), it refers to “the feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning”. Language anxiety is also defined as "a term that encompasses the feelings of worry and negative, fear-related emotions associated with learning or using a language that is not an individual's mother tongue" (MacIntyre and Gregersen, 2012, p. 103). Research on FLA has shown that it is categorized as situation-specific anxiety, which results from a particular reason such as learning or using a foreign language (MacIntyre and Gardner, 1991b).

Numerous studies show the existence of a negative relationship between FLA and foreign language learning among different languages such as English, French, Spanish or Japanese (MacIntyre and Gardner, 1991b; Aida, 1994; Horwitz, 1986). According to MacIntyre and Gardner, a context in which foreign language anxiety is experienced hinders cognitive processing (1994a, 1994b), and it hinders to communicate actively in the target language (MacIntyre and Gardner, 1991a, 1991b). However, there are also various views about this issue. To clarify, some researchers have emphasized the fact that an anxious attitude towards foreign language learning may indeed facilitate the learning process (Spielmann and Radnofsky, 2001). Besides, some of the authors view FLA as a result of learning deficiency (Sparks, Ganschow and Javorsky, 2000). In light of this information, it can be said that the problem of anxiety and its connection to foreign language learning is still an ongoing discussion in the literature. However, it is crucial to note that FLA level of students should not be neglected under any circumstances since it is of utmost importance to support and sustain effective language learning and teaching.

Horwitz (1986) suggests three components related to foreign language anxiety, which are also the sub-dimensions of Foreign Language Classroom Anxiety Scale (Horwitz et al.1986) used in this study: communication apprehension, test anxiety, and fear of negative evaluation. McCroskey (1977) defines communication apprehension as "an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons." (p. 78). Horwitz et al. (1986) also define it as "a type of shyness characterized by a fear of or anxiety about communicating with people." According to McCroskey (1984), communicatively apprehensive people display three typical behaviour patterns: They avoid, withdraw and disrupt the communication. Furthermore, there is no doubt that the environment where people take the test causes anxiety for them. Test anxiety is referred as the second segment of FLA proposed by Horwitz (1986) which is vitally important in people's lives for various reasons. Simply put, it implies a sort of performance anxiety which arises from the fear of deficiency in testing or evaluation environment. Horwitz et al. (1986) assert that students experiencing test anxiety often feel that if their performance in the test is not perfect, it can be considered as a failure since they put unrealistic demands on themselves. Finally, fear of negative evaluation implies "apprehension about others' evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively" (Watson and Friend, 1969: 448). It occurs when foreign language learners are not self-confident enough and not completely sure about what they are saying. Furthermore, since evaluation on each other is an essential part of second language classes, learners feel anxious, insecure and uncomfortable when they are aware of the fact that they are being watched by the teacher and other peers (Zhao, 2007). As a result, it affects their class performance in a negative way. Besides, students tend to believe that they cannot display the proper social impression as they desired. According to Aida (1994, p.157), students with fear of negative evaluation "sit passively in the classroom, withdraw from classroom activities that could otherwise enhance their improvement of the language skills" or even "cut class to avoid anxiety situations". It is essential to state that fear of negative evaluation and test anxiety seem similar at first, however, they are different concepts in that fear of negative evaluation is not only limited to test-taking situations but rather it also includes such anxiety types as social anxiety or public- speaking anxiety. Therefore, it is much broader in scope than test anxiety.

In an effort to take a closer look at the relationship between mindset and foreign language anxiety of EFL learners, the following questions will be investigated in the present study:

1. What is the level of EFL learners' foreign language anxiety?
2. What is the percentage of learners who view intelligence as fixed and growth, and who are undecided?
3. To what extent, if at all, is there a relationship between mindset and foreign language anxiety level of EFL learners?

3. Methodology

3.1. Research Design

The current study adopts a quantitative study design, which refers to "explaining phenomena by collecting numerical data that are analyzed using mathematically based methods in particular statistics." (Aliaga and Gunderson, 2002, p. 1). The current study is descriptive in its nature since the data was collected without changing or manipulating the conditions or the environment. Since the ultimate goal of this study is to describe the characteristics of a group of EFL learners via some surveys, it is fair to say that survey research is adopted in the present study. Survey method is highly preferred by the researchers

because of representing a high population, being cost and time-effective, gathering the data with different ways such as telephone, e-mail, interview, web-based and direct administration of surveys (Cresswell 2005; Fraenkel et al. 2012; Mertens, 2005) and providing fast and precious results. Direct administration was chosen in the present study, providing an easier and faster data collection procedure. While survey research can be used in a descriptive manner as explained, it is also possible to use it for investigating the relationship between the variables involved (Fraenkel et al., 2012). This can be done by combining survey research and correlational research design, and it is crucial to emphasize that the current study exactly tries to do so since it seeks to find out the relationships among a number of variables by administering some sort of surveys.

3.2. Setting and Participants

The present study was conducted in two different settings, one of which is a private university in Ankara whereas the other one is a state university, based on the assumption that findings from these universities would also be generalized to other private and state universities. The first setting is Atılım University Preparatory School, a private university in Ankara, Turkey. The second setting of the study is a state university, Gazi University School of Foreign Languages where the researcher currently works as an English instructor. Both universities aim to equip students with the main foreign language skills required in a global level in order to assist their future studies in their academic life in the most effective way.

The study comprised of a total of 203 participants who were enrolled in various departments and were receiving compulsory English prep-class education. Among 203 participants, 100 (49.26%) of the students are currently studying at Atılım University Preparatory School whereas 103 (50.74 %) of the students are currently studying at Gazi University Preparatory School. Participants were chosen through convenient sampling. They varied in gender, department, type of high school graduated from, L2 proficiency, the number of years they have known English, and any other foreign language they have known different from English. Table 1 summarizes the demographic information of the participants:

Table 1. *Demographic Information about the Participants*

		F	%
Gender	Female	90	44,3
	Male	113	55,7
Department of Study	Natural Sciences	164	80,8
	Social Sciences	39	19,2
Type of High School Graduated	Science High School	21	10,3
	Anatolian High School	86	42,4
	Social Sciences High School	1	,5
	Vocational High School	10	4,9
Type of High School Graduated	Regular High School	11	5,4
	Private High School/College	57	28,1
	Basic High School	11	5,4
	Anatolian Teacher Training High School	6	3,0
L2 proficiency level	Pre-Intermediate	154	75,9
	Intermediate	43	21,2
	Upper-Intermediate	6	3,0
The number of Years English is Known	1-5 years	41	20,2
	5-10 years	113	55,7
	+10 years	49	24,1
Any Other Languages Known Different from English and Native Tongue	Yes	31	15,3
	No	172	84,7

3.3. Data Collection

The data was collected using two Likert scales: the adapted version Dweck's Mindset Instrument (DMI) and Foreign Language Classroom Anxiety Scale (FLCAS). DMI, which was developed by Dweck (2000) and consisted of 8 items in its adapted version, aimed to understand how people view their own intelligence and talent whereas FLCAS consisting of 33 items in total was developed by Horwitz et al. (1986) to measure students' level of foreign language anxiety in the classroom. By taking participants' language qualification into consideration, Turkish versions of both scales were administered to participants. In the present study, the Turkish adaptation version of FLCAS by Aydin (1999) was used. DMI was

translated into their native language, Turkish, by the researcher. Since it was of great importance to have no difference between both versions, the procedures of translation and back-translation were applied thanks to some native speakers of English and Turkish colleagues.

3.4. Data Analysis

In the current quantitative study, descriptive and inferential statistical procedures in SPSS Statistics 21.0 were applied to evaluate the collected data. For the first research question, descriptive statistics were used, and mean and standard deviation were computed so as to explore students' level of foreign language anxiety. For the second research question, students were placed into three different groups (fixed mindset, undecided, and growth mindset) according to their scores in Dweck's Mindset Instrument, and the ratio of students identified with each of these three groups was calculated and analyzed with the help of descriptive statistics by examining mean and frequency distribution. Finally, Spearman-Brown Correlation Coefficient analysis was run to explore the existence of any relationship between foreign language anxiety and mindset.

4. Findings

The first research question investigated the level of foreign language anxiety that EFL learners have. The findings are presented in Table 2 as follows:

Table 2. *Participants' level of foreign language anxiety and its sub-dimensions*

	Mean	Standard Deviation
Communication Apprehension	3,06	0,94
Test Anxiety	3,13	0,85
Fear of Negative Evaluation	2,76	1,01
Foreign Language Anxiety (FLA)	3,03	0,85

According to the descriptive statistics, the mean score for foreign language anxiety ($M=3.03$, $SD=0.85$) is slightly above the mid-point (3.00) of a 6-point Likert Scale. Thus, the foreign language anxiety level of students ($M=3.03$, $SD=0.85$) was found at a moderate level ($M=3.03$, $SD=0.85$) as “students with averages around 3 should be considered slightly anxious” (Horwitz, 2008). As for its sub-dimensions, the participants appeared to have the highest mean value in the sub-dimension of test anxiety ($M=3.13$, $SD=0.85$), showing that test anxiety was the most significant type of anxiety felt at a moderate level in L2 classes. It was followed by communication ($M=3.06$, $SD=0.94$), the result of which also clearly showed that participants slightly experienced communication apprehension in L2 classes. Last but not least, the sub-dimension of fear of negative evaluation released the lowest mean score ($M=2.76$, $SD=1.01$), and this finding indicated that fear of negative evaluation was not experienced as much as the other two types of anxiety mentioned above since “students with averages below 3 are probably not very anxious” (Horwitz, 2008).

Regarding research question 2, which investigates the percentage of participants who view intelligence as fixed and growth, and who are undecided, descriptive statistics were

employed and frequency distribution analysis was used. Frequency distribution analysis of the participants regarding their particular mindset is given in Table 3.

Table 3. *The percentage of learners who hold fixed and growth mindset, and who are undecided*

		Number of Participants	%
Mindset Type	Fixed Mindset	37	18,2
	Undecided	36	17,7
	Growth Mindset	130	64,0
	Total	203	100,0

The findings proposed that 64% of the students were identified as having a growth mindset, viewing intelligence as dynamic, changeable, and not fixed at birth. Furthermore, 18,2% of the students were identified as having a fixed mindset, viewing intelligence as fixed and unchangeable. Lastly, 17,7% of the students were identified as undecided.

Dweck (2006) asserts that about 20% of learners are identified as undecided (DMI score between 3.1-3.9) in their view of intelligence. Taking this into consideration, it can be said that the data collected from this study also support what Dweck (2006) has suggested in her theory in that 17,7% of students from two universities were classified in the undecided category in the current study and it is undoubtedly quite close to Dweck's suggested value of 20%.

Finally, for the last and main research question which seeks to investigate the relationship, if any, between mindset and foreign language anxiety, Shapiro-Wilk Test was first run to see whether the collected data is normally distributed. As Table 4 illustrates below, while the data from the sub-dimension of test anxiety and foreign language anxiety is normally distributed, the data collected from other variables is not normally distributed ($p > 0.05$). Therefore, to understand the correlation between participants' level of foreign language anxiety and their particular mindset type, Spearman-Brown Correlation coefficients were examined.

Table 4. *Test of Normality: Shapiro-Wilk Test Analysis*

	Shapiro-Wilk		
	Statistic	Df	Sig.
Mindset	,945	203	,000
Communication Apprehension	,986	203	,040
Test Anxiety	,987	203	,066
Fear of Negative Evaluation	,974	203	,001
Foreign Language Anxiety (FLA)	,989	203	,106

The correlation coefficients of FLA, its three sub-dimensions, and mindset were presented in Table 5:

Table 5. *Spearman-Brown Correlation Coefficients of the Variables*

		Communication Apprehension	Test Anxiety	Fear of Negative Evaluation	Foreign Language Anxiety (FLA)
Mindset	Correlation Coefficient	-,041	-,040	,017	-,040
	P	,558	,571	,811	,570

As indicated in Table 5, the correlation coefficients among mindset, foreign language anxiety, and the sub-dimensions of communication apprehension, test anxiety and fear of negative evaluation were found quite close to 0. The results showed that a weak negative relationship between students' mindset and level of foreign language anxiety ($r = -.040$, $p = .57$, >0.05) with its sub-dimensions of ($r = -.041$, $p = .55$, >0.05), test anxiety ($r = -.040$, $p = .57$, >0.05), and a weak positive relationship between mindset with fear of negative evaluation ($r = .017$, $p = .81$, >0.05) was found, however, this relationship was not statistically significant. ($p > 0.05$). All in all, no statistical relationship was found between learners' mindset and foreign language classroom anxiety level.

5. Discussion of Results

The present study mainly sought to examine the relationship, if any, between mindset and foreign language anxiety of EFL learners. Overall, the findings ascertained that no significant relationship existed between the two variables. To put it another way, holding a fixed or growth mindset was not related to the level of FLA experienced by EFL learners. Reviewing the existing literature on the topic, it is clearly seen that a limited number of studies focus on this relationship, and claim that there is a significant correlation between mindset and anxiety (Bandura and Jourden, 1991; Martocchio, 1994; Northrop, 2014; Schleider, Abel, and Weisz,

2015; Trudeau, 2009). These studies found out that individuals with more fixed- minded experience more anxiety. Taking this into consideration, the results of this research study contradict with the aforementioned studies. However, it is vital to emphasize that these studies did not specifically investigate any existence of a significant relationship between mindset and FLA as opposed to the present study; however, the type of anxiety they focused on was actually different. For example, Martocchio's study (1994) concerned computer anxiety whereas Schleider, Abel, and Weisz (2015) dealt with general anxiety and depression. Furthermore, Northrop (2014) investigated the relationship among student mindset, parent mindset, and anxiety, which includes such different anxiety types as trait anxiety, trait-somatic anxiety, trait-cognitive anxiety, state anxiety, state-somatic anxiety, and state-cognitive anxiety while Trudeau (2009) focused on only test anxiety. Thus, the difference found between the results of the current study and other aforementioned studies might stem from the fact that they tried to explore the relationship between mindset and anxiety, not particularly foreign language anxiety, as mentioned above. To the best of researcher's knowledge, since almost no study exists exploring the correlation between mindset and FLA, the current study will hopefully be a starting point in this issue and contribute to fulfilling the gap that can be observed in the literature. In addition, comparing the findings of the current study with future studies specifically focusing on the correlation between mindset and foreign language anxiety will draw a better and more precise picture to evaluate the results.

The study also tried to explore what the level of foreign language anxiety of EFL learners is. It is concluded on the basis of the findings that EFL learners' language anxiety has been found at a moderate level, which indicates similar results with Mesri (2012) and Rajanthran et al. (2013). They also found participants' level of anxiety at a moderate level in their studies. As Horwitz (2008) states, "*Students with averages around 3 should be considered slightly anxious, while students with averages below 3 are probably not very anxious. Students with average 4 and above are probably fairly anxious*". It is claimed that moderate level of anxiety in second language education triggers the motivation for the target language, and as a result, learners would put much more effort so as to learn and acquire that foreign language (Khairi and Nurul Lina, 2010). The results of prior studies express that language anxiety is a quite different and unique type of anxiety than other types (Horwitz, 1986), and types of language anxiety are communication apprehension, test anxiety, and fear of negative evaluation as stated before. Regarding this, in the current study, the first and main type of language anxiety was attributed to test anxiety, which has a negative correlation with grades, self-confidence and test performance (Oxford, 1990, as cited in Piechurska-Kuciel, 2008). This revealed that EFL learners felt anxious, nervous, or worried about an upcoming assessment. It was followed by communication apprehension, and finally, fear of negative evaluation. The fact that test anxiety was found to be the major type of language anxiety might result from EFL learners' often being exposed to a number of assessment tools such as exams, quizzes or oral presentations, which are undoubtedly indispensable parts of foreign language learning. In this sense, the finding of this study is not considered a surprise. It is also supported by the prior study of Lee (2011) finding that among the three types of language anxiety, test anxiety was the highest, followed by communication apprehension, and finally the fear of negative evaluation. However, when the previous research is analyzed, some studies also suggest that communication apprehension is the main source of foreign language anxiety (Young, 1990). Conversely, it is also seen that in a research study conducted by Chen (2005), the highest source of foreign language anxiety has been found as fear of negative evaluation, followed by communication apprehension, and finally, test anxiety.

Finally, the percentage of EFL learners who endorse a fixed or growth mindset, and who fall into the category of undecided was also investigated in this study. The results of the current study are in line with Dweck's Theory of Motivation (2006) to some extent. According to Dweck (1999), "*While people may vary greatly as to how much they are inclined toward a fixed theory [i.e., mindset] or a growth theory [mindset], roughly 40% seemed more inclined toward a growth theory and 40% seemed more inclined toward a fixed theory. The other 20% were undecided.*" When the findings are analyzed, it is apparent that 17.7 % of EFL learners fall into the undecided category, which is a quite similar percentage to what Dweck (2006) has suggested. Yet, it is observed that 64% of them adopt a growth mindset whereas 18.2% adopt a fixed mindset, indicating that they are not quite similar percentages to Dweck's suggested percentages. That is to say, the participants of the current study highly tended to adopt a growth mindset unlike what was expected. The results of this study are persistent with Dweck's (1999) and P'Pool's (2012) research which found out that roughly 20% of students was classified in the undecided category because of not holding fixed or growth mindsets. In a research carried out by P'Pool (2012), for example, 17.8% of students hold a fixed mindset (entity theory) whereas %67.8 of them endorses a growth mindset (incremental theory). The rest 14.4% have been identified as undecided. Taking into the consideration of the findings stated above and the decrease in the percentage of learners holding a fixed mindset (18.2%), and the increase in the percentage of learners holding growth mindset (64%) in this study, it can be inferred that EFL learners may have started to develop more growth mindset towards language learning with the help of their schools, teachers, interventions, or simply by themselves with their own efforts such as curiosity, persistence and asking for feedback.

6. Implications for Education and Teaching

The results of the present study provide some key pedagogical implications which can be useful in language education for educators, learners and institutions to create a highly-effective learning and teaching environment where growth mindset can be developed for holders of fixed mindset and for undecided ones, and where the level of learners' FLA level can be decreased substantially.

The results of this research study demonstrated that no significant relationship existed between the mindset adopted and FLA level. Thus, the judgment that learners with a growth mindset feel more anxious than learners with a fixed mindset or vice versa may mislead the teachers, so educators should evaluate these two psychological factors independently from each other. Furthermore, while developing curriculums, lesson plans and materials, teachers and institutions should be aware of the fact that there is no link between holding a fixed or growth mindset and FLA, and thus they should prepare them accordingly.

Regarding foreign language classroom anxiety, the findings of the current study demonstrated that EFL learners felt a moderate level of FLA, and females appeared to experience more anxiety than males despite being not a statistically significant difference. Since the level of FLA has been found moderate but not weak in this study, it is not possible to neglect it at all. As Crookall and Oxford state, "*dealing with anxiety in an explicit and purposeful way is part of true learner training*" (1991, p. 145) given the fact that anxiety can result in detrimental effects on foreign language achievement. Thus, for both teachers and institutions, it is significant to raise EFL learners' awareness of the existence of FLA (Horwitz, 1986, p.131) and its possible effects, and important measures should be taken in order to reduce it among EFL learners. On the other hand, bearing in mind its facilitative role which has been suggested by a wide variety of research (Ehrman and Oxford, 1995; Young, 1992), it is also crucial to have an optimal amount of language anxiety for students,

and teachers have a great role in achieving this. Teachers, firstly, can provide a safe and learner-friendly classroom environment that does not include any factor causing debilitating anxiety. They can also prepare their lesson plans according to learners' personalities, needs, and interests. Furthermore, since students studying natural sciences felt more fear of negative evaluation, teachers can try to make them feel more relaxed and comfortable before any kind of evaluation such as exams, quizzes or oral presentations. With respect to this, they can also take initiatives to minimize the sense of negative competition among the learners, and the importance of cooperation and collaboration can be emphasized instead. Moreover, Price (1991) suggests that teachers can encourage students to make mistakes in the class and can enlighten them about the fact that having mistakes is a natural part of the process of learning and they are not considered a failure. Next, since L2 proficiency level is found to be correlated with FLA and the sub-dimensions of communication apprehension and test anxiety, especially upper-intermediate level learners should be informed about the sources and debilitating results of language anxiety directly by their teacher or providing some seminars and workshops focusing on the ways that anxiety can be decreased.

As for mindset, it was revealed that the vast majority of participants in this study (64%) adopted a growth mindset, which is a surprising but a desirable result. For the rest of the learners who endorsed a fixed mindset and who were undecided, some meaningful implications can be suggested to develop a growth mindset. Firstly, students can be actively involved in the learning process itself by creating goals, making efforts to pass and complete them, and tracking their own process during that time (Dweck, Walton and Cohen, 2014). By doing so, teachers will embrace a more holistic approach which can, in turn, result in increased achievement and motivation. In her well-known research, Dweck also gives other strategies such as using praise for effort and persistence, encouraging deep learning rather than fast learning, teaching learners about the differences between two mindsets, setting personal goals with learners, emphasizing challenges and risks as well as success, and designing grading systems that support the growth-mindset criteria more. Besides, building a curriculum to implement growth mindset practices into the classroom is another crucial step to see the true potential of growth mindsets enhancing students' learning. Secondly, to strengthen a growth mindset and develop incremental beliefs among L2 learners, mindset interventions, whose positive effects on learners have already been proved by a large body of research (Paunesku, Yeager, Romero and Walton, 2014; Yeager and Dweck, 2012) can be implemented by the schools. These interventions can be quite simple and affordable by offering learners an online program such as *Brainology* created by Dweck and her colleagues (2008), whose aim is to assist learners know about the human brain and its *neuroplasticity*-the idea that the brain is like a muscle and it grows stronger with more repetitive practices-and how to make it work better to form new connections, or even by providing them a one-hour training focusing on the idea that intelligence is something which can be cultivated over time. The essential point here is that these mindset intervention programs do not directly teach the idea of a growth mindset or impose learners to adopt a growth mindset. Rather, they aim to facilitate learners to be more aware of the learning strategies and opportunities that they can make the most of. Last but not least, it is also essential to emphasize that not only for learners but also for teachers can initial and continuing professional development sessions regarding growth mindset be given. In these sessions, how to build curriculums and lesson plans to implement growth mindset practices into the classroom can be highlighted. Moreover, teachers can be taught how to create some visual materials such as posters, pictures or charts as the constant reminders of the idea of growth mindset in the classroom both for themselves and learners to help them reach their true potential.

7. Comments and Further Suggestions

7.1.1. Comments and Suggestions for Institutions and Organizations

In this study, it is found out that university students have a moderate level of foreign language anxiety. In order to decrease foreign language anxiety of university students, it is suggested for universities to focus on more student-centered lessons. Universities should also create opportunities to discuss and inform students about anxiety and its effects via some seminars or supportive activities.

This study finds out that 64% of students adopt a growth mindset whereas 18,2% of students adopt a fixed mindset and the rest (17,7%) is labeled as undecided. For fixed-minded or undecided students, universities are suggested to make use of growth mindset interventions or programs that teach the growth mindset and the neuroplasticity of the human brain.

7.1.2. Comments and Suggestions for Researchers

In the current study, the relationship between mindset and foreign language anxiety is examined. Since there is a gap in mindset literature, it is suggested for researchers to conduct more studies examining the relationship between mindset and different variables such as motivation, academic achievement, self-efficacy and so on.

This study is conducted only with university students. Researchers are suggested to conduct studies with primary, secondary and high-school students as well.

The present study was conducted only in the capital city of Turkey, Ankara. It is suggested to study the same topic in different universities, and different cities with a larger study group, which will definitely assist researchers in investigating different variables such as socio-economic status and educational background of participants.

This study was descriptive correlational research indicating only the correlations between variables, not causations. Thus, more causal studies investigating the cause and effect relations between these variables may contribute to the findings and lead researchers to more causal conclusions.

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