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Impact of Mindfulness Training on EFL Learners' Willingness to Speak, Speaking Anxiety Levels and Mindfulness Awareness Levels

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Abstract

There has been a rise of interest in mindfulness and its effects on the educational context during the last several decades. The research study aims to investigate the effects of mindfulness training on EFL students' level of speaking anxiety, willingness to speak in the target language, and their levels of mindfulness awareness. The perceptions of participants were also investigated in this study. In total, 41 sophomore students who were studying in the Aviation Management Department (20 in the experimental group, 21 in the control group) participated in the study. The participants were taking General English Courses for 8 hours every week in one of the state universities in the Black Sea Region, Turkey. To reduce the risk of bias, the data were gathered at different times and from multiple sources; questionnaires, and interviews. For quantitative data, the Turkish adapted versions of the Mindfulness Attention and Awareness Scale (MAAS), Foreign Language Classroom Anxiety Scale (FLCAS), and Willingness to Communicate Scale (WTC) were utilized as pre and post-tests. For qualitative data, Semi-structured Interviews were conducted. The findings of the study revealed that mindfulness had a positive effect on participants' willingness to speak, their speaking anxiety levels, and their mindfulness-awareness levels. Qualitative data also showed that the participants got huge benefits not only in the English language learning context but also in different areas of their lives.

Keywords: Mindfulness, Speaking Anxiety, Tertiary Level EFL Learners, Willingness to Speak

1. Introduction

It is inevitable to experience language anxiety in second language learning, especially in oral communication. According to some research studies, foreign language anxiety (FLA), experiencing the emotions of worry and agitation when engaged in learning and applying a foreign language (MacIntyre & Gardner, 1994) has huge negative effects on the language learning process (Onwuegbuzie, Bailey, & Daley, 2000). Many scholars accept speaking ability as the most challenging skill causing anxiety among language learners (Cheng, Horwitz, and Schallert, 1999). Many students have difficulty expressing themselves in a foreign language at different levels due

to speaking anxiety. Even though using the foreign language orally is a requirement for students, they always complain about not being able to speak fluently as most of them are unwilling to speak even in language classes.

Many studies have tried to uncover the factors that may facilitate oral communication in a foreign language and reduce speaking anxiety (Hanafiah, et al. 2022; Sadighi & Dastpak, 2017; Chou, 2018; Pribyl, Keaten, and Sakamoto, 2001; Tsi-plakides and Keramida, 2009). This research aims at reducing speaking anxiety and encouraging willingness to communicate in ESL speaking classes with the help of mindfulness training. Mindfulness is acknowledged as a practice that influences learners' both physical and mental well-being in a good way. (Brown and Ryan, 2003). Therefore, many research studies have been carried out revealing the positive effects of mindfulness on foreign language learning. For instance, it has been suggested that mindfulness training has positively influenced the learners' performance in the language learning context (Bishop et al., 2004; Zhang et al., 2013) It has been found that mindfulness is one of the ways used to manage stress and anxiety (see Brown & Ryan, 2003). According to Langer (1990), thanks to mindful learning, students might be open-minded and creative learners and they can see the world from different perspectives. The study conducted by Roemer et al. (2009) demonstrates that the learners having a generalized anxiety disorder had less levels of mindfulness-awareness in comparison to the control group, which shows that mindfulness lessens the anxiety level of the learners. Another study conducted by Napoli, Krech, & Holley (2005) to understand the relationship between mindfulness training and students' concentration and attention levels reveals that there is a huge difference between learners trained with mindfulness exercises and other learners not involved in mindfulness training. It shows that incorporating both mindfulness training and school studies may increase students' focus and attention levels greatly.

Although it seems to be originated in Buddhism, mindfulness is commonly used in many fields, including health, psychology, communication, and education. In terms of education, it is suggested that, language learners may be involved in activities more actively, attain their attention to the meaning, increase their concentration and creativity, avoid stress, and increase their flexibility and engagement via the use of a mindfulness training. For instance, Mrazek et al. (2013) demonstrated that the students participating in mindfulness training increased their reading comprehension scores. Furthermore, Shao and Skarlicki (2009) revealed that mindfulness training positively affected the students' class performance.

However, the percentage of studies showing the relationship between mindfulness training and speaking anxiety and willingness to communicate in a foreign language is limited (Charoensukmongkol, 2019). That's why this study aims to investigate whether mindfulness training may help learners to cope with the challenge of speaking anxiety and unwillingness to communicate. It will investigate Mindfulness treatment as an education program for enhancing the attention or focus level of EFL learners, getting over learners' speaking anxiety, and fostering a willingness to communicate in a foreign language context among tertiary level EFL learners. It is clear that speaking anxiety is a big obstacle and this research study might help the field in terms of improving EFL learners' competence in speaking English efficiently.

2. Literature Review

2.1 Speaking Anxiety

McNally (1989) describes anxiety as a tendency to react frightfully to the stressors. Moreover, according to MacIntyre & Gardner, (1994, p. 284), it is "the feeling of stress and worries especially connected with foreign language learning". MacIntyre and Gardner (1994) assert that the feeling of stress and worry experienced especially in a foreign language context is not the same as the familiar feeling of anxiety and so it becomes a barrier needed to be overcome by the learners. According to Horwitz (2001), foreign language anxiety needs to be acknowledged as a necessary factor that may handicap foreign language learning. Krashen (1982) indicates that, anxiety intensifies the affective filter; as a result, language learners may not be open to language input resulting in not being able to get the messages correctly.

Some research studies have been conducted connected with speaking anxiety in EFL classrooms. Price's (1991) interview study reveals that the learners worried about making pronunciation mistakes during speaking activities

in a classroom environment feel more anxious. Moreover, oral presentation tasks create more anxiety and stress for learners. (Koch and Terrell, 1991). In their study, Koch and Terrell (1991) also show that the activities that require oral performance in the class such as presentations, group work activities, or role-playing create so much anxiety that learners have difficulties in producing statements. Huang (2004), in his study, demonstrates that university students in Taiwan suffer from a high degree of speaking anxiety in a foreign language learning environment. Liu and Jackson (2008) whose study includes 547 Chinese English learners finds that due to speaking anxiety, most students are unwilling to communicate in English classroom environments. Besides, in their qualitative study, Tsiplakides and Keramida (2009) find that because of being afraid of being humiliated by their peers, some students experience high levels of speaking anxiety.

2.2 Willingness to Communicate

It was McCroskey and his companions who first used the concept 'WTC' in first language acquisition (McCroskey, 1992; McCroskey & Richmond, 1987). Then it was mentioned again in second language acquisition (MacIntyre, Dörnyei, Clément, & Noels, 1998). MacIntyre et al. (1998) state that, the main purpose of learning a second language is to support willingness to communicate in a particular context as it is WTC which may help learners to learn the target language efficiently. When we witness WTC in a language learning environment, the possibility of practicing the target language gets higher. MacIntyre, et al. (1998) explained WTC as "being ready to take part in a conversation at a specific time with a particular person in the target language" (p.547). While explaining WTC, the researchers usually assert that WTC is more related to learners' readiness rather than the situations.

The language learners' reluctance to interact with people in a foreign language is widely encountered in language learning contexts. There have been several studies conducted to cope with the problem of unwillingness among language learners. Yu (2009) studied WTC and its relation to communication apprehension and communicative competence with 235 Chinese college language learners and found that there is an interconnection between WTC, communicative competence, and communication apprehension.

Bektaş (2005) conducted a study on 356 Turkish college students to see if they are eager to use the language orally or not in the foreign language. He concluded that learners' perception of the international community and their self-confidence are directly related to the students' WTC in the target language. Besides, he discovered that the motivation of learners and their personalities are indirectly connected with WTC. Atay and Kurt (2009) also examined the WTC with 159 students in the Turkish context. According to the findings of both qualitative and quantitative research, there is a strong connection between communication competence and WTC. Likewise, Şener (2014) studied with Turkish college students in the department of English language teaching. Both qualitative and quantitative data demonstrated that self-confidence is the most crucial factor that directly influences WTC in the second language learning process. There is a strong relationship among variables such as apprehension, motivation, students' views, characteristics, communication competence, and willingness to communicate. To conclude, a great majority of the studies on WTC indicate the importance of creating a suitable atmosphere to encourage speaking.

2.3 Mindfulness and Mindful Learning

Mindfulness is about consciousness and acceptance, and it can also be described as an ability to control, focus and redirect the attention of someone in a beneficial way (Bishop et al., 2004). Leary and Tate (2007) also described mindfulness as an awareness of the moment and asserted that it helps us in many ways; it can lessen the perception of negative future and past pessimistic thoughts, it helps us accept the present condition as it is and appreciate it without sticking to it or refusing it, it encourages positive attitudes and good feelings by improving more effective ways of communicating with other individuals, it can help you avoid the health-damaging energy.

The components of mindfulness including awareness and unconditional acceptance of present-moment experience are acknowledged as an efficient cure for distress - anxiety, panic, depression, anger, and so on (Hayes & Feldman, 2004). In spite of dating back to Buddhism and being seen as a side of spiritual tradition, the employment of mindfulness in other fields such as psychology, positive psychology, medicine, education, and communication is more of a new phenomenon (Kabat-Zinn, 1982). Thanks to this circumstance, many research studies demonstrating

the effects of mindfulness on different fields have been conducted. According to some studies in psychology, people can benefit from mindfulness in many ways. Because of mindfulness training, individuals can decrease stress (Flook, et al., 2013) decrease their overthinking habits (Ramel, et al., 2004), be autonomous individuals (Brown & Ryan, 2003), be pleased with their relationship (Carson, et al., 2004), improve their well-being (Urry et al., 2004) and develop their self-regulation (Chambers, et al. 2008).

Some research studies in medicine reveal that mindfulness and cognitive functioning are strongly related. Namely, by using mindfulness techniques, individuals can use their left brain more actively (Davidson et al., 2003) improve their memory and concentration (Mrazek, Franklin, Phillips, Baird, & Schooler, 2013), and have more flexible cognitive skills (Moore & Malinowski, 2009). In terms of communication, mindfulness provides adaptability, flexibility, and less nervousness (Gudykunst, 2004, p. 256-263), which results in better communication skills.

Mindfulness in education called mindful learning is applied in classes to clear a busy mind and to be in the moment alertly. As a pedagogical tool, it is explained by Weare (2014) as "...learning the ability to pay attention and develop positive attitudes such as inquisitiveness, friendliness, sympathy, and non-judgmentalism..." (p. 1037). Langer (1990), who carried out a lot of studies related to mindful learning and composed plenty of theories on this subject, claims that mindful learners tend to be more creative, more sensitive to current ideas, and broaden their horizons. She explains it as "mindful learning provides opportunities to see and understand an experience in countless ways" (p.65). Further, Luberto et al. (2013) who studied with psychology students revealed that mindfulness techniques can also be effectively used to overcome frightening and tough situations. They also discovered that those who have mindfulness skills could regulate their emotions in a better way.

As reported in research, mindfulness is extensively beneficial in various fields. It is applied to boost one's attention span and foster mental clarity (Brown and Ryan 2003). It is also closely related to cognitive functions, which boost the learning process (Karelaia and Reb 2014), creative thinking skill, and decision-making skills (Capurso, et al., 2013). Actually, all the benefits are really useful for promoting speaking skills and enhancing oral presentation skills in English in many ways. First, it helps individuals focus on the topic they are studying as mindfulness encourages learners to stay on the activities moment-to-moment (Brown and Ryan 2003). Oral communication requires English learners to focus on the content fully and be attentive during the conversation. Otherwise, learners may lose their concentration and feel anxious resulting in lower performance (Mrazek et al. 2012). According to Brown and Ryan (2003), being attentive during speaking activities improves individuals' communicative competence as once learners are more engaged in activities, it becomes easier for them to reduce their anxiety and they become mindful English speakers. As a result, staying in the activities fully helps them not to be distracted by other thoughts that may hinder their performance (Mrazek et al. 2013).

Secondly, mindful learners gain the ability to have a high level of self-confidence, which prevents language anxiety (Pappamihel 2002; Pekrun 1992). Many experts agree that mindfulness can foster confidence and self-efficacy (Gärtner 2013; Glomb et al. 2011). Furthermore, one of the characteristics of mindfulness is to decrease the individuals' incessant negative thoughts causing anxiety (Gärtner 2013). Since mindful learners stay in the moment without fearing the past and worrying about the future, they avoid anxiety much easier.

Finally, mindful learners tend to be aware of the emotional stage they are living through in a speaking activity. The emotions are closely related to anxiety. As a characteristic of mindfulness, non-judgemental acceptance of negative emotions helps learners handle those negative thoughts that may hinder their ability to perform effective presentations. (Hofmann et al. 2010; Kabat-Zinn et al. 1992). Once people experience mindfulness, they realize that all the pessimistic thoughts and negative emotions could be accepted kindly and be allowed to go because they are temporary feelings that come and go (Frewen et al. 2008, 759). Therefore, the English learners who are aware of this fact may let the negative emotions go of not allowing them to handicap their presentations. Research studies have also stated that mindfulness enhances individuals' memory capacity even when they are under a lot of stress (Dane 2011; Jha et al. 2010; Zhang et al. 2013). These advantages of mindfulness, which enhance mental clarity and let pupils stay calm, can help students focus their attention on their speech and arrange its content more efficiently while speaking English (Jun et al. 2011).

Despite the numerous reports of mindfulness' good effects on human functioning, there is a significant void in mindfulness studies in the EFL environment. As a result, the current research will look at mindfulness, mindful learning, and its effects on speaking ability among university-aged EFL students. The results of a Mindfulness intervention with a group of EFL students were compared to the students of a control group who did not receive any intervention.

3. Method

A mixed-method was utilized for this research study as this methodology offers a greater range of ways to better comprehend difficult research issues in many contexts. Mixed research studies mix perspectives, enabling researchers to explore from both an inductive and deductive way, and to combine theory generation and hypothesis testing in one experiment. (Jogulu and Pansiri, 2011). An interventional quasi-experimental design was used to see the effects of the Mindfulness treatment. Besides, triangulation was utilized for this research to increase credibility and validity. The data collection tools used in this study were: questionnaires and semi-structured interviews.

3.1 Research Questions

1. Will mindfulness training make a difference for EFL students in terms of willingness to communicate?
2. Will mindfulness training make a difference for EFL students in terms of their mindfulness-awareness levels?
3. Will mindfulness training make a difference for EFL students in terms of their speaking anxiety?
4. What are the perceptions of the students participating in the mindfulness training?

3.2 Participants & Sampling

This research was conducted with the students in the Department of Aviation Management at a State University in the Black Sea Region during the second semester of the 2021 -2022 academic year. Convenience sampling was used in the research. Mackey & Gass (2012) explain this type of sampling as “members of the target population are selected only if they meet certain practical criteria, such as geographical proximity, availability at certain time, or easy accessibility” (p: 81). In total, 41 sophomore students taking General English courses for 8 hours a week took part in this study. At the beginning of the academic year, they took a placement test and as per the test findings, their level was B1 when they took part in the study. The ages of the participants varied between 20 and 23. For the goals of the study, two B1 classes were selected. The participants were divided into experimental (EG) and control groups (CG) at random. Convenience sampling was used in this study. While in the experimental group, there were 20 students, the control group consists of 21 students. At the B1 level, the students studied General English for 8 hours every week, which included integrated English skills and subskills covered within an English Coursebook. During these courses, the learners were required to do group work, pair work, or individual speaking tasks. Besides, they were also expected to perform their presentations and do a video recording and take individual speaking exams as a part of the speaking part of the schedule. The researcher was in charge of teaching main courses to these two classes during the time of the study. However, only the EG got Mindfulness training implemented by the researcher.

The researcher had previously studied and learned about implementing mindful instruction and how to conduct it from a psychology specialist through online professional mindfulness courses at a different institution. Furthermore, at the beginning of the study, the researcher consulted an academician in the field of psychology about the purposes and process of the study and got some suggestions and support from the same expert.

3.3 Instruments

3.3.1 Mindfulness Attention and Awareness Scale (MAAS)

Brown and Ryan developed the mindfulness attention and awareness scale (MAAS) to assess trait mindfulness (2003). There are 15 questions on the scale. The whole questions in the original measure were graded on a 5-point

Likert scale, with 1 being almost always and 5 being very seldom (Almost never). The 15-item instrument scale is designed to assess how attentive the participants are and how aware they are of their current everyday life involvement. The internal consistency of MAAS is .82 and $\alpha = .92$. The Turkish version of the MAAS by Özyeşil, Arslan, Kesici, and Deniz (2011) was used in the study. They found the scale's internal consistency as .80, and its reliability coefficient as .88.

3.3.2 The Foreign Language Classroom Anxiety Scale (FLCAS)

The Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986) was used to assess language anxiety. In the domain of EFL, its reliability and concurrent validity have been verified successfully (e.g. Horwitz et al., 1986; Kim, 2002). The FLCAS is a 33-item self-report that determines the amount of anxiety. It is a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree,"(5). The more anxiety students experience, the higher their subscale scores are. The FLCAS is a dependable scale because Cronbach's alpha coefficient measures its internal consistency. .93, with test-retest reliability of .83 and a $p = .001$. In this study, the Turkish version of FLCAS generated by Aydın, et al. (2016) was utilized in the study. The internal consistency of the Turkish version of FLCAS was .91. the reliability is found as .88 and internal consistency is found as .80.

3.3.3 Willingness to Communicate Scale (WTC)

The original framework of the Willingness to Communicate Questionnaire was from McCroskey (1992). The WTC was created to assess whether or not you want to start or avoid interaction in a second language. The WTC consists of 12 items in which participants were asked to specify the proportion of times they would like to communicate in different types of contexts, such as a meeting or a group, and with different types of individuals, such as outsiders, acquaintances, and friends. Study participants are asked to give a percentage ranging from 0 (never) to 100 (always). The internal reliability of the total score varies from .86 to .95, with a mean estimate of .92, indicating that the WTC scale is highly dependable. Because the reliability coefficient was .88 and Cronbach's alpha was .60, the translated form of the WTC was deemed to be a trustworthy data-gathering tool. The revised version was also evaluated in a pilot study with 28 college students in Turkey.

3.3.4 Semi-structured Interviews

In addition to using scales, semi-structured interviews were also conducted to do an in-depth analysis and to understand the reasons behind the participants' responses. By conducting interviews, the researcher aimed to investigate participants' ideas, feelings, and opinions deeply. Focus group interviews were conducted with 6 students twice. A focus group is a method of gathering qualitative data. A focus group is "a collection of people who share similar qualities and meet to discuss a particular problem or an issue" (Anderson, 1990, p.241). Focus groups make it possible to acquire a lot of qualitative data in a short period. With the support of other participants, focus groups give an instant chance for evaluation or clarification on one's viewpoint. They enable researchers to analyze body language in addition to what is said. Focus groups can assist a researcher in uncovering previously undiscovered aspects of the subject of study.

To accomplish so, 6 participants were interviewed in one group session immediately following the training. Two sessions were held and in total 12 students were interviewed in two sessions. Each group interview took 15 to 20 minutes to record. Every interview was audiotaped as an audio file on a smartphone and listened to later. The audio files were transcribed and then examined in relation to their content after the interviews.

4. Data Analysis

At the very beginning of the study, the necessary permission was taken from the ethical committee of the university. The participants were randomly selected from B1 level classes as CG and EG in the Aviation Faculty. Before Mindfulness training, the whole three scales were distributed to the students in these two B1 classes (both Control Group and Experimental Group) as a pre-test. The Mindfulness Training lasted for about four weeks. Every week, the researcher and the participants in the Experimental Group met in a class on Mondays and

Thursdays and did the training. Every session took 15 minutes and every week two sessions were held. The intervention was implemented between the dates of 18.04.2022 and 19.05.2022.

The researcher met the Experimental Group prior to the start of the intervention to provide background information about mindfulness, its historical stages, the reasons for using it, mindfulness techniques, mindfulness myths, how to use mindfulness, etc in detail. The students' questions were also welcomed and answered through the warm-up session.

From April to May 2022, the Mindfulness Group got guided Mindfulness Training for four weeks. The researcher delivered the intervention twice weekly for 15 minutes on designated days. In each mindfulness session, the participants were instructed to sit comfortably to make them feel relaxed while sitting silently with closed eyes and concentrating their minds on their breathing. The researcher herself gave the instructions during those mindfulness sessions clearly in a friendly and welcoming manner. Each session was instructed according to a theme. Once the participants were through the meditation, the instruction was given according to the theme of the week. Week one consisted of Mindfulness of Breath and Everyday Mindfulness themes, Mindful Walking and Mindfulness of body were the themes of the second week. Mindfulness on Concentration and Mindfulness of Emotions were the themes of the third week. Mindfulness on Acceptance of Anxiety and Mindfulness of Safety were the themes of the fourth week. Except for these formal and informal instructions in sessions, some daily informal mindfulness activities were assigned to the participant, and two positive and negative feeling sheets were distributed to make them witness their progress and raise their awareness on this issue as the more practice they do, the more they internalize mindful learning.

5. Findings

5.1 Analysis of the Quantitative Findings

For the research, both the Control and Experimental Groups were administered the WTC, MAAS, and FLCAS scales as pre-and post-tests. The quantitative data obtained after the application of the scales were analyzed using the SPSS 26 program. Before starting the analysis, it was checked whether they fit the normal distribution to determine which type of (parametric or non-parametric) tests would be used to analyze the data. While performing this control, the Shapiro-Wilk Normality Test was used because $N_{control}=21$, $N_{experiment}=20$, and $N_{intergroup}=41$

Table 1 shows that the data fit the normality distribution.

Table 1: Normality Test

Shapiro-Wilk Normality Test								
Control Groups	Ist.	S d	p	Experimental Groups	Ist.	S d	p	
WTC_PRE_CONTROL_TOTAL	0,96	2	0,58	WTC_PRE_Experimental_TOTAL	0,96	2	0,61	
	3	1	7		4	0	6	
MAAS_PRE_CONTROL_TOTA L	0,95	2	0,34	MAAS_PRE_Experimental_TOTA L	0,98	2	0,98	
	0	1	8		5	0	2	
FLCAS_PRE_CONTROL_TOTA L	0,97	2	0,83	FLCAS_PRE_Experimental_TOTA L	0,96	2	0,74	
	5	1	7		9	0	3	
WTC_POST_CONTROL_TOTAL	0,96	2	0,55	WTC_POST_ Experimental_TOTAL	0,97	2	0,80	
	2	1	0		2	0	0	
MAAS_POST_CONTROL_TOT AL	0,95	2	0,44	MAAS_POST_Experimental_TOT AL	0,92	2	0,13	
	6	1	4		6	0	1	
FLCAS_POST_CONTROL_TOT AL	0,95	2	0,34	FCLAS_POST_Experimental_TOT AL	0,97	2	0,74	
	0	1	1		0	0	5	

Ist: statistics, sd: degrees of freedom

When Table 1 is examined, it is seen that $p > \alpha = 0.05$ for all groups, and therefore the data fit the normality distribution. In this case, it is appropriate to use parametric tests when examining the differences between the means of the groups.

At the beginning of the analysis, it was checked whether there was a significant difference between the pre-values of the groups used in the study. With this control, it was aimed to check whether the people in both the control and experimental groups started the research process under equal conditions. Since the experimental and control groups are independent of each other, the independent samples t-test was used for analysis.

Whether there is a significant difference between the pre-test averages of the Control and Experimental groups was examined using the independent samples t-test. In addition, since the pre-test and post-test groups were dependent, the difference between the means of the groups was investigated with the paired-samples t-test.

Table 2 shows that both experimental and control groups started the research process under equal conditions.

Table 2: Independent samples t-test results of the experimental and control groups' pre-test data

Scales	Control Pre Test (Pre)			Experimental Pre-Test (Pre)			Independent Samples t-Test		
	N	Mean	SS	N	Mean	SS	t	sd	p
WTC	21	61,2857	25,61473	20	72,3000	27,43816	-1,329	39	0,191
MAAS	21	63,0476	9,74411	20	58,1500	13,43709	1,341	39	0,188
FLCAS	21	84,5238	26,82838	20	77,4000	20,01684	0,960	39	0,343

Ist: statistics, sd: degrees of freedom

When Table 2 is examined, no significant difference was found between the pre-test (pre) averages of the experimental group and pre-test (pre) averages of the control group, at the 5% significance level. In this case, it can be said that both groups were included in the research process under equal conditions.

Whether there was a significant difference between the pre-test and post-test averages of the control group was determined by using a paired-samples t-test.

As an answer to the first, second, and third research questions, whether mindfulness had an influence on students' willingness to speak, their mindfulness-awareness levels, and their speaking anxiety levels, Tables 3 , 4 ,and 5 could be examined.

Table 3: Paired samples t-test results of the control group

Scales	Control Pre Test (Pre)			Control Post Test (Post)			Paired Samples t-Test		
	N	Mean	SS	N	Mean	SS	t	sd	p
WTC	21	61,2857	25,61473	21	64,8095	29,29269	-0,949	20	0,354
MAAS	21	63,0476	9,74411	21	59,3810	9,13497	1,448	20	0,163
FLCAS	21	84,5238	26,82838	21	85,1905	27,12124	-0,180	20	0,859

SD: Standard Deviation, SD: degrees of freedom

As an answer to the first, second, and third research questions, Table 3 shows that no significant difference was found between the pre-test and post-test averages of the control group, at the 5% significance level. It can be said that the willingness to communicate in a foreign language, the level of mindfulness, and the anxiety of speaking a second language of the students who did not receive mindfulness training did not change significantly.

Whether there was a significant difference between the pre-test and post-test averages of the experimental group was determined by using a paired-samples t-test.

Table 4: Paired samples t-test results of the experimental group

Scales	Experimental Pre-Test (Pre)			Experimental Post Test (Post)			Paired Samples t-Test		
	N	Mean	SS	N	Mean	SS	t	sd	p
WTC	20	72,3000	27,43816	20	89,5000	19,64554	-3,878	19	0,001
MAAS	20	58,1500	13,43709	20	65,5000	12,80008	-3,007	19	0,007
FLCAS	20	77,4000	20,01684	20	65,4500	15,31245	3,847	19	0,001

SD: Standard Deviation, SD: degrees of freedom

As an answer to the first, second, and third research questions, Table 4 demonstrates that significant differences were identified between the pre-test and post-test averages of the experimental group, with 99% reliability. When the averages obtained from the total scores of the scales are examined, it is seen that the WTC average increased from 72.3 to 89.5, the MAAS average increased from 58.15 to 65.5, and the FLCAS average decreased from 77.4 to 65.45.

In this case, it may be said that students who got Mindfulness training had a higher willingness to communicate in a foreign language, a higher degree of mindfulness, and a lower level of second language speaking anxiety compared to their previous condition.

Whether there is a significant difference between the post-test averages of the Control and Experimental groups was examined using the independent samples t-test.

Table 5: Independent samples t-test results of experimental and control groups' post-test data

Scales	Control Post Test (Post)			Experimental Post Test (Post)			Independent Samples t-Test		
	N	Mean	SS	N	Mean	SS	t	sd	p
WTC	21	64,8095	29,29269	20	89,5000	19,64554	-3,153	39	0,003
MAAS	21	59,3810	9,13497	20	65,5000	12,80008	-1,769	39	0,085
FLCAS	21	85,1905	27,12124	20	65,4500	15,31245	2,850	39	0,007

SD: Standard Deviation, SD: degrees of freedom

As an answer to the first, second, and third research questions, Table 5 reveals that significant differences were found between the post-test (post) averages of the control and experimental groups based on the WTC and FLCAS scales, with 99% reliability, and no significant difference was found at the 5% significance level based on the MAAS scale.

When the averages obtained from the total scores of the scales are examined, it is seen that the WTC average increased from 64.8095 to 89.5 and the FLCAS average decreased from 85.1905 to 65.45. It is seen that the mean MAAS increased from 59,381 to 65.5, but this increase was not statistically significant (or significant).

5.2 Analysis of the Qualitative Findings

As an answer to the fourth research question; 'What are the perceptions of the students participating in the mindfulness training?', qualitative data was gathered via semi-structured interviews which were examined and coded to demonstrate the themes and categories. Manual coding was utilized owing to the small number of participants to gain an in-depth understanding of data. The researcher preferred inductive coding, which is a bottom-up approach. The researcher started with no codes predetermined before and developed codes in the process of analysing the dataset. Themes 1,2,3,4,5,6 and 7 are the positive sides of Table 6 and Theme 8 is about

one of the limitations of this intervention. To get reliable qualitative data, apart from the researcher, two coders who work as instructors in the same department contributed to the analysis by bringing a variety of perspectives to the data.

Table 6: Content analysis of the Semi-structured interviews

Main Themes	Categories	Codes
1. emotion regulation ability	getting rid of negative emotions	1.1 adapting to make things calmer. (S/1) 1.2 staying calm (S/1,2,7,9) 1.3 avoiding anger(S/10) 1.4 not reacting instantly (S/10,11) 1.5 relaxing more (S/5,6))
2. staying focused	being more in the moment	2.1 learning how to stay in the moment(S/2,6,11,12) 2.2 enjoying the moment (S/6) 2.3. doing things by concentrating more(S/3) 2.3 raising awareness by focusing more (S/1, 8,10) 2.4 focusing on even small things (S/5, 10,11,12)
3. not identifying yourself with your emotions	putting some distance between you and your emotions	3.1. distance with feelings (S/2,3,5,6,11) 3.2. not identifying yourself with your feelings (S/2,9,10,11)
4. lowering ESL public speaking anxiety	not being afraid of speaking	4.1. being eager to speak (S/ 2,3,7)
5. enabling more self-confidence	speaking willingly	5.1. gaining self-confidence in speaking. (S1,2,6,7,8,9,
6. reducing fear of making mistakes	not focusing on mistakes	6.1. not hesitating to talk (S/6) 6.2. speaking more (S/2) 6.3. focusing on speaking but not mistakes (S/10)
7. reductions in rumination	getting rid of obsessions	7.1. not being addicted to the past (S/ 12) 72. getting rid of worries (S/11)
8. taking time	getting used to it	8.1. not having enough time to get benefit from it in English classes (S/11,12)

5.2.1 Theme 1. Emotion regulation ability

Students stated that mindfulness helped them cope with their problems more calmly and effectively. In this respect, students 1,2,7, and 9 pointed out the benefits of mindfulness in terms of calming themselves in stressful situations.

“Mindfulness, helped us to be aware of the things that we are doing and it has helped us to do things more calmly.” (S/1)

“It was better in terms of calming myself down when I experienced one extreme event in times of stress and crisis.” (S/1,2,7,9)

Students 10 and 11 mentioned the differences in their reactions to events after mindfulness training.

“I was an angry person but now I don’t exaggerate events.” (S/10)

“For example, I used to give very sudden reactions when I got angry. Now I can stand calmly like this.” (S/10,11)

“Students 5 and 6 directly stated how mindfulness helped them sleep more comfortably and have a clear and relaxing mind.”

“Practicing mindfulness activities made me relax, at least it made me think more clearly” (S/5,6)

“Doing Body Scanning exercise before sleep helped me to sleep more comfortably because before mindfulness, I couldn't go to sleep easily because of many negative thoughts in my mind.”(S/6)

This conclusion is also consistent with Caldwell, et al. (2010) research findings, as mindfulness integration in schools improves children’s sleep quality. Implementing mindfulness in the educational context, according to Greeson, et al. (2015), enables learners to handle a stressful heavy workload and act calmly. This supports the findings of the current study in terms of assisting students in controlling their emotions and being more flexible in stressful situations. Applying mindfulness in the educational setting, according to Greeson, Toohey, and Pearce (2015), assists students in managing stressful hectic schedules and acting calmly.

5.2.2 Theme 2. Staying focused

Students 1,2,3,5,6,10 and 11 directly stated that thanks to mindfulness, students could stay focused more easily and effectively.

“By focusing on the sound, I can understand and learn the pronunciation better now.” (S/1)

“I learned to stay in the moment because most of the time I had very different thoughts in my mind so I used to think of different things while doing one job.” (S/2)

“Now I do the things I do with more focus and I can stay in the moment more.”(S/3)

“I can understand and focus on small things right now.” (S/5)

“I realized that it is more delicious to focus on what I am doing at the moment without thinking too much.” (S/6)

“I enjoyed more by focusing on the moment not by thinking beyond, before or after that moment, but by staying in the moment.” (S/ 6)

“Mindfulness increased my awareness of the things that I was doing more and this awareness made my works more efficient.” (S/10)

“In general, I was looking out of the window in classes, but now I can focus on you better.” (S/11)

It's vital to note that the purpose of mindfulness training is to let the practitioner observe the present moment for what it is. Because mindfulness methods entail maintaining focus on the present-moment reality and it also brings attention back when it starts to wander (Bishop et al., 2004). Mindfulness training has been linked to improved sustained attention in novice meditators (Chambers, et al., 2008). One study found a link between intervention-related increases in sustained attention and lower levels of depressed feelings (Chambers et al., 2008).

The majority of one's conscious life is spent in a condition in which the mind is not concentrated on a single job (Killingsworth & Gilbert, 2010). Once task-unrelated ideas impair attentional focus, mind wandering occurs.

Mind-wandering is one of the most challenging barriers for learners. In this regard, learners who are aware may be able to focus more on their academic achievement while focusing less on their faults (see Kabat-Zinn, 1990). Namely, EFL learners may effectively stay focused on activities and discard preoccupying ideas when they are firmly anchored in the present moment, therefore relaxing their tense brains.

5.2.3 Theme 3. Not identifying yourself with your emotions

Students 2,5,9,10,11 declared that they could keep their distance from their emotions.

"I tried to keep the distance with my feelings." (S/2)

"Those feelings don't belong to me, they come and go like clouds in the sky." (S/2)

"I remind myself that I don't need to be sad because it will pass anyway." (S/5)

"By constantly reminding myself that feelings come and go, I was actually able to get out of that state of internalization and adoption." (S/9)

"When we feel angry, we know that this feeling is not us. In fact, it will go away." (S/10)

"When it hurts, it hurts now but I know it will pass." (S/11)

Mindfulness training may also improve metacognitive awareness, viewing them as transient mental occurrences rather than identifying with them or believing thoughts to be true representations of reality (Segal et al., 2002; Shapiro, Carlson, Astin, & Freeman, 2006). Teasdale (1999) expected that enhanced metacognitive awareness would mean a reduction in rumination, a process of recurrent negative thinking that has been linked to a variety of psychiatric problems (Ehring & Watkins, 2008). Teasdale (1999) predicted that increased metacognitive awareness could lead to less rumination, a type of persistent negative thought connected to a range of mental illnesses (Ehring & Watkins, 2008). In this respect, when students encounter difficulties during their oral performance in an educational context, they may overcome their negative thoughts by keeping a distance from their feelings.

5.2.4 Theme 4. Lowering ESL public speaking anxiety

Students 2, 3 and 7 declared that they could overcome their speaking anxiety thanks to the mindfulness training.

"Our excitement wears off as we focus on our conversation." (S/2)

"I get excited when I try to speak in an unfamiliar environment, but it passes very quickly now" (S/3)

"If I couldn't speak fluently like that, I had a desire not to speak, and I was discouraged. It's broken now." (S/7)

In research by Arch and Craske (2006), college students rated their emotional reactions to a series of affectively valenced photos in between hearing one of 3 pairs of audio guidelines: mindful breathing, unfocused concentration, or anxiety. Those allocated to the concentrated breathing group showed consistently favorable emotional reactions, but the other two groups exhibited a reduction in positive emotional reactions to neutral slides. In their study, Campbell-Sills, Barlow, Brown, and Hofmann (2006), Patients with anxiety and depression problems were randomly allocated to accept or suppress their feelings while watching an emotionally arousing video. The two groups experienced identical degrees of subjective suffering while watching the video, but the acceptance group's heart rate was slower and they expressed less negative feelings when compared to those in the suppression condition. These results demonstrate that training in two essential aspects of mindfulness meditation (focused attention and acceptance) might lower emotional responses to unpleasant stimuli while also increasing readiness to stay in contact with them.

This discovery, in particular, is parallel with the previous studies that have shown the advantages of mindfulness in helping people function better in hard conditions (Hofmann et al. 2010). Mindfulness is linked to reduced ESL speaking anxiety. The research study also shows the effectiveness of mindfulness in assisting people in doing well in stressful settings (Hofmann et al. 2010). The fact that it mindfulness is linked to speech anxiety in L1 (Fleming, & Kocovski, 2013) indicates that mindfulness may also be implemented in L2 classes to avoid speaking anxiety.

According to Semple, Reid, and Miller (2005), adopting a 6-week trial of mindfulness helps treat kids with anxiety problems, which is consistent with the current research study.

5.2.5 Theme 5. Enabling more self-confidence

Students 1,2,5,6,7,8,9 and 10 claimed that with the help of mindfulness training, they had more self-confidence in their oral performance. They also pointed out that they were more willing to speak English in class and with their foreign friends.

“It actually made us have more Self-Confidence.”(S/1)

“This activity gave me the courage that I need because, for example when I feel very excited before I start speaking, I say, if I start talking, this feeling will go away.” (S/2)

“My foreign friends wanted to talk by voice instead of texting, I wasn't willing to do that before, but now I'm not that far from that.” (S/5)

“I am more self-confident. I don't wonder if the thing I am saying is right or wrong. I just say it even if it's wrong. I focus on expressing myself.” (S/6)

“I used to avoid attending the classes in the first year. I was very afraid to attend the classes. Even compared to previous semesters now, I do not hesitate to attend classes, on the contrary, it is not difficult for me to talk in the class.”(S/7)

“ I was afraid of talking when you asked my opinion. You know, I was writing a sentence to myself, for example, I was making preparations, but I was reluctant to speak in the class. Now, I have more courage to speak willingly in the class.” (S/8)

“I coped with my speaking anxiety a little bit.”(S/9)

“Especially when I have more self-confidence, I want to communicate with foreigners more.” (S/10)

Bandura (1997) also thought that self-efficacy can help people control their emotions. Individuals' anxiety levels will grow if they believe they are not capable of achieving desired goals or are not well qualified and ready to handle stressful occurrences, according to him. Likewise, EFL learners may view things as harsher and more challenging than they are due to a lack of confidence in their own capacities to cope with hard and stressful events. They could also be more worried and sensitive about others' perceptions of them. Because of that fear, they might avoid interacting with others. Besides, they may also be anxious about their academic performance. (see Fallah, 2014). The findings are also in line with Bellinger, DeCaro, and Ralston's (2015) study, which found practicing mindfulness reduces exam anxiety and improves arithmetic ability. Likewise, because of mindfulness treatment, students may handle their speaking anxiety. That's why they can also perform well in English exams.

5.2.6 Theme 6. Reducing fear of making mistakes

Students 6, 9 and 10 reported that their fear of making mistakes reduced to a great extent.

“When I talk to foreigners, I don't hesitate because I know that when I make a mistake he/she can correct me. No problem with that.” (S/ 6)

“Because we are not afraid of making mistakes now, we try more to speak.”(S/ 9)

“I was focusing on making it a little more perfect. Even if it's wrong right now, I know that the other person will understand me when I speak.”(S/10)

“ In reading classes, while reading loudly, I used to be afraid of making mistakes. Now, I am a little more relaxed because I know that the teacher can correct me and my friends only focus on understanding the reading text.”(S/10)

Mindful learners may focus more on their learning and achievement while paying less attention to their faults. (see Brannon, 2010), resulting in reduced test stress and communication anxiety. In other words, EFL learners may better concentrate on activities and discard preoccupying ideas when they are firmly anchored in the present moment, therefore relaxing their tense brains.

5.2.7 Theme 7. Reductions in rumination

Students 11 and 12 stated that they could get rid of their unpleasant, auto and negative thoughts.

“I was a person who was too attached to a past event and I couldn't leave behind it. Now, I am not addicted to such things anymore because I try to focus on the moment.”(S/ 12)

“I was the person who wore things too much and worried too much. Now I could get rid of most of my worries.” (S/11)

5.2.8 Theme 8. Taking time

Students 11 and 12 stated that they needed more time to apply the things they have learned in their oral production.

“ Before speaking exam, I tried to calm down by doing the exercises we have learned. I could achieve some but I think we need more time to get benefit from it. (S/11)”

“I couldn't use it in my speaking classes. Actually, I am already a talkative person. In the class, I know my friends so there is no need to get excited but in time, we can get benefit from it more. (S/12)”

These results can also be interpreted in terms of the reality that mindfulness can reduce rumination (Coffey, Hartman, & Fredrickson, 2010), which is characterized by persistent, unpleasant, and auto thoughts about the future or past and is linked to anxiety and depression (Nolen-Hoeksema, 2000). Previous studies show that mindfulness training promotes metacognitive awareness (Teasdale et al., 2002) and decreases rumination (Jain et al., 2007). According to Ramel, Goldin, 2 Carmona, and McQuaid (2004), the reduction in a depression upon MM training is attributed to a reduction in ruminative thinking patterns, which include persistent, automatic negative thoughts (also known as ruminative thoughts).

6. Discussion

In response to the initial research question (whether there are any statistically significant between EFL students who received mindfulness training and those who did not in terms of willingness to communicate), significant differences were identified between the pre-test and post-test averages of the experimental group, with 99% reliability. However, in the control group, the willingness to communicate in a foreign language did not change significantly. It is possible to conclude that students who had Mindfulness training were more eager to speak in a foreign language. This study's findings are consistent with Dane's (2011) findings, which found that mindfulness has a favourable relationship with task performance and can boost students' willingness to communicate. Furthermore, the current study's findings are consistent with Yashima's (2002) willingness to communicate paradigm, which reveals that a stronger willingness to speak is linked to reduced anxiety and higher awareness of communicative competence. Qualitative data also reveal that students who got mindfulness training could cope with their anxiety of making errors while speaking both in or outside of the class, which shows that as students stated in the interviews, they got more courage and confidence while performing their presentations or in group discussions, etc. Even when they were asked to speak with foreign people, they could express themselves without fear and shyness. As McCroskey and Richmond (1987) stated in their study, shy humanbeings prefer to be mute and hesitant to speak. According to the qualitative data, students also claimed that while they focused on the fear of being laughed at by the people around them before the training, thanks to the training, they could focus on their performance and the meaning more, which might help them to handle the stressful situation. In addition to this, students added that they could learn how to regulate their emotions in stressful situations. Some of them claimed that with the help of mindfulness meditations, they could react more positively in tough conditions, The finding is parallel with Roemer et. al (2009) study showing the connection between mindfulness and emotion regulation.

As an answer to the second research question, (whether there is a difference in mindfulness levels between EFL students who received MMCI training and those who did not? Quantitative findings revealed that participants who attended mindfulness training had a great level of mindfulness. With 99 percent reliability, significant changes were found between the experimental group's pre-test and post-test averages, yet the levels of mindfulness-awareness in the control group did not change significantly. Qualitative data also support this finding in many ways. The participants stated that they used to be too busy with their past or future worries, thanks to the mindfulness training, they could raise their awareness about the importance and benefits of staying in the moment

greatly, which might influence their ability to focus on their speaking tasks but not their worries. Mindfulness has been proven in various fields to bring participants' attention to staying at the moment. (KabatZinn, 2003). Furthermore, the participants also claimed that they could stop living life on autopilot, which means that they could fulfill their tasks with great awareness. The study conducted by Campbell and Christopher. (2012) is also consistent with the findings of the study indicating that the kids participating in mindfulness training had better attention scores. The students also stated that instead of bouncing aimlessly from one job or idea to another, they could concentrate on their activities more attentively. Habitual and instinctive responses, thoughts moving from one issue to another one and absent-mindedness are all signs of mind wandering (Mrazek, Smallwood, & Schooler, 2012). On the other hand, table 5 shows that, when the post results of the experimental and control group were compared, it was found that the mean MAAS increased from 59,381 to 65,5, but this increase was not statistically significant. This finding is also parallel to some other studies which didn't generate statistically significant findings on mindful attention and awareness. (Brulette et al., 2020; Washington 2021).

In this study; however, it was found that, whereas within the experimental group, statistically significance was realized in mindfulness-awareness levels of the participants, only when the control group and experimental group's post-test results on mindful awareness were compared, the result concludes that there is an increase but not statistically significant. In fact, this finding is supported by qualitative data in many ways. Some participants asserted that they needed more time to be able to implement and digest the mindful techniques in their lives. In addition to this, an increased dose of the mindfulness treatment with a series of sessions for a long time could be preferable for some participants to make them apply the techniques they learned. While some participants could apply mindfulness to their language learning process and their own lives more easily, some others may need more time.

Regarding the third question, (whether there is a difference in L2 speaking anxiety between EFL students who received mindfulness training and those who did not), it could be stated that in terms of quantitative data, the students' FLCAS average decreased from 77.4 to 65.45 indicating that the participants had a lower level of second language speaking anxiety after the intervention. This finding was also supported by qualitative data in a variety of ways. The participants claimed that they could reduce their anxiety in their oral production both inside and outside of the classroom. Some of them also indicated that as they got more self-confidence, they became more eager to express themselves in English. Some others even claimed that they were demotivated to attend English classes, but after the treatment, they were more encouraged to attend and participate in classes. The findings of both quantitative and qualitative data are in parallel with some other studies. According to the findings of the study implemented by Charoensukmongkol, 2016, mindfulness is linked to decreased ESL speaking anxiety and, as a result, greater performance. According to Brannon (2010), mindfulness, assessment stress, and fear of interacting or talking were also inversely related among university learners. Furthermore, the findings of this study are consistent with those of KabatZinn (2008) and Siegel (2010) who found that mindfulness can reduce anxiety. Besides, the findings reveal that mindfulness is an effective tool to get rid of anxiety and stress. All these data demonstrate that speaking anxiety could be overcome greatly with the help of mindfulness treatment.

As an answer to the fourth question, qualitative data were gathered through semi-structured focus-group interviews conducted with 6 students in one session and 6 students within another session. Qualitative data indicate that nearly all students were satisfied with the intervention and they realized the benefits of mindfulness and immediately started to implement the techniques they learned in their own lives. In terms of their health issues, some of them claimed that they could overcome their sleeping problems. They could breathe with awareness, and regulate their emotions. At school, they could get rid of their fear of speaking, attend and participate in their classes more willingly, and focus on their tasks and activities. Namely, some of them stated that they were able to avoid mind-wandering enormously, which affected their grades positively. Apart from formal mindfulness meditations, applying daily mindfulness techniques raised their awareness. As they learned how to differentiate their emotions from their own identities, they could overcome their negative thoughts and become more eager to attend classes.

To conclude, all these results prove that using mindfulness treatment in a school context may reduce the students' speaking anxiety, increase their willingness to communicate, and raise their mindful awareness. Both quantitative and qualitative data supported the findings.

7. Conclusion

The present study was conducted to test if mindfulness training made a difference for EFL students in terms of increasing their willingness to communicate, raising their mindfulness-awareness, and lowering their speaking anxiety. The study was also designed to see the perceptions of students towards mindfulness treatment. The research was carried out in one of the state universities in the Black Sea Region in Turkey during the academic year of 2021-2022 in the spring term. Convenience sampling was conducted for selecting the participants for the study. The study included two groups; the experimental group consisted of 20 sophomore students (13 females & 7 males), and the control group consisted of 21 sophomore students (12 males & 9 females) studying at Aviation Management Department. They were taking 8 hours of General English courses every week at the time of the intervention. Semi-structured interviews, the Willingness to Communicate Scale (WTC), Mindfulness Attention and Awareness Scale (MAAS), and The Foreign Language Classroom Anxiety Scale (FLCAS) were utilized as data collection tools.

Both quantitative and qualitative data findings revealed that mindfulness training increased students' willingness to communicate in English, raised their mindfulness awareness, and lowered their speaking anxiety to a great level. The students also found mindfulness training useful in both their school lives and private lives for a variety of reasons such as better concentration, higher willingness to participate in discussion activities, lower stress, fear, depression, anxiety levels, better health conditions, better relationships, better emotion regulation ability, more self-confidence. The findings of the study also indicated that mindfulness became useful not only in terms of increasing their willingness to communicate or lowering their speaking anxiety but also it became beneficial in a variety of areas.

All these findings may support the idea that mindfulness might be implemented in all types of education institutions as all students might get help from mindfulness training to some extent. In fact, mindful schools have already started to spread all around the world.

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