Enhancement of Students' English Vocabulary Learning Through the Integration of Transcendental Meditation Technique

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Abstract

Vocabulary knowledge is one of the most important elements of learning English in learning English as a foreign language (EFL), and Transcendental meditation (TM) has been claimed to facilitate vocabulary enhancement. This study examined the enhancement of English vocabulary learning through the integration of the TM Technique and level of autonomous learning. The participants, consisting of 20 students in both the experimental group and control group, enrolled in an English proficiency course at Rajapark Institute during the academic year 2023. The instrumentation included an English proficiency test, a vocabulary knowledge test, and a set of questionnaires validated by three experts (IOC > .50), and tested by a pilot study α = .902). The quantitative data were analyzed using mean, standard deviation, and percentage including independent samples t–test and paired sample t–test, whereas qualitative data were analyzed by applying content analysis and analytic induction. The results showed that the posttest results of the experimental group showed a significant increase in the mean score after the implementation of TM at .05, with an improvement of 49.76% (M = 64.55, S.D. = 5.81). Additionally, the participants in the experimental group showed an increase in their attitude towards learning autonomy after learning at a significant level of .05 (M = 4.83, S.D. = .339). Specifically, TM was found to be beneficial in various aspects of autonomous learning, including enhancing English language learning, boosting confidence in asking questions and applying skills in real–life situations, achieving greater success in language learning, increasing access to supplementary information, fostering motivation and confidence in learning, promoting self–directed practice, encouraging creativity in learning, and improving understanding of learning content.

Introduction

English plays paramount significance in the development of cross-cultural communication skills and access to high-quality information. It enables students to effectively apply knowledge and information in various academic fields. Therefore, a robust foundation in the English language is crucial for the enhancement of language proficiency across diverse fields of study, facilitating learning, teaching, and professional endeavours in the future.

In learning English as a foreign language (EFL), vocabulary serves as one of the most essential keys to language learning. Learners generally begin by memorizing individual words and subsequently integrate these words into phrases, construct sentences, and develop communication within various contexts (Ellis, 2020; Nation, 2022; Suwannatrai & Thumawongsa, 2019). Adequate knowledge of vocabulary is crucial for effective communication in speaking, reading, listening, and writing skills. This is because meaningful and comprehensible communication cannot occur without vocabulary knowledge. Vocabulary learning can be achieved in a variety of ways, such as teaching vocabulary when new words are encountered in reading materials or teaching interesting vocabulary to provide learners with the necessary vocabulary knowledge for higher-level learning (Nation, 2015, 2022) states that the acquisition of vocabulary is an essential component in the process of learning a foreign language, as meaningful and comprehensible communication is contingent upon a sufficient knowledge of vocabulary. Effective communication and understanding cannot be achieved without an adequate knowledge of vocabulary. Therefore, having rich vocabulary knowledge implies the creation of opportunities for efficient and appropriate communication (Nation, 2022; Schmitt, 2010). However, EFL learners often encounter challenges in the learning process due to the constraints of limited language learning contexts and the absence of opportunities to apply acquired vocabulary in everyday life poses a hindrance to vocabulary acquisition (Suwannatrai, Thumawongsa, & Chumpavan, 2022).

The above-mentioned statements imply that vocabulary could facilitate comprehension of a language. Learners who possess a rich understanding of vocabulary tend to comprehend written and spoken texts more effectively than those with a limited vocabulary. Furthermore, learners must

not only memorize the meanings of words but also learn how to use them in sentences (Suwannatrai & Thumawongsa, 2019). At present, various methods for learning English vocabulary are proposed, one of the most effective approaches is the use of meditation techniques which facilitate learners in better enhancement of vocabulary (Oaas & Supaneedis, 2016; Ting, Nidich, & Nidich, 2021). One meditation technique that could be particularly helpful for learning English vocabulary is the Transcendental Meditation technique (TM) which involves training the mind to be focused on the present moment, without thinking about the past or the future. Conti, Doyle, Fearon, and Oppedisano (2022) claim that TM could be effective in improving learners' memory retention by linking words with images or emotions associated with the intended learning objectives. V. Charoen-Rajapark (2016), an expert in the field of TM, explains that the practice of TM can help learners enhance memory and learn things better. According to R. A. Charoen-Rajapark (2016), practicing TM for 15–30 minutes a day has been found to result in improved memory retention and increased duration of memory. Therefore, mindfulness meditation is considered an alternative option for learners aiming to develop their English language skills. In addition, TM also contributes to the development of various other skills, such as attention, creativity, and cognitive flexibility, which are important for learners seeking success in both academic studies and professional endeavours (Oaas & Supaneedis, 2016; Ting et al., 2021; Ting, Yin, & Horibe, 2022; Yin, 2017). To my knowledge few studies on TM have been found, this study examines the effects of TM on the English vocabulary learning development of students including investigating the potential positive impact of TM on autonomous learning among students. To shed light on the advantages of TM, the results of the study are anticipated to increase understanding of methods that can efficiently contribute to the development of English vocabulary learning skills in students. Furthermore, it is believed that the results of this study may serve as motivation to integrate TM techniques into other learning processes in the future and can be used as a guide for developing English vocabulary learning and teaching in EFL contexts at various levels.

Research Objectives

This study aims to investigate the effect of using the TM technique on the English vocabulary learning enhancement of students, including attitudes and autonomous learning in EFL contexts. The study addresses the following research questions:

1. Are there significant differences in vocabulary enhancement between the experimental group learning vocabulary through the implementation of the Transcendental Meditation technique

and the control group learning vocabulary without implementing the Transcendental Meditation technique?

2. Are there significant differences in attitude toward autonomous learning among students in the experimental group before and after the implementation of the Transcendental Meditation technique?

Limitations of the study

The participants of the study are limited to the students enrolling in the course of English proficiency at Rajapark Institute in the first semester of academic year 2023. The results may not cover all pictures of students learning English in EFL contexts. In addition, lessons including food, computers, society, history, finance, politics, friendship, science, and the arts used for teaching in the experimental group and the control group were the book entitled 400 Must-Have Words for TOEFL written by Stafford-Yilmaz and Zwier (2005), published by McGraw-Hill.

Literature Review

Vocabulary Learning and Importance of Vocabulary

Prominent scholars in language teaching (e.g., Brown, 2014; Nation, 2015; Richards, 2006) have explained that vocabulary is the smallest meaningful unit of language consisting of words, phrases, or expressions used for communication in a particular language. it is further explained that the study of vocabulary involves understanding the smallest units of language that contain meaning and can be used for communication, including spoken words, sound groups, or phrases that convey meaning independently (Paowpan et al., 2011). Intarasomjai and U-nakarin (2022), Platapiantong and Thienpermpool (2020) also state that vocabulary is crucial for communication as it enables learners to comprehend the meaning of texts, express thoughts or emotions accurately, and respond smoothly to others. Learners should, therefore, prioritize vocabulary learning throughout their educational journey. In brief, vocabulary is significant for communication as it enhances learners' understanding of text or conversation, enables accurate expression of thoughts or feelings, and facilitates smooth interaction with others. Vocabulary is the most significant aspect of language education. Regardless of how much learners study grammar or pronunciation skills, if they lack sufficient vocabulary to convey meaning, communication will be meaningless because is considered

the core of language and holds significance for general learners; therefore, having sufficient vocabulary enhances meaningful and effective communication in various language contexts (Intarasomjai & U-nakarin, 2022; Nation, 2022). In EFL contexts, teachers should carefully consider the prioritization of vocabulary teaching in order of importance (Nation, 2022; Suwannatrai & Thumawongsa, 2019).

Ellis (2020) provided that there are two main categories of vocabulary: explicit vocabulary which is explicitly taught by the teachers providing the meaning of the words and helping the learner to understand how to use it, and implicit vocabulary in which the learners encounter and learns from various contexts both inside and outside the classroom. Currently, vocabulary instruction has evolved continuously. Regardless of the teaching methods, vocabulary instruction typically is categorized as follows: (a) teaching vocabulary when encountering new words in the reading content. Normally, when teachers teach reading comprehension skills, challenging vocabulary may appear in the text, teachers, therefore, should carefully decide which content to be taught, (b) teaching new and interesting vocabulary to expand learners' vocabulary range. This type of vocabulary instruction involves learning the meanings of words directly without utilizing other skills. Teachers who explicitly teach vocabulary should have effective methods and steps for teaching interesting vocabulary to enhance learners' language acquisition and motivation (Brown, 2014; Ellis, 2020; Khanthapong, 2017; Nation, 2015, 2022; Suwannatrai et al., 2023).

Meditation as a Learning Technique

Meditation could be a helpful device for enhancing learning and cognitive performance since it cultivates a state of mental clarity, focus, and calmness, which can optimize the brain's ability to absorb, process, and retain information (Rueangsiri et al., 2021). Several studies have demonstrated the positive effects of meditation on various aspects of learning. For example, Karnjanasingha and Sripunvoraskul (2014); Nimchue (2018); Sanguanngam and Srirat (2022); Senamontree and Worrachat (2019) found that concentration and mindfulness learning could have positive effects on inner peace, the development of morality, the leadership skill, the collaborative learning, and the development of emotional quotient (EQ). In addition, it could enhance memory and retention because it helps learners focus on what they are learning, reducing distractions, and enhancing concentration which allows learners to fully engage with study materials and grasp concepts more effectively (Rueangsiri et al., 2021). Furthermore, it has been shown to strengthen memory consolidation, the

process of transferring information from short-term to long-term memory. This memory retention enables learners to store and recall information more efficiently (Vikornmapon et al., 2023).

Given the importance of TM technique in this study, practicing approximately 15–30 minutes per day, TM could reduce stress and anxiety which could minimize negative emotions that may hinder learning (Oaas & Supaneedis, 2016; Ting et al., 2022; Yin, 2017). Furthermore, TM is claimed to not only foster cognitive flexibility which could allow learners to handle problems from multiple dimensions, but also promote self-regulation, enabling learners to monitor their thoughts, emotions, and learning processes and identify areas that need improvement and develop effective learning strategies (R. A. Charoen-Rajapark, 2016; V. Charoen-Rajapark, 2016). Concerning these advantages, TM is considered an important learning technique for learners who want to be successful in their studies and work. Therefore, it is included in the curriculum of Rajapark Institute to help learners improve their learning quality. Importantly, since empirical evidence has rarely been found, TM techniques will be examined in this study.

Attitude, autonomous learning, and TM in vocabulary learning

Vocabulary is crucial for language proficiency, TM emerges as a potential tool, impacting both mental and emotional states in ways that could benefit vocabulary acquisition.

Positive Attitudes and Enhanced Learning. A study conducted by Ellis (2020); Jalali and Dousti (2014) highlights the importance of positive attitudes towards language learning. Learners with favourable attitudes tend to be: (1) intrinsically motivated, driven to learn by internal factors, and actively engaging in vocabulary-building activities; (2) less anxious and apprehensive, as reduced anxiety creates a conducive environment for learning and engagement; and (3) confident and self-efficacious promoting autonomous learning strategies in learning English vocabulary.

Autonomous Learning and Effective Vocabulary Acquisition. it empowers individuals to take charge of their learning journey, selecting and adapting strategies to suit their needs. This aligns well with TM principles, which emphasize self-regulation and internal awareness (Conti et al., 2022). These include: (1) self-directed strategies, where learners employ various techniques like spaced repetition, context clues, and mnemonics, leading to improved retention and recall (Benson, 2011); (2) metacognitive awareness, where learners become aware of their learning styles and effectively choose appropriate strategies for vocabulary expansion; and (3) increased motivation

and persistence, which self-driven learning fosters intrinsic motivation and persistence, crucial for sustained vocabulary efforts (Benson, 2011; Conti et al., 2022).

TM and Potential Benefits for Vocabulary Learning. This practice involves a simple mental technique to transcend surface-level thoughts and reach a state of inner quietude. Research suggests various benefits that could support effective vocabulary learning. A study by Oaas and Supaneedis (2016); Ting et al. (2022) suggested that TM reduced stress and anxiety, creating a calmer learning environment. Additionally, it enhanced focus and concentration, not only strengthening attention and facilitating better absorption of new vocabulary, but also improving memory consolidation and recall, potentially benefiting vocabulary retention (Conti et al., 2022; Platapiantong & Thienpermpool, 2020; Ting et al., 2021; Ting et al., 2022; Yin, 2017).

Research Methodology

This mixed methods study aimed not only to examine vocabulary enhancement between the experimental group learning vocabulary before and after implementing the TM and the control group learning in an actual classroom setting but also to explore the attitude concerning autonomous learning of the experimental group after implementing the TM technique.

Populations and Samples

The population included 76 students, distributed across four sections: Section 1 (20), Section 2 (20), Section 3 (17), and Section 4 (20), who were enrolled in the English Proficiency course of Rajapark Institute during the first semester of the academic year 2023. The entire population selected by applying purposive sampling has received training in two courses—Science of Creative Intelligence (SCI 100) and Transcendental Meditation Technique to Dharma (TM 100).

The samples were randomly selected from all four sections, with Group 4 designated as the experimental group, and Group 1 as the control group. Once the samples were identified, the researchers administered proficiency tests at Rajapark Institute to assess their English language proficiency levels, utilizing an Independent T-test. The analysis revealed that mean scores on the English proficiency test between the experimental group (48.70) and the control group (47.35) demonstrated a standard normal distribution ($Z_{Skewness}$ = 0.166, $Z_{Kurtosis}$ = 0.405). The Levene's Test for homogeneity of variances showed no significant difference (F = 0.432, *Sig.* = .515, (P>.05),

suggesting that both groups had similar or comparable English language proficiency levels as illustrated in the table below.

		Levene's Test for Equality of Variances		t–test for Equality of Means		
		F	Sig.	t	df	P–value
English Proficiency Score	Equal variances assumed	.432	.515	.682	37	.499

P > .05

Instrumentation

English Proficiency Test. The test, designed to evaluate the English proficiency of students of Rajapark Institute before graduation, was used to assess the English language knowledge levels of participants.

Test of Vocabulary Knowledge. The vocabularies used as the pretest and the posttest for the entire test (IOC > 0.50) validated by three language teaching experts in teaching English as a foreign language, English language teaching, and linguistics, were based on the lessons (400 Must–Have Words for TOEFL) taught in the classroom. The test format included vocabulary matching –synonyms and antonyms– vocabulary definition, vocabulary, and grammatical structure, and sentence completion, totaling 100 questions.

Questionnaires and Semi–Structured Interview Form. The questionnaire consisted of two parts. Part 1 included respondent demographics. Part 2 involved assessing attitudes towards the learning autonomy of the experimental group in learning English before and after implementing the TM technique. The questionnaire was designed in designed in five–point Likert–type scales ranging from 5 (Strongly agree) to 1 (Strongly disagree). As for validity, the questionnaire and the semi–structured interview questions used to elicit qualitative data concerning the experience, attitude, and perspectives of the participants, were reviewed by three experts to approve IOC value (IOC > 0.50). Finally, the pilot study of the questionnaire was done with 30 students with similar characteristics. The Cronbach's alpha coefficient was .902, exceeding the acceptable threshold for this research (≥ 0.8).

Classroom Teaching

In this study, Communicative Language Teaching was applied to teaching in the actual classroom of both the experimental group and control group. Typically, stages teaching included; (a) Lesson Introduction, generating interest and stimulating learners' curiosity about new vocabulary, (b) Presentation, presenting new vocabulary items, (c) Practice, having learners practice using the vocabulary by providing exercises and activities focused on memorizing word meanings, (d) Production, encouraging students to apply the practiced vocabulary in real communication, or having them engage in conversations or exchange opinions using the vocabulary, and (e) Conclusion, summarizing the key points of the lesson (Suwannatrai et al., 2023). For the experimental group, before each class, learners practice the TM100 course and SCI 100 course for approximately 15 minutes. After each teaching session, learners practice TM for another 15 minutes before ending the class. This pattern continues for a total duration of 10 weeks.

Data Analysis and Presentation

Descriptive statistics, including mean, percentage, and standard deviation were used to analyze basic quantitative data. Inferential statistics, specifically paired samples t–test and independent samples t–test, were applied to compare the mean score of vocabulary learning and autonomous learning. The qualitative data from the interview were analyzed by utilizing content analysis and analytic induction approach and presented in narrative format.

Results

Table 1 (RQ1). Results of vocabulary enhancement between the experimental group learning vocabulary through the implementation of the TM technique and the control group learning vocabulary without implementing the TM technique.

Vocabulary Enhancement	N	M	SD	t	df	P
Experimental Group	20	64.55	5.81	2.532		
Control Group	20	59.40	6.99		38	.016*

*P > .05

The results showed that the mean of the pretest score for the experimental group before learning English vocabulary with the implementation of TM was 43.10. The posttest score showed an improvement of 49.76%, reaching 64.55. This improvement was higher than the scores of those in the control group, who were learning English vocabulary without practicing TM (Mean of pretest

= 40.15, posttest score = 59.40, an improvement of 47.94%). The comparison results of the posttest score between the experimental group and the control group revealed that the mean score of the experimental group was 64.55 (*S.D.* = 5.81, an improvement of 49.76%), whereas the control group scored 59.40 (*S.D.* = 6.99, showing an improvement of 47.94%). The assumption of the normality test indicated that the posttest score variable was normally distributed ($Z_{Skewness}$ = –0.351, $Z_{Kurtosis}$ = 0.011).

The result of the equal variances assumed between the two groups obtained from Levene's test was F = .725, *Sig.* = .400, indicating that there was no significant difference in the variance of scores between the two groups. Consequently, the t–test was conducted. According to the independent samples t–test presented in Table 1, the obtained values were t = 2.532, df = 38, and $P- value$ = .016. Therefore, it was concluded that the experimental group had significantly higher scores than the control group at a significant level of .05. This statistically significant difference suggested that TM practice may enhance vocabulary retention and learning outcomes.

In addition, the results of in–depth interviews with representatives of the experimental group after experiencing TM practice alongside English vocabulary learning revealed that they had a positive attitude towards practicing TM implemented in English teaching. They perceived TM practice as beneficial for language learning in various aspects, such as enhancing concentration during lessons, reducing stress and anxiety, improving understanding of information, better retention of materials, and increasing confidence in speaking English. For example, the representative 4 informed,

"The practice of TM before starting to learn English is a good way for me to prepare myself for learning. I usually feel more relaxed and focused. After class, practicing TM helps me to review what I have learned. I feel that I understand the information that I have learned better after practicing."

Table 2 (RQ2). Results of attitudes towards autonomous learning of students in the experimental group before and after the implementation of the Transcendental Meditation technique (N = 20).

Reflection on Autonomous learning of the experimental group before and after implementing TM.	Before		Interpretation	After		Interpretation
	M	*SD*		*M*	*SD*	
1. Enhancing English learning.	3.10	.308	Moderate	4.95	.224	Strongly Agree
2. Improving Understanding of English contents.	3.25	.639	Moderate	4.50	.513	Strongly Agree
3. Enhancing creativity in English learning.	3.05	.510	Moderate	4.70	.470	Strongly Agree
4. Fostering motivation in English learning.	2.90	.447	Moderate	4.90	.308	Strongly Agree
5. Increasing confidence in English learning.	3.00	.562	Moderate	4.80	.410	Strongly Agree
6. Boosting confidence in posing questions in class.	3.15	.587	Moderate	4.95	.224	Strongly Agree
7. increasing access to supplementary information about English learning.	3.15	.366	Moderate	4.90	.308	Strongly Agree
8. Having self-directed practice in English learning.	2.95	.510	Moderate	4.80	.410	Strongly Agree
9. Applying English language skills in real-life situations.	3.20	.616	Moderate	4.95	.224	Strongly Agree
10. Achieving greater success in language learning.	3.05	.510	Moderate	4.90	.308	Strongly Agree
Total	3.08	.505	Moderate	4.83	.339	Strongly Agree

Table 2 showed that the mean score for autonomous learning before practicing TM was at a moderate level (*M* = 3.08, *S.D.* = .505). After practicing TM cooperated with learning English in the classroom, there was an increase in attitude towards autonomous learning among participants in the experimental group in all aspects (*M* = 4.83, *S.D.* = .339).

When considering specific aspects, it was found that TM technique was advantageous in enhancing English language learning (*M* = 4.95, *S.D.* = .224), boosting confidence in posing questions in the classroom (*M* = 4.95, *S.D.* = .224), applying English language skills in real-life situations (*M* = 4.95, *S.D.* = .224), achieving greater success in language learning (*M* = 4.90, *S.D.* = .308), increasing access to supplementary information about English learning (*M* = 4.90, *S.D.* = .308), fostering motivation (*M* = 4.90, *S.D.* = .308), and confidence in language learning (*M* = 4.80, *S.D.* = .410). Moreover, there was a rise in self-directed English language practice

(*M* = 4.80, *S.D.* = .410), greater creativity in learning English (*M* = 4.70, *S.D.* = .470), and an improved understanding of English learning contents (*M* = 4.50, *S.D.* = .513), respectively. That is, the implementation of TM practice with English language learning significantly increased participants' autonomous learning in all aspects compared to a moderate baseline as shown in Table 2, demonstrating a substantial improvement from the pre-test level.

Table 3. Results of autonomous learning of students in the experimental group before and after the implementation of the Transcendental Meditation technique using Paired Samples Test

Comparison results of autonomous learning of the experimental group after practicing TM (N = 20)	*M*	*SD*	*t*	*df*	*P*
Before	30.80	1.765	– 33.081	19	.000*
After	48.35	1.386			

*P <.05

Table 3 showed the differences in autonomous learning among participants in the experimental group before and after practicing TM. All 10 pairs tested by using Paired Sample Test were found to be highly significantly different (*P* <.05). The comparative analysis of the autonomous learning of the experimental group before (*M* = 30.80, *S.D.* = 1.765) and after (*M* = 48.25, *S.D.* = 1.386) practicing TM together with English vocabulary learning showed that the level of autonomous learning of the experimental group after practicing TM integrated in English teaching was higher than before the study at a statistically significant level of .05. Table 3 detailed the statistically significant differences in specific aspects of autonomous learning, showcasing increased self-directed planning, active information seeking, and critical reflection among participants after TM integration. This suggested that TM positively impacted not only overall motivation for independent learning but also specific strategies and behaviors associated with autonomous language acquisition.

Based on in-depth interviews with representative students in the experimental group who practiced TM after English classes, it was found that they had a positive trend towards self-directed learning in seeking knowledge about English on their own because it helped them to focus on what was being taught. For example, representative 5 said,

"TM is quite beneficial for my learning. It makes me more mindful, which helps me to better observe my own mistakes and to seek new ways to learn English. It also helps me to be more motivated, which helps me to stay committed to learning English."

Conclusion

Based on the results of this study, compared to students who learned vocabulary without TM (49.76%), those who practiced TM showed a significantly higher improvement in their posttest scores (47.94%). This suggests that TM could be a valuable tool for enhancing vocabulary acquisition. Furthermore, students in the experimental group reported positive feedback regarding their experience. They perceived the TM technique as beneficial for various aspects of language learning, including improved concentration, reduced stress, enhanced information understanding, better material retention, and increased confidence in speaking English. Overall, the study demonstrates that incorporating the TM technique into English vocabulary learning can lead to significant improvements in student performance and positive attitudes towards language learning.

Furthermore, the results showed that participants in the experimental group who practiced TM alongside their English studies showed a significant increase in their attitude towards learning autonomy (M = 4.83, $S.D.$ = .339). Specifically, TM was found to be beneficial in various aspects of autonomous learning, including enhancing English language learning, boosting confidence in asking questions and applying skills in real-life situations, achieving greater success in language learning, increasing access to supplementary information, fostering motivation and confidence in learning, promoting self-directed practice, encouraging creativity in learning, and improving understanding of learning content.

Discussion

RQ 1. It is evident that students who engaged in TM demonstrated a significantly greater improvement in posttest scores compared to their counterparts who learned vocabulary without TM. This finding strongly suggests a positive effect of implementing TM as a tool for enhancing English vocabulary acquisition. Moreover, participants in the experimental group reported various benefits associated with TM practice, including enhanced concentration, reduced stress levels, improved material retention, and increased confidence in speaking English. These reported benefits align with

the notion that TM helps learners concentrate on their studies, reduces stress and anxiety, and ultimately leads to improved learning and memory abilities. Additionally, it fosters creative thinking, potentially contributing to a more effective learning experience for English vocabulary. The results are consistent with the previous studies (e.g., Karnjanasingha & Sripunvoraskul, 2014; Paowpan et al., 2011; Platapiantong & Thienpermpool, 2020), which emphasize the positive impact of meditation training, particularly in the context of language learning and teaching, with a specific focus on memory enhancement. A related study on vocabulary memorization techniques and retention revealed that learners with a concentrated and focused mindset towards learning tended to learn and memorize English vocabulary more effectively than those who were distracted during class (Rueangsiri et al., 2021). This finding further supports the idea that practices like TM, which enhance concentration and focus, contribute significantly to successful vocabulary acquisition.

In applying TM techniques to teaching and learning, V. Charoen-Rajapark (2016) further suggests that learners should be encouraged to practice TM regularly because it can help learners focus more on their studies, reduce stress and anxiety, and develop creativity and imagination. Regular practice of TM helps learners to learn more effectively (Oaas & Supaneedis, 2016; Ting et al., 2022; Yin, 2017).

RQ 2. The results revealed that the experimental group showed a significant increase in the mean scores for autonomous learning in English after the implementation of TM techniques. Based on the interview, it was found that TM practicing helped learners develop a more positive attitude toward English language learning. Students in the experimental group perceived that their proficiency in English improved, leading to increased confidence in asking questions in class, applying English language knowledge in real-life situations, seeking additional information from various sources, and fostering creative thinking in language learning. The results are consistent with studies in Thailand contexts by (Benson, 2011); Paowpan et al. (2011); Rueangsiri et al. (2021); Vikornmapon et al. (2023) emphasizing the benefits of meditation, which suggests that meditation, four sublime states of mind, and the threefold training have positive impact on developing autonomous learning skills among university learners (Conti et al., 2022; Oaas & Supaneedis, 2016; Senamontree & Worrachat, 2019; Ting et al., 2022; Yin, 2017). The results of this study also demonstrate that the TM technique can help develop learners' autonomous learning skills as it contributes to the development of learners' self-directed learning and helps students maintain focus on their tasks,

control their thoughts and emotions, and observe and cope with various aspects of their surroundings. All of these skills are deemed crucial for autonomous learning.

Recommendations

It should be noted that this study is an initiative experimental study, suggesting the need for further research to support the results. A more extensive research study should be conducted to validate the results and explore additional factors that align with the integration of the TM technique in English language teaching and may influence the effectiveness of vocabulary learning such as the learning ability levels within the experimental group, the learning period, and learning activities concerning TM. Further studies will contribute to enhancing the credibility of the research findings and provide a better understanding of other factors that may impact the effectiveness of English vocabulary learning. suggestion or recommendations. For applying the research results in the classroom, teachers can organize learning activities that promote learners' mindfulness, and concentration, and create a learning environment conducive to autonomous learning, including encouraging learners' participation in learning activities, providing opportunities for them to express their opinions, and offering support and encouragement to learners.

New Knowledge

TM Technique serves as a useful tool for lesson preparation and lesson review. Practicing TM before commencing a lesson is a means of preparing learners for the upcoming learning experience. This practice helps them focus and get ready before delving into the lesson content, thereby reducing stress and anxiety that may otherwise distract their learning focus. Engaging in meditation before lessons proves to be an effective method to ensure learners are prepared to efficiently absorb new information. Practicing TM after the lesson conclusion supports learners in reviewing the material covered in the lesson, enhancing their ability to memorize the content and preventing disruptive thoughts and feelings from impeding the reviewing process. It enables learners to stay focused on the current moment, facilitating a more effective review of lesson content. This practice contributes to developing mindfulness, helping learners concentrate on the material being reviewed and efficiently connecting various pieces of knowledge they have acquired. The integration of the TM technique, regarded as an abstract science, with English as a

Foreign Language (EFL) in the vocabulary domain reveals observable outcomes. These outcomes are evident not only in measurable results but also in the students' attitudes, an essential element influencing self-directed or autonomous learning. This novel insight into the connection between TM, language acquisition, and the attitudes of students constitutes a unique contribution from this study.

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