Language anxiety: its impact on english proficiency in diploma in electrical and electronics engineering (DEE) students

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ABSTRACT

This investigation examines the phenomenon of language anxiety and its impact on the English proficiency of Diploma in Electrical and Electronics Engineering (DEE) students. The principal research goals encompass three key components: identifying the main factors that lead to language anxiety in DEE students, evaluating the correlation between language anxiety and English proficiency levels, and exploring successful approaches for alleviating language anxiety and enhancing English proficiency. Utilizing a quantitative survey method, the study pinpoints key sources of anxiety such as apprehension towards negative evaluations, communication anxiety, and test-related stress. Using SPSS version 2.0 the data was thoroughly analysed. The findings highlighted that about half of the respondents agreed to anxiety affects their English proficiency with mean value 3.07. The data shows a noteworthy inverse correlation between language anxiety and English proficiency, suggesting that heightened anxiety levels correspond to diminished proficiency. Moreover, the investigation underscores various successful approaches for alleviating language anxiety, which involve providing positive reinforcement, enhancing exposure to English in low-pressure settings, and integrating anxiety-alleviating techniques into English as a Second Language instructional practices. The results emphasize the importance of addressing language anxiety to enhance learning outcomes and propose practical steps for educators in improving English proficiency.

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Introduction

Language anxiety is a well-documented phenomenon that significantly affects ESL (English as a Second Language) learners' proficiency. It is a specific form of anxiety that manifests in language learning contexts. According to Horwitz, Horwitz, and Cope (1986), language anxiety can be classified into three categories: communication apprehension, test anxiety, and fear of negative evaluation. Khan (2015) found that anxiety is particularly high when learners are required to speak English, with various sources contributing to this anxiety. Research by Zheng (2023) underscores that the apprehension of failing in language examinations is a pivotal factor contributing to overall language anxiety in ESL learners. Recent studies have identified learners fear

criticism from peers and instructors, impacting their willingness to participate in class activities (Mak, 2011). The apprehension of being evaluated negatively by peers and instructors due to errors is a common fear among students. This apprehension can be paralyzing, resulting in reticence in verbal expression and active participation during educational sessions. Park and French (2019) ascertain that, learners possessing higher self-efficacy and confidence in their English proficiency exhibit reduced anxiety levels.

The objectives of this research are to identify the primary factors contributing to language anxiety among DEE students as ESL learners, evaluate the correlation between language anxiety and English proficiency levels, and investigate effective strategies for reducing language anxiety and improving English proficiency in ESL learners.

This study is essential especially for teachers and students of DEE to understand the impact of anxiety on English proficiency. It is also crucial to identify ways or strategies in helping the teachers and students in enhancing the English Proficiency. Recent literature suggests several strategies to mitigate language anxiety and improve English proficiency. Providing constructive feedback and positive reinforcement helps build learners' confidence (Dörnyei, 2007). Creating a supportive classroom environment where learners feel comfortable practicing English with peers can reduce anxiety (Young, 1991). Incorporating technology-assisted language learning tools and creating opportunities for low-stakes practice in a supportive environment have also been shown to be effective. By addressing these aspects, educators can significantly boost the language learning experience and outcomes for DEE students.

Method

A sequence of surveys was distributed to 60 students who were registered in the Department of Electrical Engineering (DEE) at Politeknik Kuala Terengganu. The participants included individuals from semester one to semester four who had completed Communicative English courses in their respective recent semesters. The questionnaires were divided into three sections based on targeted research objectives. The first section touches on the factors contributing to language anxiety among DEE students. Next section covers the correlation between language anxiety and English proficiency levels in DEE students. Whereas the last section goes for the strategies for reducing language anxiety and improving English proficiency in ESL learners generally and specifically to DEE students of Politeknik Kuala Terengganu. Cronbach's alpha is measured with value 0.991, which is also extremely high and nearly identical to the non-standardized alpha value. The "N of Items" column indicates that there are 21 items or questions being analyzed. Overall, the elevated Cronbach's alpha coefficients, approaching 1, indicate a high level of reliability and consistency among the 21 items under assessment. This suggests that these items are accurately capturing the same latent construct or concept.

Results and Discussion

Figure 1 <Demographic Factors>

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	57	95.0	95.0	95.0
	Female	3	5.0	5.0	100.0
	Total	60	100.0	100.0	
Valid	Sem 1	5	8.3	8.3	8.3
	Sem 2	25	41.7	41.7	50.0
	Sem 3	7	11.7	11.7	61.7
	Sem 4	23	38.3	38.3	100.0
	Total	60	100.0	100.0	

This table presents demographic factors related to gender and academic semester level of the study participants. The total number of participants is 60. The majority of participants are male, with 57 out of 60 (95%). Only 3 participants (5%) are female. 5 participants (8.3%) are in Semester 1. The largest group of 25 participants (41.7%) are in Semester 2. Whereas 7 participants (11.7%) are in Semester 3 and 23 participants (38.3%) are in Semester 4. The table provides the frequency counts, percentages, valid percentages, and

cumulative percentages for each demographic category. There is a significant gender imbalance, with an overwhelming majority of male participants. Participants are well distributed across the four semester levels, with the highest representation from Semester 2 and Semester 4 students. This demographic breakdown suggests that the study sample is heavily skewed towards male students, potentially limiting the generalizability of findings to the broader student population. Additionally, the distribution across academic semesters allows for analysis based on different levels of educational progression.

Figure 2 <Factors Contributing to Anxiety>

No.	Item	N=60		
		Means	SD	Interpretation
A1	I feel nervous when speaking English in front of others.	3.37	.76	Medium high
A2	I worry about making mistakes when using English.	3.42	.77	Medium high
A3	I feel intimidated when I hear others speak English fluently.	3.18	0.83	Medium high
A4	I get anxious when I have to respond in English during class.	3.20	.66	Medium high
A5	I am afraid of being laughed at when I speak English.	2.65	.84	Medium low
A6	I feel pressured to perform well in English tests and assignments.	2.95	.77	Medium low
A7	I feel uncomfortable when I have to use English in spontaneous conversations.	3.38	.61	Medium high

Based on the mean scores in the table, A2 (Worrying about making mistakes when using English) falls as the most contributing factor to anxiety with the value 3.42. Whereas the least score is A5 (Being afraid of being laughed at when speaking English) with Mean value 2.65 indicates, it may not be as significant as other factors that contribute to anxiety. Not to mention, A1 and A7 also have major impacts on this matter. Many learners experience nervousness and fear when required to speak English publicly, also reflecting the challenges associated with impromptu communication in a second language. Dewaele and MacIntyre (2019) observe that peer pressure and the apprehension of peer judgment can heighten language anxiety, particularly in group scenarios necessitating verbal interaction. In summary, the highest levels of anxiety seem to be around speaking English in front of others, worrying about mistakes, responding during class, and spontaneous conversations (mean scores above 3.2). Relatively lower anxiety is reported for being intimidated by fluent speakers, fear of being laughed at, and pressure for tests/assignments (mean scores below 3.0). These findings align with previous research highlighting the significant role of communication apprehension and fear of negative evaluation as sources of language anxiety (Horwitz et al., 1986; MacIntyre & Gardner, 1994).

Figure 3 <Correlation between Language Anxiety and English Proficiency Levels>

No.	Item	N=60		
		Means	SD	Interpretation
B1	I feel that my anxiety affects my ability to understand spoken English.	3.45	.72	Medium high
B2	My anxiety makes it difficult for me to speak English clearly.	2.70	.83	Medium low
B3	"I believe my nervousness impacts my English writing skills."	2.90	.80	Medium low
B4	When I am anxious, I struggle to read and comprehend English texts.	2.80	.66	Medium low
B5	My fear of making mistakes hinders my overall English language proficiency.	3.12	.64	Medium high
B6	Anxiety causes me to forget words and phrases I know in English.	2.67	.73	Medium low
B7	I perform poorly in English assessments due to my anxiety.	2.87	.60	Medium low

Overall, the data suggests the correlation between language anxiety and English proficiency levels, based on the mean scores of various items measured on a Likert scale. B1 (Mean = 3.45) that is anxiety affects my ability to understand spoken English falls as the most elevated mean score which indicates that respondents moderately agree that their anxiety affects their ability to understand spoken English. Additionally, the fear of

making mistakes (B5) also shows a moderate to high level of agreement in hindering overall English language proficiency. These findings align with recent research on the detrimental effects of language anxiety on various aspects of language learning and performance (Dewaele & Dewaele, 2017; Myo, Mahmud, & Rosly, 2020; Rajab, 2021). Consistent research demonstrates an inverse relationship between language anxiety and levels of English proficiency. Elevated levels of anxiety typically align with lower proficiency in English. Initially, anxious students may refrain from speaking and participating in class to avert embarrassment, resulting in fewer opportunities for practice and slower language progression. Students may feel disheartened and less inclined to interact with the language. Prolonged anxiety can diminish self-esteem and self-efficacy, fostering a detrimental cycle where students' confidence in their language abilities wanes, subsequently reducing their proficiency. Zheng (2023) underscored the intricate interplay between language anxiety and proficiency, noting that anxiety can influence different language skills to varying extents. Notably, speaking tends to evoke more anxiety than reading or writing.

Figure 4 <Effective Strategies for Reducing Language Anxiety and Improving English proficiency>

No.	Item	N=60		
		Means	SD	Interpretation
C1	Participating in group discussions in English helps reduce my language anxiety.	2.85	.90	Medium low
C2	Practicing English with native speakers improves my confidence and reduces anxiety.	2.88	.90	Medium low
C3	Using relaxation techniques (e.g., deep breathing) helps me feel less anxious when speaking English.	2.78	.72	Medium low
C4	Receiving positive feedback from teachers and peers boosts my confidence in using English.	3.38	92.	Medium high
C5	"Engaging in regular English language practice (e.g., reading, writing, listening) helps reduce my anxiety.	3.17	.78	Medium high
C6	Attending English language workshops or extra classes helps me feel more competent and less anxious.	3.23	.77	Medium high
C7	Using language learning apps and online resources makes me feel more comfortable with my English proficiency.	3.57	.56	Medium high

The data presents effective strategies for reducing language anxiety and improving English proficiency. The data shows the mean scores and standard deviations for seven items related to various strategies. The most effective strategy was C7, mean = 3.57. It is supported by Liu and Jackson (2020), Golonka et al., 2014 and Shadiev et al., 2017 that technology-based tools, such as language learning apps, reduce anxiety by allowing students to practice at their own pace and receive instant feedback. Also, Zheng (2023) notes that online communities offer a platform for students to practice English in a supportive and non-judgmental environment. Additionally, C4 with the value 3.38 perceived effectiveness of receiving positive feedback and attending extra classes or workshops aligns with the literature on the role of teacher support and opportunities for practice in reducing language anxiety (Horwitz, 2001; Von Wörde, 2003). A supportive and encouraging teaching style is crucial in mitigating anxiety. Oxford (2020) emphasizes that the role of the teacher is vital in creating a low-anxiety classroom environment. Positive reinforcement and constructive feedback are essential. Teachers should offer constructive feedback and encourage students, fostering a supportive atmosphere that reduces anxiety. A study by Dewaele and MacIntyre (2019) emphasized that positive emotional experiences in the classroom, facilitated by supportive teacher-student interactions, significantly reduce anxiety and boost language proficiency. By implementing these successful approaches, educators can help alleviate language anxiety and enhance English proficiency among ESL students, creating a more effective and enjoyable language learning experience.

Conclusions

The research concludes that language anxiety has a significant impact on the English proficiency of students enrolled in the Diploma in Electrical and Electronics Engineering (DEE) program. Factors contributing

to language anxiety encompass the fear of receiving negative evaluations and apprehension towards communication. Furthermore, language anxiety, particularly in the context of speaking activities, has been found to significantly impact English proficiency (Jugo, 2020). Speaking anxiety, a specific type of language anxiety, has been identified as a key factor in the development of communication skills (Altun, 2023). Test anxiety and foreign language reading anxiety have also been found to negatively impact English reading proficiency (Tsai, 2012). These findings highlight the complex and varied nature of language anxiety and its impact on English proficiency. An evident correlation has been established between language anxiety and levels of English proficiency, demonstrating that heightened levels of anxiety are linked to lower proficiency. The significance of this investigation lies in shedding light on the prevalent issue of language anxiety among DEE students, who necessitate proficient English skills for comprehending technical materials, and progressing in their future needs. Further research is needed to explore the long-term effectiveness of these strategies and to develop new methods to support anxious Dee students. Various factors contribute to this anxiety, each playing a pivotal role in shaping students' perceptions and performance in their language acquisition journey.

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