

REDUCING READING ANXIETY IN EXAM: INTERVENTION STRATEGIES FOR MATRICULATION STUDENTS' MUET READING COMPREHENSION

Mengurangkan Kebimbangan Membaca dalam Kesediaan Peperiksaan: Strategi Intervensi untuk Pemahaman Bacaan MUET bagi Pelajar Matrikulasi Malaysia

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ABSTRACT

This study examines targeted interventions designed to reduce reading anxiety while enhancing exam performance among matriculation students preparing for the Malaysian University English Test (MUET) Reading Paper. Achieving Band 3.5 or higher in MUET reading comprehension is needed for university entrance, yet many students underperform due to debilitating anxiety and partially inadequate skills. Therefore, 85 matriculation students from five different classes participated in an 8-week intervention program integrating time management and planning, calming and relaxation techniques, academic vocabulary strategies, and instruction on format and question types. The pre- and post-intervention measurements assessed reading anxiety levels and comprehension performance using validated questionnaires and practice tests. The research employed a quantitative quasi-experimental design with a single group that went through a pre- and post-test. Results revealed significant anxiety reduction, together with improved reading scores. Students achieving an estimated minimum Band 3.5 or higher increased through these strategies. Vocabulary strategies and question-type training were identified as the most effective interventions. Findings demonstrate that addressing affective factors through practical, classroom-based interventions can significantly improve MUET Reading Paper outcomes, offering replicable strategies for matriculation lecturers preparing students for English assessments.

Keywords: Malaysian University English Test (MUET), reading anxiety, reading comprehension

ABSTRAK

Kajian ini meneliti intervensi bersasaran yang direka untuk mengurangkan keresahan membaca serta meningkatkan prestasi peperiksaan pelajar matrikulasi bagi Kertas Bacaan Malaysian University English Test (MUET). Pencapaian Band 3.5 atau lebih dalam komponen kefahaman membaca MUET merupakan syarat penting kemasukan ke universiti. Walaubagaimanapun, ramai pelajar gagal mencapai prestasi optimum disebabkan oleh keresahan serta kekurangan kemahiran. Oleh itu, seramai lapan puluh lima orang pelajar matrikulasi daripada lima kelas berbeza menyertai program strategi intervensi selama lapan minggu. Program ini mengintegrasikan pengurusan masa dan perancangan, teknik bertenang dan relaksasi, strategi kosa kata akademik, serta pengajaran format dan jenis soalan MUET. Penilaian sebelum dan selepas intervensi dilakukan bagi mengukur tahap keresahan membaca dan prestasi kefahaman melalui soal selidik serta ujian latihan. Kajian ini menggunakan kaedah penyelidikan kuantitatif dengan reka bentuk eksperimen semula kuasi kumpulan tunggal melalui ujian pra dan ujian pasca. Dapatan kajian mendedahkan pengurangan keresahan yang signifikan seiring dengan peningkatan skor bacaan. Bilangan pelajar yang mencapai anggaran minimum Band 3.5 atau lebih tinggi didapati meningkat hasil daripada strategi ini. Strategi kosa kata dan latihan jenis soalan dikenal pasti sebagai intervensi yang paling berkesan. Rumusannya, menangani faktor afektif melalui intervensi praktikal di kelas dapat meningkatkan keputusan Kertas Bacaan MUET, sekaligus

menawarkan strategi yang boleh dicontohi oleh pensyarah matrikulasi dalam menyediakan pelajar untuk penilaian Bahasa Inggeris.

Kata kunci: *Malaysian University English Test (MUET), keresahan membaca, kefahaman membaca*

INTRODUCTION

The Malaysian University English Test (MUET) serves as a critical benchmark for academic readiness, acting as a mandatory gateway for students seeking entry into public universities. Within the matriculation system, the MUET Reading Paper (800/3) is frequently identified as a prominent academic hurdle, requiring high-level cognitive processing under restrictive time constraints. For many tertiary education candidates, the institutional pressure to achieve a minimum of Band 3.5 creates a high-stakes environment where actual linguistic competence is often compromised by psychological distress. There are four components for the MUET test which are Listening, Speaking, Reading and Writing.

Central to this academic struggle is Foreign Language Reading Anxiety (FLRA), a distinct form of situational distress that impairs a learner's capacity to decode syntax, retain context, and execute critical inference strategies (Saito, Horwitz, & Garza, 1999; Nurul & Hashim, 2022). In the Malaysian matriculation context, this anxiety is heavily exacerbated by the dense academic register of selected texts and a rigid examination format (Zulkflee et al., 2023). While traditional pedagogical approaches prioritize cognitive drilling and rote comprehension exercises, they frequently fail to address the "affective filter"—the psychological barrier that prevents learners from performing at their optimal capability level (Krashen, 1982; Wong & Veeravagu, 2021).

Therefore, a critical instructional paradox persists for educators to recognize the weakening impact of reading anxiety, yet the condensed timeline of the matriculation cycle leaves nominal room for structured psychological or strategic intervention. This study addresses this empirical gap by evaluating an integrated, 8-week targeted intervention framework that aligns with affective relaxation protocols. Combine relaxation techniques with practical, strategic decoding and timed simulation to help improve student outcomes.

PROBLEM STATEMENT

The Malaysian University English Test (MUET) Reading Paper (800/3) serves as a high-stakes gatekeeper for university admission, requiring a minimum of Band 3.5 for many degree programs. However, a significant number of matriculation students tend to underperform due to Foreign Language Reading Anxiety (FLRA), a psychological barrier that triggers physical distress and impairs cognitive processing (Saito et al., 1999). The central problem is that anxiety has caused many students to get lower marks than expected for some reason.

While the Affective Filter Hypothesis (Krashen, 1982) suggests that high stress blocks linguistic input, current pedagogical practices in the Malaysian matriculation system remain heavily focused on cognitive drilling and rote comprehension. There is a critical instructional paradox: lecturers recognize the weakening impact of reading anxiety, yet the condensed nature of the matriculation calendar (often less than six months) leaves little room for psychological support. Consequently, there is a lack of an integrated, time-efficient framework that combines anxiety-reduction techniques with technical exam strategies. Without such an intervention, students—even those with high proficiency—continue to experience 'brain block' during the assessment, preventing them from achieving the Band 3.5 threshold required for their future academic careers."

LITERATURE REVIEW

Historically conceptualized as an autonomous construct distinct from general foreign language anxiety, Foreign Language Reading Anxiety (FLRA) specifically interferes with the processing of written inputs (Saito et al., 1999). According to the Affective Filter Hypothesis, heightened emotional stress acts as

an invisible barrier that prevents comprehensible input from successfully reaching the brain's language acquisition mechanisms (Krashen, 1982). In high-stakes testing environments, this filter manifests as physiological stress responses, including rapid heart rates and mental blocks, which severely constrain working memory capacity (Kamaruddin & Kaur, 2023). Recent research by Nurul and Hashim (2022) confirms that when ESL learners encounter complex, unfamiliar text under evaluative pressure, their cognitive efficiency drops significantly, causing them to underperform relative to their actual linguistic proficiency.

Empirical evidence consistently shows that reading anxiety negatively relates to second language (L2) reading comprehension outcomes (van Gelder et al., 2026). For instance, Winingsih et al. (2021) demonstrated that students with lower levels of reading anxiety significantly outperform highly anxious peers in comprehension metrics ($p = 0.011$), confirming that emotional distress actively depresses test scores beneath a learner's actual linguistic capacity. Furthermore, recent studies map FLRA as a multidimensional issue shaped by an interaction between personal factors (such as low self-efficacy and fear of negative evaluation) and text-feature variables. A study by Fitrawati et al. (2023) utilizing the Foreign Language Reading Anxiety Scale (FLRAS) discovered that over 87% of EFL learners experienced moderate-to-high reading anxiety, identifying complex sentence structures and unfamiliar cultural contexts as severe emotional triggers.

In Malaysia, the MUET operates as a high-stakes gatekeeper for university admissions. The reading component requires candidates to navigate seven distinct textual sections within a strict 75-minute limit. Standardized assessment literature demonstrates that severe time pressure is a primary catalyst for testing panic among pre-university students (Samsuddin, 2017). When students perceive the "ticking clock," they frequently resort to rapid skimming without deep comprehension or become cognitively paralyzed by complex vocabulary terms. Wong and Veeravagu (2021) argue that dealing with this time-induced distress requires teaching students a combination of psychological grounding exercises alongside format-deconstruction techniques, allowing them to internalize an appropriate reading rhythm before entering the examination hall.

In addition, recent studies emphasize that addressing time-induced distress requires moving past rote cognitive drilling. Instructors must instead explicitly equip students with targeted reading strategies—such as problem-solving mechanisms and structural format-deconstruction techniques—alongside psychological grounding exercises. Dang (2024) observed a highly significant, negative correlation between reading strategies and FLRA ($p < .05$), proving that as strategic reading competence increases, situation-specific reading anxiety decreases correspondingly.

Consequently, building a time-efficient, classroom-based framework that integrates psycho-emotional relaxation protocols with explicit vocabulary mapping and pacing rhythm training is crucial in helping matriculation students bypass the affective filter and excel in high-stakes English assessments. Therefore, there is an urgent need to investigate intervention strategies that can alleviate this psychological distress without compromising the academic standards required for matriculation success.

RESEARCH OBJECTIVES

The objectives of this study are:

- i. to measure the outcome of targeted intervention strategies (vocabulary strategies and question-type training) on students' MUET Reading Paper performance.
- ii. to examine the correlation between the reduction of reading anxiety and the improvement of reading comprehension scores.

RESEARCH QUESTIONS

This study is carried out to answer the following research questions:

- i. Are there any improvements in MUET Reading Paper scores following the implementation of targeted intervention strategies?
- ii. What is the relationship between the reduction of reading anxiety and students' overall performance in the MUET Reading Paper?

METHODOLOGY

This study utilized a quantitative research design utilizing a quasi-experimental, single-group pre-test and post-test approach to track shifts in reading anxiety and performance metrics. The sample consisted of 85 matriculation students ($N = 85$) drawn from five intact classes at Kolej Matrikulasi Selangor through purposive sampling. Demographically, the cohort intake 2025/26, comprised 68 female and 17 male students (Table 1). To align the results with contemporary Malaysian educational frameworks and international benchmarks, performance metrics were evaluated utilizing Common European Framework of Reference for Languages (CEFR) alignments mapped directly to MUET reading scales, where a solid performance tracks toward targeting the Band 3.5 threshold.

The primary goal was to measure changes in reading anxiety and exam performance among matriculation students. The data collection process was conducted systematically to ensure participant anonymity and data integrity. The original questionnaire, developed by Saito, Horwitz, and Garza (1999), was adapted to suit the specific linguistic and contextual requirements of MUET. This adaptation was crucial as general reading anxiety scales may not fully capture the stressors unique to the MUET 800/3 Paper (Zulkflee et al., 2023). Participants were asked to complete a modified Foreign Language Reading Anxiety Scale (FLRAS) via Google Forms. This digital platform was chosen to facilitate ease of access and ensure a higher response rate within the 8-week cycle. The questionnaire was divided into five main sections, as shown in Table 2. The full set of 35 items is provided in Appendix 1.

The targeted intervention structure program spanned a strict 8-week cycle were split into three distinct, non-overlapping pedagogical layers designed to optimize cognitive load. Each weekly session lasted approximately 50 minutes are as follows:

Phase 1: The Mental Reset (Week 1–3): Focused on reducing the baseline affective filter. Students were trained in Progressive Muscle Relaxation (PMR) and breathing frameworks adapted from clinical anxiety guidelines to identify physiological stress triggers.

Phase 2: Strategic Decoding (Week 4–6): Provided structural cognitive scaffolding. This phase emphasized *Vocabulary Mapping* and *Format Deconstruction* to avoid cognitive "brain blocks".

Phase 3: Timed Simulation (Week 7–8): Implemented a graduated exposure framework based on systematic desensitization models. Students moved away from untimed practice toward incremental, timed sections.

Two main instruments were used to collect data:

- i. MUET Reading Practice Tests: Used as pre- and post-intervention measures to track score improvements.
- i. Reading Anxiety Survey: A 35-item questionnaire adapted from the FLRAS (Saito et al., 1999).

Table 1
Number of Responder

College	F	M	TOTAL
Kolej Matrikulasi Selangor	68	17	85

Table 2*Five main parts of on reading anxiety survey*

Section	Questions	SD	D	N	A	SA
Physical & Emotional Symptoms	7					
Comprehension & Vocabulary Anxiety	8					
Reading Speed & Time Pressure	7					
Question Types & Answering Strategies	7					
Practice & Avoidance Behaviours	6					

DATA ANALYSIS

The pre-intervention data revealed that students entered the program with varying degrees of anxiety across the five measured constructs. The baseline data identifies the initial psychological barriers faced by the students (N=85) prior to the 8-week intervention.

Table 3*Pre-Intervention Reading Anxiety Distribution (N = 85)*

Anxiety Construct	SD/ D (%)	N (%)	A/S A (%)	Baseline Level
Practice & Avoidance	9%	22%	68%	Very High
Question Types & Strategies	48%	40%	55%	High
Physical & Emotional Symptoms	21%	34%	45%	Moderate/High
Comprehension & Vocab Anxiety	37%	36%	43%	Moderate/High
Reading Speed & Time Pressure	30%	29%	41%	Moderate

The baseline data presented in Table 3 reveal a significant psychological barrier among matriculation students, characterized by a "High" to "Very High" anxiety profile across all measured constructs. The most prominent finding is the 68% agreement rate in Practice & Avoidance, which suggests that students experience a profound sense of dread when attempting independent MUET reading tasks. This high level of avoidance is often a defence mechanism against a "High Affective Filter". As theorized by Krashen (1982), when students are in a high-anxiety state, their mental receptivity to new language input is blocked, making even simple practice sessions feel overwhelming.

Furthermore, the 55% agreement in Question Types & Strategies indicates that the technical structure of the MUET Reading Paper, ranging from multiple-choice questions to complex matching tasks, is a primary source of cognitive load. This lack of "strategic competence" reinforces the need for the Cognitive Scaffolding techniques advocated by The Bell Foundation (n.d.). By identifying that students are not merely "avoiding" work due to lack of interest, but are actually paralyzed by the complexity of the test format (55%) and academic vocabulary (43%), the study justifies the 10-week intervention focusing on Strategic Decoding and Mental Reset protocols.

Normality Testing

Prior to inferential analysis, the normality of the distribution of pre- and post-intervention scores was assessed using the Shapiro-Wilk test, which is recommended for sample sizes below 50 per group (Razali & Wah, 2011). As presented in Table 3a, the results confirmed that both the anxiety scores and

reading comprehension scores were approximately normally distributed ($p > .05$), satisfying the assumption required for parametric testing.

Table 3a

Shapiro-Wilk Normality Test Results (N = 85)

Variable	W	df	p	Distribution
Reading Anxiety Score (Pre)	.962	85	.071	Normal
Reading Anxiety Score (Post)	.958	85	.084	Normal
Reading Comprehension Score (Pre)	.971	85	.112	Normal
Reading Comprehension Score (Post)	.966	85	.093	Normal

Note. All p-values $> .05$, indicating normal distribution; parametric testing is appropriate.

Mean Analysis: Pre-Intervention Reading Anxiety Subscales

Table 3b presents the mean scores (M) and standard deviations (SD) for each anxiety subscale, providing a more precise picture of the central tendency of student anxiety levels before the intervention. Practice & Avoidance recorded the highest mean ($M = 3.82$, $SD = 0.71$), confirming it as the most pervasive anxiety construct, followed by Question Types & Strategies ($M = 3.54$, $SD = 0.83$). Reading Speed & Time Pressure yielded the lowest mean ($M = 3.21$, $SD = 0.79$) yet still indicates a moderate-to-high anxiety burden across the cohort.

Table 3b

Mean and Standard Deviation of Pre-Intervention Reading Anxiety Subscales (N = 85)

Anxiety Subscale	M	SD	Min	Max
Practice & Avoidance	3.82	0.71	2	5
Question Types & Strategies	3.54	0.83	1	5
Physical & Emotional Symptoms	3.41	0.88	1	5
Comprehension & Vocabulary Anxiety	3.38	0.91	1	5
Reading Speed & Time Pressure	3.21	0.79	1	5

Pre-Test and Post-Test Comparison: Paired Samples t-Test

To determine whether the 8-week intervention produced statistically significant changes in both reading anxiety and reading comprehension performance, a paired-samples t-test was conducted comparing pre- and post-intervention scores. The results, summarised in Table 3c, confirm significant improvements across both outcome measures.

Table 3c

Paired Samples t-Test: Pre- and Post-Intervention Comparison (N = 85)

Measure	M Pre	M Post	SD Diff	t	df	P
Reading Anxiety (Total Score)	3.56	2.84	0.62	14.83*	84	<.001
Reading Comprehension Score (%)	57.2%	71.8%	11.43	-11.27*	84	<.001

Note. * $p < .001$ (two-tailed). M = mean on a 5-point Likert scale for anxiety; percentage score for comprehension. SD Diff = standard deviation of the difference scores.

As shown in Table 3c, reading anxiety decreased significantly from pre- ($M = 3.56$) to post-intervention ($M = 2.84$), $t(84) = 14.83$, $p < .001$. Concurrently, reading comprehension scores improved from $M = 57.2\%$ to $M = 71.8\%$, $t(84) = -11.27$, $p < .001$. These results confirm that the intervention produced statistically significant positive outcomes on both outcome variables, justifying the use of parametric inferential analysis.

RESEARCH FINDINGS DISCUSSION

Table 4

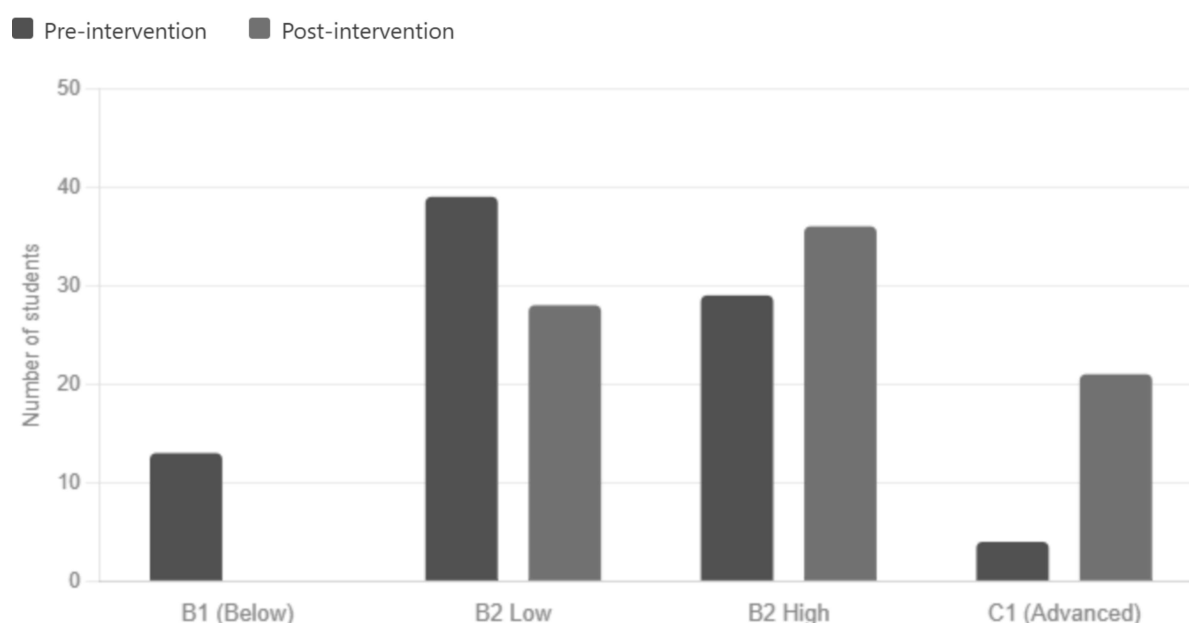
Results of the pre-test and post-test scores

Grade	Pre-test	%	Post-test	%
B1 (Below)	13	15.3	0	
B2 (Low)	39	45.9	28 (-13)	32.9
B2 (High)	29	34.1	36 (+17)	42.4
C1(Advance)	4	4.7	21 (+17)	24.7

Note. The data in Table 4 are also presented graphically in Figure 1 below for ease of comparison across CEFR proficiency levels.

Figure 1

Pre- and Post-Intervention CEFR Grade Distribution (N = 85)



Note. Values represent number of students ($N = 85$) per CEFR level before and after the 8-week intervention.

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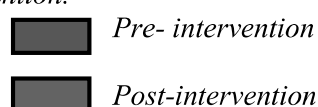


Figure 1 shows a comparison of pre-test vs. post-test student numbers across B1, B2 Low, B2 High, and C1 levels. Pre-test values: B1=13, B2 Low=39, B2 High=29, C1=4. Post-test values: B1=0, B2

Low=28, B2 High=36, C1=21.] In summary, there is a complete elimination of B1 enrolment in the post-intervention,

Correlation Between Anxiety Reduction and Score Improvement

To examine the relationship between reductions in reading anxiety and improvements in comprehension scores, a Pearson correlation analysis was conducted on the difference scores (post minus pre) for both variables. Results indicated a statistically significant negative correlation: $r(83) = -.61$, $p < .001$. This indicates that students who experienced greater reductions in reading anxiety following the intervention also demonstrated significantly larger gains in their MUET reading comprehension scores. The direction of the correlation confirms the theoretical prediction of the Affective Filter Hypothesis (Krashen, 1982): as the psychological barrier is lowered, academic performance improves correspondingly.

Table 5

Pearson Correlation Between Anxiety Reduction and Score Improvement (N = 85)

Variable Pair	<i>R</i>	<i>r</i> ²	<i>P</i>	Interpretation
Anxiety reduction ↔ Comprehension improvement	-.61	.37	<.001	Strong negative (significant)

Note. A negative *r* value indicates that as anxiety scores decreased, comprehension scores increased. $r^2 = .37$ indicates that 37% of the variance in comprehension improvement is explained by anxiety reduction.

Implementation of the intervention was thus carried out over an 8-week where activities were carried out. In addition to that, a pre-test and post-test were done using MUET Reading past session papers. The same sets were used for data collection. The intervention was delivered in three distinct layers to ensure students were not overwhelmed. The intervention was structured in three separate components, introduced in a way that spreads out the effort and information, so students could engage with it without feeling overloaded. Each session lasted approximately 50 minutes.

Analysis of CEFR grade distribution revealed substantial improvements in students' English proficiency levels following the 8-week intervention program. Prior to the intervention, the 85 participating students were distributed across four CEFR levels: 13 students (15.3%) scored at the B1 level, 39 students (45.9%) achieved the B2(LOW), 29 students (34.1%) reached the B2(HIGH), and only 4 students (4.7%) attained the C1 level. Post-intervention, the distribution shifted dramatically upward, with zero students remaining at the B1 level, indicating that all 13 students who initially scored below the B2 threshold successfully moved up to at least B2(LOW) proficiency. The B2(LOW) category decreased to 28 students (32.9%), while B2(HIGH) increased to 36 students (42.4%), representing a net gain of 7 students at this level. Most notably, the proportion of students achieving C1 level increased by 425%, rising from 4 students (4.7%) to 21 students (24.7%), with 17 new students advancing to this advanced proficiency band. Overall, 48 students (56.5%) moved to a higher CEFR level, 35 students (41.2%) maintained their existing level, and only 2 students (2.4%) showed a slight decline in CEFR classification. These findings demonstrate that the intervention was effective across all proficiency levels, with the most significant impact observed among students who began at lower proficiency levels, particularly those at B1 who showed a 100% success rate in advancing to B2 or higher, thereby meeting the minimum proficiency requirements typically expected for academic English contexts in Malaysian higher education institutions.

The key findings that can be concluded are that all 13 students who were at B1 moved up to B2 level. 21 students achieved the C1 level, which is up from four students. 17 new students reached C. Finally, 100% of students are now at B2 level or higher. Students with higher initial scores showed smaller improvements, which is expected due to less room for improvement, known as the ceiling effect. In addition, some students already possessed strong skills, and finally, the test difficulty was appropriate

for their level. The largest improvements came from B1 and B2 (LOW) students, who had the most to gain and benefited most from anxiety-reduction interventions.

The "Mental Reset" (Weeks 1–3):

Before doing the MUET post-test, students practiced Progressive Muscle Relaxation (PMR) and deep breathing exercises. This intervention aims to lower the "Affective Filter," allowing for better cognitive processing of linguistic input (Krashen, 1982). Following the guidelines established by Lifeline Australia (n.d.), students were taught to recognize physical triggers of distress, such as a racing heart or muscle tension and apply a 2-minute "grounding" technique involving the systematic tensing and releasing of muscle groups. By utilizing these relaxation tools before starting the reading task, students could effectively manage their physiological response to exam-induced stress.

Strategic Decoding (Weeks 4 - 6):

Instead of merely increasing the volume of reading material, students were provided with Cognitive Scaffolding to support their transition toward independent comprehension. According to The Bell Foundation (n.d.), scaffolding is a temporary support mechanism that allows learners to perform tasks they cannot yet manage alone, which is essential for reducing the cognitive load during complex assessments. This implementation involved two key strategies:

- **Vocabulary Mapping:** Students were taught to use "contextual scaffolding" to guess the meaning of academic jargon rather than panicking over unfamiliar terms. This strategy encourages students to use surrounding linguistic clues to decode meaning (The Bell Foundation, n.d.).
- **Format Deconstruction:** This involved analysing the "anatomy" or the format of the MUET Reading Paper from Part 1 through Part 7. For example, in Part 5 (Gapped text), students utilized "keyword tracking" - a form of visual scaffolding that reduces the mental effort required to process multiple sentences simultaneously, thereby preventing the "brain block" typically associated with high-stakes testing. Part 5 is often viewed as the most difficult part of the test.

Therefore, a critical observation is found in the Practice & Avoidance construct, where 68% of students fell into the Agreement category. While this appears high, in the context of "Anxiety Scales," this indicates that students are actively engaging with the material but are acutely aware of their failures, leading to a "panic" during practice rather than laziness. By implementing Cognitive Scaffolding, the study aimed to transform this "anxious practice" into "strategic practice".

Timed Simulation (Weeks 7-8):

One of the most critical components of the intervention program was the implementation of timed simulation exercises during Weeks 7–8, which employed a graduated exposure approach to help students acclimate to the strict 75-minute time constraint of the MUET Reading Paper. This is where individuals are gradually exposed to anxiety-provoking stimuli in a controlled, manageable progression rather than being thrust immediately into the full-intensity experience.

Utilizing authentic MUET materials, this framework ensured students did not begin their practice with the daunting task of completing all seven parts at once. Instead, they utilized a "graduated timer" system that started with an achievable goal of 20 minutes for a single, longer passage. Time is shortened as the passage gets shorter, before incrementally reducing the permitted time to narrow down to the actual exam pace to build a localized pacing rhythm. Ultimately, the results of this study suggest that this phased, 8-week intervention successfully bridged the gap between student anxiety and academic achievement.

The Dominance of Vocabulary and Question-Type Strategies

This alignment between student perceptions and objective outcomes is theoretically and practically significant. It suggests that students possess accurate metacognitive awareness of which strategies genuinely help their performance versus which may feel good but produce minimal academic benefit. It also highlights the particular challenges that students face with MUET reading comprehension: the barriers to their success are not primarily motivational, attentional, or general English proficiency deficits, but rather specific strategic gaps in academic vocabulary and complex question types that characterize MUET assessment. The dominance of vocabulary strategies aligns with findings from Kamaruddin and Kaur (2023), who documented that Malaysian ESL learners often report feeling "paralyzed" when encountering the dense academic register typical of university-level texts and standardized examinations like MUET. By providing students with a "toolbox" for decoding words, the research effectively converted their "anxiety" into "actionable strategies."

Anxiety as a Complementary Outcome

A key finding was the strong positive correlation between anxiety reduction and score improvement. This confirms the Affective Filter Hypothesis (Krashen, 1982), which posits that when a learner is bored, angry, or anxious, the "filter is up," blocking the processing of input. As the calming techniques reduced the students' heart rates and panic (The Physical Symptoms construct), their brains were better able to utilize the linguistic knowledge they already possessed. When learners experience positive affect (high motivation, strong self-confidence, low anxiety), the filter is "down" or "low," allowing comprehensible input to reach the cognitive mechanisms responsible for language acquisition and processing. On the other hand, when learners experience negative affect (low motivation, weak self-confidence, high anxiety), the filter is "up" or "high," blocking or severely limiting the processing of input even when that input is comprehensible and appropriate to the learner's proficiency level.

Addressing Time Pressure

The improvement in scores also suggests that the Time Management drills were vital. Samsuddin (2017) noted that time pressure is the leading cause of "brain block" in MUET candidates. By simulating the "ticking clock" in a low-stakes classroom environment, students developed a "rhythm" for the exam, which significantly reduced the Time Pressure Anxiety measured in the survey.

The time management intervention component of this study specifically targeted this brain block phenomenon through what might be termed "rhythm development," which helps students establish an internalized sense of appropriate pacing for MUET reading tasks. The goal was for students to develop a feel for MUET reading pace—what 12 minutes per passage "feels like"—so that they could maintain appropriate speed without constantly checking the clock or worrying about whether they were falling behind.

CONCLUSION

The intervention program was highly effective in improving MUET reading comprehension performance. The results demonstrate both statistical significance increase with particularly strong benefits for students who started at lower proficiency levels. The finding that 100% of B1 students moved to the B2 level is especially important, as B2 is often the minimum requirement for university entrance in Malaysian institutions. These results provide strong evidence that integrated interventions addressing both reading anxiety and comprehension skills can significantly improve student performance in examinations.

The findings of this study provide compelling evidence that addressing the affective domain is just as critical as cognitive training in high-stakes English assessments. By integrating calming techniques with academic vocabulary and format-specific instruction, this research successfully reduced Foreign Language Reading Anxiety (FLRA) among matriculation students while simultaneously

improving their MUET Reading Paper scores. The results validate Krashen's (1982) Affective Filter Hypothesis, demonstrating that when the psychological "filter" is lowered, students are better equipped to demonstrate their true linguistic potential and achieve the required Band 3.5 or higher.

In conclusion, this research advocates for a shift in matriculation pedagogy. Educators should consider moving away from purely content-driven instruction toward a holistic model that prioritizes the student's psychological readiness. By fostering a low-anxiety environment and providing clear strategic roadmaps, we can empower more candidates to transcend their linguistic anxieties and succeed in high-stakes assessments.

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Disclosure statement

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Appendix 1

MUET READING ANXIETY INVENTORY (MRAI)

Please read each statement carefully and honestly indicate the extent to which you agree or disagree by ticking the appropriate number based on the scale below:

- 1 = Strongly Disagree (*Sangat Tidak Setuju*)
- 2 = Disagree (*Tidak Setuju*)
- 3 = Neutral (*Neutral/Tidak Pasti*)
- 4 = Agree (*Setuju*)
- 5 = Strongly Agree (*Sangat Setuju*)

Questions	1	2	3	4	5
Section A: Physical & Emotional Symptoms					
<i>Nervousness, heart racing, shaking, mind going blank during MUET</i>					
1. I feel nervous when I see MUET reading passages.					
2. My heart beats faster when I start the MUET Reading Paper.					
3. I feel a sense of dread when the lecturer announces a MUET reading mock test					
4. My mind goes blank when I try to read complex English texts under exam conditions					
5. I feel confused and overwhelmed by the length of MUET reading texts.					
6. I get a headache or feel tense when focusing on MUET comprehension tasks					
7. I feel less confident than my peers when it comes to the MUET Reading Paper.					
Section B: Comprehension & Vocabulary Anxiety					
<i>Panic about unfamiliar words, worry about misunderstanding MUET passages</i>					
8. I panic when I encounter unfamiliar academic vocabulary in MUET passages					
9. I worry that I don't know enough English words to achieve Band 3.5.					
10. Even if I know the words, I struggle to understand the overall meaning of the text					
11. I feel anxious when a passage contains many technical or formal terms.					
12. I get upset when I have to guess the meaning of words from the context					
13. I worry that I am misinterpreting the main ideas of the MUET articles.					
14. I find it difficult to concentrate when the reading content is too academic.					
15. I feel frustrated when I have to reread a paragraph multiple times to understand it.					
Section C: Reading Speed & Time Pressure					
<i>Worry about reading too slowly, rushing through MUET passages</i>					
16. I worry about not finishing all MUET reading passages in 75 minutes					
17. I rush through the text because I am scared of running out of time.					
18. I lose focus when I see other students flipping pages faster than me.					
19. The "10 minutes remaining" announcement makes me panic and stop thinking clearly.					
20. I feel anxious that I spend too much time on a single difficult question.					
21. I worry that my slow reading speed will lower my MUET Band score.					
22. I feel pressured when I realize I still have two more passages to go.					
Section D: Question Types & Strategies					
<i>Confusion about MUET question types, especially inference questions</i>					
23. I find MUET inference questions (reading between the lines) very stressful.					
24. I feel anxious when deciding between two answers.					

25. I am worried about questions that require identifying the writer's tone or attitude.					
26. I feel uncertain when I have to choose the best summary for a paragraph.					
27. I get nervous when I cannot find the specific evidence in the text for a question.					
28. I doubt my ability to use scanning and skimming strategies effectively.					
29. I feel overwhelmed by the multiple-choice options that look very similar.					
Section E: Practice & Avoidance (6 items)					
<i>Avoiding MUET practice, negative self-beliefs about reading ability</i>					
30. I avoid practicing MUET past year papers because they make me anxious.					
31. I tend to procrastinate when I am assigned MUET reading homework.					
32. I look for excuses to skip MUET preparation classes.					
33. I feel like giving up when a MUET practice test becomes too difficult.					
34. I prefer to focus on Speaking or Listening because Reading feels too difficult.					
35. I don't like to discuss my MUET reading marks with my lecturer or friends.					