

# Writing Anxiety and Writing Performance among Generation Z Undergraduates in an English-Medium Instruction Context: A Correlational Study

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## ABSTRACT

This research examines how writing anxiety affects the writing performance of Generation Z learners who study Business Management courses via an English-Medium Instruction environment in a Malaysian university. A quantitative correlational design was employed, involving 60 first-year students selected through random sampling. Data were gathered by employing the Second Language Writing Anxiety Inventory (SLWAI) together with a standardised academic writing test. Descriptive statistics showed that students experienced writing anxiety at a moderate level, with cognitive anxiety being the most dominant dimension. The Pearson Correlation analysis revealed that writing anxiety negatively impacted writing performance, demonstrating a moderate relationship between the two variables ( $r = -0.46$ ,  $p = .001$ ). Cognitive anxiety showed the strongest link to decreased writing performance among the three anxiety-related dimensions. The results demonstrate that internal psychological elements which include fear of negative evaluation and self-doubt significantly affected Generation Z learners' overall writing performance. The study suggests that students' writing anxiety needs to be managed as it creates challenges for these learners, most of whom are products of formal school education where Malay is the medium of instruction. Having to understand complex concepts while completing assignments in English within their disciplines, increases learners' writing anxiety at the cognitive level, thus affecting their learning outcomes. Overall, this study highlights the relationship between Generation Z learners' writing anxiety and their writing performance, and extends current literature on the learning patterns and behaviour of Generation Z in English-Medium Instruction classrooms.

**Keywords:** Writing anxiety, Cognitive anxiety, Gen Z learners, ESL writing, SLWAI

## INTRODUCTION

Writing in a second language (L2) requires more than linguistic skills because it creates an emotional experience. For many L2 learners, writing in English triggers feelings of anxiety, uncertainty, and fear of evaluation. Generation Z (Gen Z) students, who were born between 1997 and 2012, face this particular challenge as they have spent their entire lives in digital environments and show increased academic stress in classroom settings where traditional writing conventions are key elements of academic evaluations. (Gao, 2023).

Writing anxiety has been widely documented as a multidimensional construct which includes cognitive components, physical symptoms and avoidance-related behaviour (Cheng, 2004; Qashoa, 2014; Rasool et al., 2023). Cognitive anxiety leads to negative thoughts and fear of criticism and self-doubt which writers commonly experience during writing tasks. On the other hand, somatic anxiety includes physical symptoms, including feelings of nervousness and trembling. Avoidance behaviour, meanwhile, manifests when students postpone or abandon writing assignments or when they suffer from writers' block under academic pressure.

Undeniably, L2 writing serves as the main assessment element which determines academic success in Malaysian universities, particularly those that use English as a Medium of Instruction (EMI) for majority of their educational programs. In the context of this study, the participants who just completed secondary schooling and characterised as Gen Z learners, are compelled to write and complete English-language assignments, reports, case studies and examinations as they enter the university. This situation places immense pressure on these digital natives, particularly when these students whose first language (L1) is Malay. Although English is learned as a Second Language (L2) throughout their formative years of schooling, the majority come from schools where Malay is the medium of instruction. Hence, advancing to a tertiary institution which adopts an EMI setting, can be very stressful and cognitively pressurising for most of them.

Emerging evidence shows that compared to previous generations, Gen Z learners experience higher stress levels which lead to increased anxiety and depression. A recent systemic review by Harefa et al. (2025) found that these digital natives whose entire lives are connected to various forms of social media engagement undergo psychological distress. Their findings show that anxiety exists as a fundamental characteristic which Gen Z develop through their experiences and association with social media engagement and digital technology. Thus, psychological vulnerability is said to affect academic performance, and this issue extends to EMI learning environments where the participants face added pressure in performing L2 writing tasks. This anxiety is more pronounced when they also have to comprehend discipline-related subjects and express their understanding in writing.

Hence, this underscores the importance of examining writing anxiety among Gen Z learners in EMI contexts. This study investigates the levels and types of writing anxiety experienced by Gen Z students pursuing various courses in the Faculty of Business Management and examines how these anxiety dimensions relate to their writing performance on a standardised writing test.

## LITERATURE REVIEW

Writing anxiety has been established as a complex psychological condition which impacts ESL students according to the research conducted by Cheng in 2004. The writing process becomes particularly challenging for learners when cognitive anxiety exists since it hampers their ability to think clearly during writing tasks (Qashoa, 2014). Annisa et al. (2024) reported that 61% of ESL learners experience physical symptoms of anxiety, with cognitive anxiety showing the strongest correlation to poor writing outcomes.

Writing anxiety has been widely documented in higher education contexts across Southeast Asia. Reyes et al. (2024) found that L2 writing anxiety affects scholars who experience psychological challenges while writing academic documents in English. Students studying in EMI environments have to handle increased linguistic requirements which lead to higher anxiety levels. Syahrudin (2025) reported that students in Malaysian higher education perceive EMI practices as academically challenging, particularly when language proficiency affects content comprehension. Students experience increased anxiety during specialised EMI modules according to Tan and Ibrahim (2024), which reveals the broader issues related to the so-called “EMI crisis.” The research shows that further research into how writing anxiety affects Gen Z’s writing performance will be insightful in understanding pedagogical implications in helping these digital natives overcome their writing anxiety in EMI contexts.

Writing anxiety continues to be a significant concern among Gen Z learners, whose psychological state could make or break their academic performance in EMI contexts, Research has shown that Gen Z report elevated anxiety levels across academic and professional domains (Lathabhavan & Lathabhavan, 2022). The evidence indicates that anxiety functions as a common trait among young learners, when faced with academic writing situations especially within EMI settings. According to Gao (2023), anxiety can develop into a permanent trait which affects Generation Z students as they handle academic pressures. More so, when the capacity to express subject matter expertise through written English determines their academic success. This increases writing stress and anxiety levels among these learners who are not fully comfortable in an EMI instruction environment. As digital natives, their written communication mostly revolves around short text messaging (SMS) and AI-assisted tools. To top it off, Gen Z are visually interactive learners with short attention spans. As a result, courses that

require prolonged and sustained attention, in organising structured reasoning, and critical writing place undue cognitive stress on their learning process (Buzetto-Hollywood and Quinn, 2023).

Annisa et al. (2024) note that cognitive anxiety stands as the primary writing anxiety problem experienced by L1 and L2 students. The combination of emotional distress and fear of negative evaluation together with low confidence levels hinder students' writing performance (Ruslan et al., 2025; Umisara et al., 2024). However, they concur that limited research exists that investigates the writing anxiety problems which Gen Z students experience during EMI programs (Ukofia, 2023).

Yenti and Susanti (2025) similarly found that university students most frequently reported Cognitive anxiety as their main barrier to effective writing. Ruslan et al. (2025) expanded on this by identifying five distinct impact of writing anxiety, including emotional distress and cognitive overload. Umisara et al. (2024) concur that low self-confidence and fear of negative evaluation were major contributors to learners' writing anxiety. This body of literature aligns with studies on academic self-efficacy and learning engagement. Zhou et al. (2025) found that students with higher academic self-efficacy showed lower anxiety and greater engagement while Hou et al. (2025) believe the concept of peer-supported learning environments, could improve motivation and reduce writing stress.

Consistent with the above literature in a wider context of learning English, it is not uncommon for Gen Z students to feel anxious and unprepared to deal with both advanced academic English and complex disciplinary content knowledge (Alam, 2022; Yuan, 2024). Anxiety levels increase when students are expected to cope with the language requirements of their studies while learning disciplinary concepts at the same time. This demands high cognitive levels (Wächter & Maiworm, 2022; Sweller 2011). Therefore, Gen Z students' writing anxiety is further compounded when facing new and unfamiliar disciplinary contexts as they advance to tertiary education.

This study extends the literature by correlating the ESL students' writing anxiety levels to their writing performance. As limited research exists examining Gen Z's writing anxiety within EMI settings, this study aims to provide pertinent insight into this cohort and contribute to pedagogical research at both the macro and micro levels of education.

## Research Objective

This study investigates writing anxiety among Gen Z students enrolled in a Diploma in Business Management within an EMI environment in a Malaysian university, and examines how writing anxiety relates to writing performance.

Specifically, the study sought to:

1. determine the level of writing anxiety among Gen Z students;
2. examine whether there is a significant relationship between their writing anxiety and writing performance.

## Research Questions

The study was guided by the following research questions:

1. What is the level of writing anxiety among Gen Z learners enrolled in a Diploma in Business Management programme?
2. Is there a significant relationship between their writing anxiety and writing performance?

## Participants' Context

The study involved 60 Gen Z who were selected through random sampling from the Diploma in Business Management programme at a public university in Malaysia. The students who participated in the study belonged to their first study year and were aged between 18 and 20 years old.

Business Management students were selected because their program requires students to study multiple disciplines which include International Business, Marketing, Finance and Human Resource. The students must produce written assignments in English for all their subjects which include reports, case studies and reflective essays, not to mention tests and examinations.

The university uses English as its main language for all instructional activities as it follows an EMI policy and thus, requires students to write in English for all courses. Hence, writing plays a key role in the academic setting, requiring students to demonstrate their understanding of academic concepts. Students who can write and complete essays with clear organisation, clarity and coherence in English will usually experience less anxiety compared to those who feel less confident in their writing skills. Thus, this study aims to examine writing anxiety among Gen Z students in an EMI setting and to find out the impact of writing anxiety on their overall writing performance.

### **Instrument**

Data for this study were gathered through two main methods which included the Second Language Writing Anxiety Inventory (SLWAI) and an academic writing test that followed established standards.

The SLWAI test developed by Cheng (2004) functions as a validated tool which measures writing anxiety among L2 learners. The inventory consists of 22 items which measure three aspects of writing anxiety: cognitive anxiety, somatic anxiety, and avoidance behaviour. Cognitive anxiety denotes negative expectations which include fear of evaluation and self-doubt that most people face during writing assignments. Somatic anxiety describes the physical effects which people experience when they feel anxious, including symptoms of nervousness and tension. People with avoidance behaviour issues tend to postpone or avoid all writing tasks. The researchers used a Likert-scale format to measure participant responses which enabled them to assess anxiety levels across three different anxiety areas. The SLWAI instrument showed high internal consistency reliability in the current study as it achieved a Cronbach's alpha score of 0.86 which confirmed its effectiveness in evaluating writing anxiety for the studied group.

The researchers assessed the writing performance via a standardised academic writing test which simulated actual university writing requirements in EMI environments. The task required students to organise and develop ideas coherently while demonstrating appropriate language use, critical thinking, and clarity of argument. Students' written responses were assessed using a standardised rubric based on the CEFR scoring criteria. The rubric assessed components such as task fulfilment, organisation, language accuracy, vocabulary use, and overall coherence. The combination of the SLWAI and the writing task enabled the researchers to examine not only students' self-reported anxiety levels but also their actual writing performance, thereby providing a comprehensive understanding of the relationship between anxiety and academic writing outcomes.

### **Research Method**

This study employed a quantitative, correlational research design. Sixty first-year Gen Z students (aged 18–20) from a local Malaysian university participated via random sampling. Participants completed the Second Language Writing Anxiety Inventory (SLWAI), consisting of 22 items measuring three domains: cognitive anxiety, somatic anxiety, and avoidance behaviour (Cheng, 2004). A standardised academic writing task was used to assess writing performance.

The SLWAI demonstrated high internal reliability (Cronbach's alpha = 0.86). Descriptive and inferential statistics, including Pearson correlation, were computed using SPSS v27 to determine the relationship between anxiety subtypes and writing scores.

## **FINDINGS**

### **Writing Anxiety Level (RQ1)**

To address the first research question, descriptive statistics were computed to determine the level of writing anxiety among the 60 Gen Z learners pursuing various disciplines in a Diploma in Business Management

programme.

Table 1 presents the descriptive statistics for students’ writing anxiety levels. The results demonstrated that participants had a mean writing anxiety score of 3.28 (SD = 0.55), indicating a moderate level of anxiety. This indicates that students can complete academic writing tasks but faced significant mental distress during these activities.

Table 1. Descriptive Statistics of Writing Anxiety and Writing Performance (N = 60)

Variable	Mean	SD	Min	Max
Cognitive Anxiety	3.68	0.64	2.10	4.80
Somatic Anxiety	3.25	0.59	1.90	4.60
Avoidance Behavior	2.91	0.72	1.50	4.30
Overall Writing Anxiety	3.28	0.55	2.20	4.65
Writing Performance Score	63.40	10.85	42	85

Closer analysis noted that Cognitive anxiety showed the highest mean score among the three writing anxiety dimensions, recording an average score of 3.68 with a standard deviation of 0.64. This implies that this anxiety dimension has a higher impact on the students’ writing performance, which includes elements of fear of negative evaluation and self-doubt. The mean score for Somatic anxiety reached 3.25 with a standard deviation of 0.59, which suggests that Gen Z learners experience moderate physical symptoms of nervousness and tension during writing tasks. Avoidance behaviour, on the other hand, has the lowest mean score of 2.91 with a standard deviation of 0.72. This demonstrates that although students face this form of writing anxiety, they will still participate in writing activities without completely withdrawing from these tasks. Overall, the findings show that the most dominant anxiety dimension that Gen Z students experience in EMI contexts is Cognitive anxiety.

**Relationship Between Writing Anxiety and Writing Performance (RQ2)**

To address the second research question, Pearson correlation analysis was conducted to examine the relationship between writing anxiety and writing performance as shown in Table 2 below.

As presented in Table 2, the sub-dimensions analysis revealed that Cognitive anxiety presented the strongest negative relationship with writing performance ( $r = -0.49, p < .001$ ). Somatic anxiety showed a moderate negative correlation that reached statistical significance ( $r = -0.35, p = .007$ ) while avoidance behaviour established a significant negative relationship that showed weaker strength ( $r = -0.28, p = .030$ ). The findings demonstrate that all three dimensions had an impact on writing performance, however, Cognitive anxiety had the highest impact.

Table 2. Pearson Correlation Between Writing Anxiety and Writing Performance

Variable Pair	Pearson r	Sig. (2-tailed)	Strength
Overall Anxiety – Writing Performance	-0.46	.001	Moderate
Cognitive Anxiety – Writing Performance	-0.49	.000	Moderate
Somatic Anxiety – Writing Performance	-0.35	.007	Weak–Moderate
Avoidance Behavior – Writing Performance	-0.28	.030	Weak

**DISCUSSION**

This section interprets the findings in relation to previous research and the broader ESL writing context.

The results indicate that Cognitive anxiety proved to be Gen Z learners’ primary issue throughout the study. Students experience psychological difficulties during academic writing due to their fear of negative evaluation

which affects their confidence level and ability to write effectively. The results of this study support Cheng (2004) who found that Cognitive anxiety represented the most important part of ESL writing anxiety because it directly affects students' writing thought processes. The findings also confirm previous studies (Yenti & Susanti, 2025; Rasool et al., 2023; Yanti & Hidayati, 2021) which show that university students experience high levels of Cognitive anxiety compared to other dimensions. This is probably due to the cognitive challenges that Gen Z faces when coping with learning disciplinary concepts and having to write with efficiency to demonstrate their comprehension of the course concepts under academic and EMI conditions. Anxiety levels increase when students are expected to cope with the language requirements of their studies while learning the content and the concepts at the same time. This demands high cognitive levels in line with Wächter and Maiworm (2022) and Sweller's (2011) earlier research. This shows that writing anxiety affects learners' from all generations and it is an issue that is still hard to pin down and resolve, even among Gen Z learners in today's educational landscape.

Past research (Ruslan et al., 2025; Umisara et al., 2024) also supports the current findings that writing tasks, particularly under academic pressure, create psychological and emotional stress for many ESL students and this is particularly true for most Gen Z, who are under-prepared for the amount of writing tasks to be undertaken in L2 within an EMI setting. As highlighted by Yenti and Susanti (2025), writing anxiety presents a complicated problem among present day learners who are digitally savvy and visually interactive; therefore, Cognitive anxiety increases during prolonged writing tasks, affecting academic performance.

The Gen Z's Avoidance behaviour score shows lower average results which indicates that students maintain some writing engagement during their anxiety episodes. The findings match Ukofia's (2023) research which showed how Gen Z students would continue writing despite their psychological discomfort. The moderate level of Somatic anxiety, however, supports Annisa et al.'s (2024) findings that there is a significant negative relationship between writing anxiety and writing performance, and confirms that anxiety is associated with reduced writing outcomes. Rasool et al. (2023) and Qashoa (2014) concur that negative outlooks and linguistic self-doubt can hinder ESL writers from developing and expressing their ideas with clarity. Thus, this research brings to the fore the negative influence of writing anxiety which acts as a psychological and cognitive interference in enhancing writing quality among Gen Z students.

The significant negative relationship between writing anxiety and writing performance confirms that anxiety is associated with reduced academic outcomes in writing. Qashoa (2014) demonstrated that Cognitive anxiety disrupts both idea generation and organisation. Content subjects in EMI environments create linguistic requirements that cause students to experience higher writing anxiety levels. Tan and Ibrahim (2024) found that students who study in specialised EMI modules experience increased anxiety because they need to master both the disciplinary knowledge in their discipline areas and writing effectively in English. Therefore, pedagogical restructuring should take place to find ways to alleviate the writing anxiety levels of today's young learners. The current research is significant as it supports and extends literature on writing anxiety research among Gen Z learners, highlighting how writing anxiety within EMI writing environments can directly impact student performance on written assessments.

## CONCLUSION

This study examined the level of writing anxiety among Gen Z learners pursuing a Diploma in Business Management programme and explored its relationship with writing performance in an EMI context. The findings revealed that students experienced a moderate level of writing anxiety, with Cognitive anxiety emerging as the most dominant dimension. Fear of negative evaluation, low confidence and self-doubt were identified as the primary psychological factors influencing the Gen Z's writing experiences. These findings highlight the importance of addressing cognitive aspects of anxiety in EMI settings, where written assessments are central to academic success.

## Future Directions

Although the study provides meaningful insights into the relationship between writing anxiety and writing performance, it is limited to a single institution with a relatively small sample size. Future research may expand the study across multiple faculties or universities to enhance generalisability.

Further studies could also explore intervention-based approaches aimed at reducing cognitive anxiety, such as the use of artificial intelligence (AI) tools, structured writing scaffolds, peer feedback mechanisms, or confidence-building strategies. Longitudinal research may additionally examine how writing anxiety evolves over time in EMI contexts. Such investigations would contribute to the development of more targeted pedagogical strategies to support Gen Z learners in academic writing.

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### Conflict of Interest Statement

The authors agree that this research was conducted in the absence of any self-benefits, commercial or financial conflicts and declare the absence of conflicting interests with the funders.

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Associate Professor Dr Irene Leong Yoke Chu and Dr Kuldip Kaur Maktiar Singh are the English lecturers who acted as inter-raters to ensure validity and reliability of the data. Dr Yeap Chun Keat and Chan Yann Sheng were the technical experts in the statistical analysis of this study. Chong Oi Leng contributed to the literature review. All the authors collaborated on the expansion of the literature review, reviewed the writing and editing of the manuscript.