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SELF-EFFICACY, MOTIVATION, AND ANXIETY IN ESL WRITING: A CORRELATIONAL STUDY OF MALAYSIAN B40 SECONDARY LEARNERS

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Abstract:

This study explores how writing self-efficacy and writing motivation shape the relationship between writing anxiety and writing performance among B40 secondary school ESL students in Malaysia. While existing research often highlights the negative impact of anxiety and the benefits of self-efficacy and motivation, little is known about how these factors interact especially in underprivileged learner populations. Using a quantitative correlational design, data were collected from 63 Form Four students through validated questionnaires and a descriptive writing task. Regression analyses revealed that writing anxiety was positively associated with writing performance, while both self-efficacy and anxiety were negatively correlated. However, neither writing self-efficacy nor motivation significantly moderated the anxiety-performance relationship. These findings challenge conventional assumptions by suggesting that, in high-stakes or resource-constrained environments, moderate anxiety may enhance performance, possibly due to increased task focus or pressure to succeed. The study underscores the need to consider contextual and psychological nuances when supporting ESL writers from disadvantaged backgrounds. Further research with larger samples and mixed methods is recommended to deepen our understanding of these complex relationships.

Keywords:

ESL Writing, Anxiety, Performance, Self-efficacy, Motivation, B40 Students

Introduction

Writing is one of the most cognitively and emotionally demanding skills for second language (L2) learners. It requires not only a command of vocabulary and grammar but also the ability to generate, organize, and communicate ideas clearly in a structured and contextually appropriate manner (AlTameemy et al., 2020). At the same time, writing is not just a technical skill, it is also an emotional experience. Many English as second language (ESL) learners struggle with self-doubt, fear of judgment, and pressure to perform, especially when writing in a language that is not their own (Wern & Rahmat, 2021; Soleimani et al., 2020).

One of the most persistent barriers to success in L2 writing is writing anxiety. This form of anxiety, often triggered by fear of negative evaluation, language limitations, or past failures, can lead students to avoid writing tasks, second-guess their abilities, and perform below their potential (Cheng, 2004; Liu & Ni, 2020). On the other hand, writing self-efficacy; the belief in one's capacity to successfully complete writing tasks has been shown to increase persistence, engagement, and confidence (Bandura, 1994; Pajares, 2003). Similarly, motivation plays a critical role: students who are driven by intrinsic or extrinsic goals tend to put in more effort, embrace feedback, and view writing as a meaningful task (Hidi & Boscolo, 2007; Graham & Harris, 2018).

Despite extensive studies on writing anxiety, self-efficacy, and motivation as separate constructs, integrated investigations into how these psychological factors interact in L2 writing remain limited (Sabariah et al., 2023; Zhou et al., 2022). Moreover, most research has focused on university-level who benefit from more resources and exposure to English (Shen et al., 2024; Sabariah et al., 2016). As a result, the dynamics among anxiety, motivation, and self-belief are underexplored in secondary school contexts especially among Malaysia's socioeconomically disadvantaged B40 group (bottom 40% of household income) (Wan Nazira Che Nor & Melor Md Yunus, 2022; Qadariah Jalok & Fazilah Idris, 2020). Students from this group often face additional barriers such as limited access to quality English instruction, fewer writing opportunities, and lower confidence stemming from systemic inequities. These learners often learn in exam-driven, high-pressure environments with limited feedback, which may influence the psychological processes underpinning writing differently from those found in higher-resource settings.

This study examines whether writing self-efficacy and motivation moderate the impact of anxiety on writing performance among B40 learners, thereby offering contextually grounded insights to support the psychological and academic needs of socioeconomically disadvantaged ESL students.

Research Question

1. Does writing self-efficacy moderate the relationship between writing anxiety and writing performance among B40 secondary school ESL students?
2. Does writing motivation moderate the relationship between writing anxiety and writing performance among B40 secondary school ESL students?

Literature Review

ESL Writing Anxiety

Writing in a second language (L2) remains one of the most challenging tasks for learners not only cognitively, but also emotionally. ESL writing anxiety is often characterized by feelings of fear, apprehension, and self-doubt when students are asked to write in English, particularly in formal or high-stakes settings. These emotional barriers are well documented across educational levels and cultural contexts (Waked et al., 2023; Hasni et al., 2024). For instance, Waked et al. (2024) noted that writing anxiety is especially prevalent among female ESL learners in conservative learning environments, where linguistic expectations and cultural norms intensify performance pressure. Similarly, Hasni et al. (2024) found a clear link between heightened anxiety and poorer writing quality among Malaysian university students.

Many of the factors contributing to writing anxiety are interconnected ranging from limited vocabulary and grammar knowledge (Sun et al., 2024) to perfectionism, fear of evaluation, and past academic failures (Zhang & Zhang, 2022). Over time, these psychological patterns can form a negative feedback loop where poor writing outcomes increase anxiety, which in turn further inhibits performance. Importantly, most of this research has been conducted with university-level or urban learners. Less is known about how writing anxiety functions among younger, socioeconomically disadvantaged groups such as Malaysia's B40 secondary school students, who may face even greater linguistic and systemic challenges in developing confidence in writing.

ESL Writing Self-Efficacy

Writing self-efficacy rooted in Bandura's (1997) social cognitive theory refers to learners' beliefs in their own capacity to complete writing tasks successfully. A strong sense of self-efficacy has been repeatedly shown to enhance motivation, strategy use, and persistence (Pajares, 2003; Sun & Wang, 2021). Learners who believe they can write effectively are more likely to engage deeply with writing tasks and navigate challenges with greater resilience.
Recent empirical studies affirm the importance of this construct. Kamal et al. (2024), in a study of Malaysian tertiary students, found that self-efficacy predicted writing performance across dimensions such as idea generation and language conventions. Anam and Stracke (2020) also observed that Indonesian students with high self-efficacy demonstrated stronger language proficiency and engagement. However, these studies were conducted in university settings, often with students who had relatively stable access to learning resources. The question remains: How does writing self-efficacy operate in under-resourced environments, especially among B40 secondary learners who may have less consistent exposure to English or feedback-rich instruction?

Moreover, Teng et al. (2023) emphasized the importance of context-specific self-efficacy measures, suggesting that writing beliefs must be understood within learners' educational and social environments. This further justifies examining self-efficacy in disadvantaged Malaysian classrooms, where traditional language instruction and exam-oriented learning may shape learners' confidence differently.

ESL Writing Motivation

Motivation is another crucial driver of writing behavior. It not only influences how much effort learners invest, but also how they respond to difficulties and persist in developing their writing skills (Hidi & Boscolo, 2007; Han, 2024). In L2 contexts, motivation is often affected by both internal beliefs for exampl self-efficacy and external learning environments.

Collins et al. (2024) found that international students' writing motivation and enjoyment improved over time in online academic English settings demonstrating the flexibility and responsiveness of motivation to contextual support. Jesseri and Ngui (2024), in a Malaysian study, observed that the integration of ICT tools in ESL writing classrooms significantly boosted students' motivation and engagement. Meanwhile, Yu et al. (2023) emphasized that genre-based instruction can create clearer expectations and relevance, increasing students' writing motivation.

Although these findings are promising, they largely reflect middle or high-income student populations. Very few studies have directly examined how motivation influences ESL writing among B40 students**,** where resource limitations, exam pressures, and lower exposure to communicative instruction may dampen motivational factors. As such, the current study investigates not just the presence of motivation but whether it acts as a moderating factor in how students respond to anxiety in writing.

While previous studies have examined ESL writing anxiety, self-efficacy, and motivation individually, their combined interaction and moderating roles are still underexplored particularly among B40 secondary school learners in Malaysia**.** This study addresses that gap by investigating how self-efficacy and motivation may shape the relationship between anxiety and writing performance. In doing so, it contributes to a more context-sensitive understanding of writing psychology in marginalized learning environments, where affective and cognitive challenges often go hand in hand.

Methodology

Research Design

This study employed a quantitative, correlational research design to investigate the relationships between writing anxiety, writing self-efficacy, writing motivation, and ESL writing performance among B40 secondary school students in Malaysia. In particular, the study explored whether self-efficacy and motivation moderate the relationship between writing anxiety and writing performance. A hierarchical regression analysis**,** including interaction terms, was used to test for potential moderating effects. This design was chosen to examine both direct relationships and more complex interaction patterns within the psychological constructs relevant to L2 writing.

While a mixed-methods approach could have provided deeper insight into learners' emotional and cognitive experiences, this study employed a quantitative design due to time constraints associated with institutional timelines and school scheduling. Incorporating qualitative data such as learner interviews, classroom observations, or reflective journals may have enriched the findings in which students perceive and navigate writing-related anxiety and motivation. Nonetheless, the use of validated psychological scales and objective writing tasks ensured that

the data collected remained reliable, generalizable, and aligned with the study's primary correlational aims.

Participants

The participants in this study were 63 Form Four ESL students from two differents chools in Perlis, Malaysia, all of whom belonged to the B40 income group, a classification for the bottom 40% of household income in the country. These students were selected through purposive sampling, ensuring the sample reflected varying levels of English proficiency and writing-related psychological profiles. Ethical approval was obtained from relevant authorities, and informed consent was secured from both students and school administrators prior to data collection.

This group was chosen not only because of their socioeconomic disadvantage but also because they represent a frequently overlooked demographic in educational psychology and ESL writing research in Malaysia. Their experiences offer valuable insight into how psychological factors operate under constrained learning conditions.

Instruments

Three key instruments were used in this study:

Writing Anxiety Scale

Adapted from Cheng (2004), this scale measures students' apprehension, worry, and avoidance behavior related to writing tasks.

Writing Self-Efficacy Scale

Based on Bandura's (1997) framework and adapted to L2 contexts, this scale assesses students' confidence in their ability to plan, organize, and complete writing assignments.

Writing Motivation Scale

Adapted from established L2 motivation inventories, this scale evaluates students' intrinsic and extrinsic motivation to engage in writing tasks (Yu et al., 2023).

All items were presented on a 4-point Likert scale (1 = Strongly Disagree to 4 = Strongly Agree). The questionnaire was divided into two sections: demographic information and the three psychological scales. The internal consistency of each scale was tested, and Cronbach's alpha coefficients exceeded .70, indicating acceptable reliability.

Additionally, a standardized descriptive writing task was used to assess students' actual writing performance. Students were asked to write a paragraph (minimum 50 words) on one of two familiar topics, both aligned with the CEFR A2–B1 level to ensure accessibility. Their responses were evaluated using a rubric adapted from national ESL writing standards, focusing on content, organization, language use, and coherence. Two trained raters independently scored the writing samples, and inter-rater reliability was calculated using Cohen's kappa ($\kappa = .81$), indicating strong agreement.

Data Collection Procedures

Data collection took place in students' own school environment during regular school hours to ensure comfort and authenticity. To reduce response fatigue and minimize participants' anxiety about the individual purposes of each scale, the three instruments; writing anxiety, writing self-efficacy, and writing motivation were combined into a single, integrated questionnaire. This approach allowed students to focus more naturally and attentively on responding to the items without being overly conscious of the distinct constructs being measured.

No strict time limit was imposed for the writing task; instead, students were given a general timeframe but encouraged to focus on clarity and completeness rather than speed. This decision was intentional to minimize anxiety and simulate a more natural writing experience.

Participants completed the writing task under teacher-supervised conditions to preserve standardization and avoid collaboration. All written samples were collected immediately after the session and anonymized for scoring. Data from the questionnaires and writing samples were then compiled for statistical analysis using SPSS Version 27.

Results and Discussion

Descriptive Analysis

Descriptive analysis was conducted to explore the overall trends in participants' responses to further understand the central tendencies and variability of key variables.

Table 1: Means and Standard Deviation

Variable	Mean (M)	Standard Deviation (SD)
Writing Performance	4.89	1.47
Writing Anxiety	20.63	3.20
Writing Self-efficacy	27.67	2.79
Anxiety x Self-efficacy (Interaction)	-0.41	1.27

The results suggest moderate levels of writing anxiety and relatively high levels of self-efficacy across the sample, while writing performance scores varied considerably among students.

Correlational Analysis

Pearson correlation coefficients were used to examine the bivariate relationships between the key variables. Table 2 presents the correlation coefficients among writing anxiety, writing self-efficacy, and writing performance.

Table 2: Correlation Matrix

Variable	1	2	3
Writing Performance	-		
Writing Anxiety	-0.415**	-	
Writing Self-efficacy	0.306**	-0.308**	-

Note: **$p < .01$

Three Key Relationships Emerged:

- A moderate negative correlation between writing anxiety and self-efficacy ($r = -0.415$, $p < .001$), consistent with past research suggesting that students who experience greater anxiety tend to doubt their writing abilities.
- A positive correlation between writing anxiety and writing performance ($r = 0.306$, $p = .007$), indicating that higher anxiety levels may have been associated with improved performance in this context.
- A negative correlation between self-efficacy and performance ($r = -0.308$, $p = .007$), which also runs counter to dominant trends in existing literature.

Regression Analysis

To explore whether writing self-efficacy moderated the relationship between anxiety and writing performance, a hierarchical regression was conducted. Two models were tested. The interaction term did not produce a significant moderation effect in either model.

While the model was significant overall, none of the individual predictors reached statistical significance at the 0.05 threshold. The interaction term between anxiety and self-efficacy failed to produce a moderating effect, suggesting that self-efficacy does not significantly alter the relationship between anxiety and performance in this sample.

The lack of significant moderation effects may suggest that contextual constraints such as limited writing instruction as well as time or teacher-centered pedagogy exert a stronger influence than learners' internal beliefs or motivation.

Model 1: Interaction of Anxiety and Self-Efficacy (Full Model)
$R^2 = 0.159$, $F(3, 59) = 3.720$, $p = 0.016$

Predictor	B	SE	β	p-value
Writing Anxiety	0.080	0.061	0.261	0.199
Writing Self-Efficacy	-0.091	0.071	-0.278	0.209
Anxiety x Self-Efficacy	-0.204	0.151	-0.173	0.185

The model was statistically significant ($R^2 = .159$, $F(3, 59) = 3.720$, $p = .016$), indicating that 15.9% of the variance in writing performance could be explained by the predictors.

Notably, a moderate negative correlation was found between writing anxiety and self-efficacy ($r = -0.415$, $p < .001$), confirming earlier theoretical claims that increased anxiety tends to reduce learners' confidence in their writing abilities. More intriguingly, writing anxiety was positively correlated with writing performance ($r = 0.306$, $p = .007$), while self-efficacy was negatively correlated with performance ($r = -0.308$, $p = .007$). These unexpected directions challenge conventional assumptions and suggest that the affective and cognitive dynamics in this specific population may operate differently from those observed in more privileged groups.

Model 2: Writing Anxiety Only (Reduced Model)
R² = 0.136, F(2, 59) = 4.726, p = 0.012

After removing non-significant predictors, the model with only Writing Anxiety and the Interaction Term was retained. The interaction term did not produce a significant moderation effect in either model.

Discussion

This study examined the complex interplay between writing anxiety, self-efficacy, motivation, and writing performance among B40 secondary school ESL students in Malaysia. These findings shed light on how psychological factors affect writing outcomes in socioeconomic disadvantaged group of students.

Contrary to prevailing assumptions, the results showed a positive correlation between writing anxiety and writing performance. Rather than being purely detrimental, a moderate level of anxiety may have enhanced performance by sharpening students' focus and increasing their motivation to succeed particularly in high-stakes academic contexts where success may be closely tied to socio-economic mobility. This aligns with the Yerkes-Dodson Law (Yerkes & Dodson, 1908; Teigen, 1994), which suggests that performance can improve with increased arousal up to an optimal threshold. Recent studies also support this finding, such as Putra et al. (2024), who found that EFL students under pressure often channel anxiety into productive writing behavior.

In contrast, writing self-efficacy was negatively correlated with performance, a counterintuitive result given that self-efficacy is typically associated with higher achievement. One plausible explanation lies in the possibility of overconfidence among students who overestimated their abilities due to limited exposure to critical feedback or structured instruction. This aligns with Heidarzadi et al. (2022), who highlighted the risk of inflated self-assessments among learners in low-resource settings. Similarly, Zhang, Zhang, and Zhu (2023) argued that writing self-efficacy is genre and context-specific hence students may feel confident in general but underperform on specific academic writing tasks.

Furthermore, this study found no significant moderating effects of either self-efficacy or motivation on the anxiety-performance relationship. These null findings suggest that psychological variables alone may not fully explain variations in writing performance among socioeconomically disadvantaged learners. Motivation, particularly among B40 students, may be driven more by external pressures for example exam performance than by a genuine interest in writing (Canada & Miralles, 2022). Ng et al. (2024) emphasised the importance of fostering intrinsic motivation as a way to improve both self-efficacy and writing outcomes.

Collectively, these findings highlight the need to expand traditional models of ESL writing performance. Classroom-level factors such as teacher immediacy, instructional clarity, and emotional support may play a more significant role than previously assumed. Additionally, task-specific factors such as genre familiarity, the presence of scaffolding, and alignment with students' prior knowledge could influence how psychological traits are expressed in performance. Teachers might implement structured scaffolding, peer feedback circles, and reflective journals to help anxious learners cope with pressure and gradually build self-efficacy.

Conclusion

This study analysed the relationships among writing anxiety, self-efficacy, motivation, and writing performance in B40 secondary ESL students a group often overlooked in L2 writing research. The results challenge dominant narratives by suggesting that anxiety may, under certain conditions, enhance rather than hinder performance. Meanwhile, self-efficacy, typically seen as a predictor of success, was negatively associated with writing outcomes, possibly due to overconfidence or limited feedback environments. Neither self-efficacy nor motivation moderated the anxiety-performance relationship, pointing to the need for more holistic models that include classroom and task-based variables.

The implications are clear: educators must move beyond simplistic assumptions about student psychology. Instead, teaching practices should aim to harness productive forms of anxiety, cultivate realistic self-appraisal, and nurture intrinsic motivation. Tailored support such as writing workshops, peer mentoring, and context-sensitive assessments can empower students in underprivileged settings.

Future research should go beyond cross-sectional surveys and explore how students emotionally experience writing in real classroom situations. While questionnaires provide useful data, they may not fully reflect how learners feel and respond during actual writing tasks. This is especially true for students from disadvantaged backgrounds, like Malaysia's B40 group, who often face exam pressure, limited teacher feedback, and time constraints. These classroom conditions can affect how students manage anxiety, motivation, and confidence in ways that are difficult to capture through surveys alone (Shen et al., 2024).

To address this, researchers could incorporate socio-emotional constructs such as resilience**,** and classroom belonging**.** These constructs have proven relevant in L2 contexts: for example, resilience has been shown to moderate the effects of language learning anxiety (Liu & Wang, 2023), while classroom belonging has been linked to stronger writing motivation and reduced self-doubt (Allen et al., 2021). By including these variables, researchers can gain a more complete understanding of how learners manage stress, persevere through writing challenges, and interpret feedback. Furthermore, mixed-methods case studies could help illuminate individual differences in coping strategies among B40 learners and expose patterns hidden in aggregate quantitative data. Such approaches would not only deepen theoretical understanding of affect in L2 writing but also offer practical insights for teacher training, classroom design, and the development of writing interventions that are responsive to learners' emotional needs.

References
Allen, KA., Slaten, C.D., Arslan, G., Roffey, S., Craig, H., Vella-Brodrick, D.A. (2021). School Belonging: The Importance of Student and Teacher Relationships. In: Kern, M.L., Wehmeyer, M.L. (eds) The Palgrave Handbook of Positive Education. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-64537-3_21

AlTameemy, F., Saleh, M., & Noor, N. M. (2020). The Challenges of Academic Writing in ESL Contexts. *Asian Journal of English Language Studies, 8* (1), 23–36.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of Human Behavior* (Vol. 4, pp. 71–81). Academic Press.

Canada, E., Jr., & Miralles, T. (2022). English Writing Instruction and Strategies As Predictors of Writing Anxiety of Students. *European Journal of English Language Teaching, 7*(5). https://doi.org/10.46827/ejel.v7i5.4510

Cheng, Y. S. (2004). A Measure of Second Language Writing Anxiety: Scale development and Preliminary Validation. *Journal of Second Language Writing, 13*(4), 313–335.

Graham, S., & Harris, K. R. (2018). Principles of Effective Writing Instruction. *Journal of Educational Psychology, 110(*1), 1–16.

Han, J. (2024). Motivational Influences on ESL Writing Performance: *A Longitudinal Approach. TESOL Quarterly, 58(*1), 52–71.

Hasni, N. A., Latif, H., & Ahmad, N. (2024). Writing Apprehension and Its Impact on Malaysian University Learners. *International Journal of Language Education, 8(*1), 112–129.

Hidi, S., & Boscolo, P. (2007). Motivation and Writing. In S. Graham, C. A. MacArthur, & J. Fitzgerald (Eds.), *Best Practices in Writing Instruction* (pp. 144–163). Guilford Press.

Liu, M., & Ni, H. (2020). Examining EFL Learners' Writing Anxiety in China. *System, 92,* 102273.

Pajares, F. (2003). Self-Efficacy Beliefs, Motivation, and Achievement in Writing. *Reading & Writing Quarterly, 19(*2), 139–158.

Sabariah Abdul Rahim, Parameswari Jaganathan, Tengku Sepora Tengku Mahadi. (2016). An investigation on the effects of writing anxiety on readiness of writing among low proficiency undergraduates. *International Journal of Language Education and Applied Linguistics*, 5, 69–79. https://doi.org/10.15282/ijleal.v5.495

Shen, X., Liliati Ismail, Jeyaraj, J. J., & Teng, M. F. (2024). Metacognitive strategies, writing self-efficacy and writing anxiety in different learning modes: A two-wave longitudinal model. *System, 126*, Article 103485. https://doi.org/10.1016/j.system.2024.103485

Soleimani, H., Nahrkhalaji, S. S., & Sarab, M. R. A. (2020). Affective Factors in EFL Academic Writing: A Mixed-Methods Study. *Journal of Language and Linguistic Studies, 16*(1), 262–279.

Sun, Y., & Wang, C. (2021). Investigating Self-Efficacy In L2 Writing Performance. *Language Teaching Research, 25*(4), 502–525.

Sun, Y., Zhang, X., & Teng, L. (2024). Grammar Anxiety and Writing Fluency Among Chinese EFL learners. *System, 118*, 103053.

Teigen, K. H. (1994). Yerkes-Dodson: A Law For All Seasons. *Theory & Psychology, 4(*4), 525–547.

Wan Nazira Che Nor, & Melor Md Yunus. (2022). Esl Writing Anxiety In The CEFR Setting: Does It Affect The Students?. *International Journal of Academic Research In Progressive Education and Development.Vol 11. Issue 3,* 62-78 https://doi:10.6007/IJARPED/v11-i3/14357

Waked, H. H., Al-Ali, M. N., & Rababah, A. (2023). Gendered Writing Anxiety in Arab EFL Classrooms. *International Journal of Applied Linguistics, 33*(2), 134–153.

Wern, C. H., & Rahmat, N. H. (2021). The Effects of Writing Apprehension on ESL Learners. *Journal of English Language Teaching and Applied Linguistics, 3*(1), 14–24.

Yerkes, R. M., & Dodson, J. D. (1908). The Relation of Strength of Stimulus To Rapidity of Habit Formation. *Journal of Comparative Neurology and Psychology, 18*, 459–482.

Yu, S., Jiang, C., & Liu, Y. (2023). Genre-Based Instruction and L2 Writing Motivation. *Language Teaching Research.* Advance online publication. https://doi.org/10.1177/13621688231101976

Zhang, L., & Zhang, X. (2022). Revisiting Perfectionism and L2 Writing Anxiety. *Journal of Second Language Writing, 56*, 101844.

Zhou, J., Wang, S and Wang, J. (2022). Investigating high schoolers' L2 writing anxiety, L2 writing self-efficacy, L2 writing self-regulated strategies, and L2 writing engagement: Relationships and mediator. *Front. Psychol.* 13:1012407