Factors Influencing Academic Writing Behaviour Among Undergraduates

Faizah Mohamad

Academy of Language Studies, Universiti Teknologi MARA

Shah Alam, 40450 Selangor, Malaysia

Nadia Anuar (Corresponding author)

Academy of Language Studies, Universiti Teknologi MARA

Shah Alam, 40450 Selangor, Malaysia

Nor Shidrah Mat Daud

Academy of Language Studies, Universiti Teknologi MARA

Shah Alam, 40450 Selangor, Malaysia

Abstract

Writing is a crucial skill for university students to succeed in the current content-driven era. However, many students are reported to be intimidated by writing as they find the task daunting, thus affecting their participation in writing activities. Students also rarely show encouraging writing behaviour, which leads to unsatisfactory written work. This study aimed to examine factors that contribute to their writing behaviour. A quantitative research method by means of a survey design was employed for data collection. A 43-item questionnaire was distributed randomly using a Google Form link to 84 undergraduate students who were undertaking various fields of study at a public university. Section A of the questionnaire queries the students' demographic profile, whereas Section B, C, and D seek responses on their psychological state, confidence, and attitudes, respectively. Section E queries their writing behaviour. Descriptive analysis was performed on each factor, and Pearson's correlation was used to analyse the relationship between the factors and the students' writing behaviour. Finally, a stepwise multiple regression was employed to discover the factor most contributing to the students'

writing behaviour. The findings indicate that confidence and attitude factors have a significant relationship with the students' writing behaviour, but the relationship between psychological state factors and writing behaviour was not significant. This finding enhances the understanding of the essentiality of attitude in facilitating students' writing mastery.

Keywords: academic writing, writing behaviour, attitude, confidence, psychological state

1. Introduction

The ability to write well has become increasingly important in this global community. Bray, Byrne, and O'Kelly (2020) advocated that communicating via writing is a key skill in the current educational landscape. As an essential communication skill, writing is necessary not only to facilitate achieving academic and career excellence but also for all other reasons where transmission of written ideas and thoughts is required. Despite its importance, writing skill is claimed to be the most difficult language skill to master. A writer is often not around when his or her written work is read and therefore needs to ensure that the meaning is clear through careful choice of words, ☐haracterize of ideas, and appropriate style of writing. The tasks are particularly crucial for tertiary academic writing, which is ☐haracterized by a critical voice with objectivity and conciseness being the goals (Vardi, 2000). Performing the tasks is even more daunting for non-native English writers (Lin & Morrison, 2021). Writing is known to be considered a challenging skill (Graham et al., 2018). As students are expected to produce output, it is essential to investigate the predictors of their writing behaviour to Improve their readiness towards writing (Moses & Mohamad, 2019).

Various areas of research in writing have been explored extensively, including writing motivation (Guay, Gilbert, Falardeau, Bradet, & Boult, 2020; Ling et al., 2021; Wang, 2021), writing challenges (Jou, 2017; Lin & Morrison, 2021; Maagerø, Siljan, & Veum, 2021), and strategies and approaches to teaching writing (Azkarai & Kopinska, 2020; Yu, Jiang, & Zhou, 2020; Zhai, 2021). Besides the complexity of writing task (Golparvar & Rashidi, 2021; Hsu, 2020; Masrom, Nik Mohd Alwi, & Mat Daud, 2015; Ruiz-Funes, 2015), other predictors of students' writing behaviour include learning environment factors (Jiang & Zhang, 2020; Li & Mak, 2022; Nabiryo & Sekiziyivu, 2019), teacher factors (Dhanya & Alamelu, 2019; Meissel, Yao, & Meyer, 2022; Shi & Baker, 2022; Wang, Lee, & Park, 2020), and learner factors (Dhanya & Alamelu, 2019; Qiu & Lee, 2020; Teng, Wang, & Zhang, 2022). This paper focuses on learner factors, particularly psychological state, confidence, and attitudes toward writing.

2. Literature Review

2.1 Writing Behaviour

Writing is a medium to express and communicate ideas, perspectives, feelings, and emotions. The benefits of writing include the development of thinking abilities (Carter, Creedy, & Sidebotham, 2017; Farahian, Avarzamani, & Rajabi, 2021; Gong, 2022; Naber & Wyatt, 2014). However, the various cognitive activities involved in writing make it challenging for many. A writer not only has to present ideas clearly using correct and appropriate language, but also

manage the content, consider readers, and coordinate hand movements when writing needs to be managed proficiently (Hermansson & Lindgren, 2019). The complexity of writing is also reflected in the "recursive" nature of the writing process (The Writing Post, 2021). Hours are spent gathering ideas, analysing resources, synthesising information, reflecting on the product, and revisiting the steps back and forth before a fine, well-polished writing product can be produced. For undergraduates, most of the coursework load is in written form, especially academic writing. The students are required to be attentive not only to the arguments but also to the language and writing conventions to fulfil the expectations of teachers or any other readers. A good writing piece, therefore, should be structured, clear, concise and well-backed up by evidence, and presented in a formal tone and style. Certain stylistic rules and guidelines also need to be adhered to (Vardi, 2000). Being the most difficult skill to develop, writing has become one of the most popular research areas in the language field.

2.2 Psychological State and Writing Behaviour

Psychological state is "an emotion or condition that greatly influences an individual's thought processes at a moment in time" (Spacey, 2020, para 1). One's psychological state also affects one's behaviour (Bhagat, 2017). Learning is a behaviour that can be affected by one's psychological state (Bunnell, 2022). Facilitative emotions, for example, have strong effects on attention as well as make encoding and retrieval of information easier (Tyng, Amin, Saad, & Malik, 2017). Students' learning outcomes are greatly influenced by their psychological state. Intelligence, motivation, interest, and cognition will not work if the psychological state is unfavourable (Bunnell, 2022).

For student writers, a balance among the above factors (intelligence, motivation, interest, cognition, and psychological state) would also influence writing performance. A better writer has higher emotional intelligence as he or she is more self-aware, better able to self-regulate, more highly motivated, and has greater empathy as well as greater social skills (Gray-Grant, 2017). Writing motivation and engagement factors were also associated with "greater enjoyment of writing, greater participation in writing tasks, more positive writing goals, more resilience when faced with difficult writing tasks, and higher literacy achievement" (Martin, Collie, & Curwood, n.d., para 23). A cognitive psychologist, Ronald T. Kellogg (1999), notes that trying to write takes time, and how much of that time is spent in a state of boredom, anxiety or creative flow depend on the writer's work schedules, behavioural rituals, and writing environments. Thus, determining students' psychological state in writing lessons is necessary to facilitate their writing.

2.3 Confidence and Writing Behaviour

A strong body of literature indicates that confidence impacts the quality of students' learning process (Norman & Hyland, 2003) as lack of confidence can potentially cause students to always doubt themselves when starting a task. This conclusion is in line with Bandura's (1997) self-efficacy concept which suggests that higher confidence encourages people to demonstrate more effort in ensuring that the goal is fulfilled. Confidence has been underlined to influence an individual's writing proficiency as evidenced in Sanders-Reio, Alexander, Reio Jr. and Newman (2014) and Prat-Sala and Redford (2012), who reported a correlation between

students' confidence in their writing proficiency and their writing performance. Building on their results, Mardiansyah (2018) confirmed that confidence significantly influenced students' essay writing achievement by 38.5%. Another study by Spix and Brasier (2018) discovered that students' increased confidence in writing critical analysis had boosted their performance in school. In contrast, Julian, Simaibhang, and Mulyadi (2021) observed no significant correlation between confidence and writing ability. However, Zoztmann and Sheldrake's (2021) comparative study between L1 and L2 postgraduate students found the latter to demonstrate lower confidence about their ability in writing despite obtaining similar grades as L1 postgraduate students. Such low confidence was then attributed to their unfamiliarity with writing conventions, intimidated by reading materials (Freeling, Doubleday, Dry, Semmler, & Connell, 2021; Zoztmann & Sheldrake, 2021) and minimal instructional time (Graham, 2019). Although the influence of confidence on writing performance is well-established in the literature, the influence of confidence on writing behaviour is understudied hence the necessity of the current study.

2.4 Attitude and Writing Behaviour

Attitude is an affective element of motivation and is defined as a learned state of readiness towards a specific task (Musgrove, 1998). Abdul Ghaffar, Khairallah, and Salloum (2020) in their interviews with students found that despite recognising writing as an essential skill, students are reluctant to participate in any writing tasks because of their inability to understand a topic and lack of clarity about the task expectation. Another study by Dhadhodara and Joshi (2017) involving 346 students found that 85% of the students articulated a negative perception towards writing. In Graham, Berninger, and Fan (2007) and Pamuji (2015), a significant relationship was found between writing attitude and writing achievement. Correspondingly, Zahroh, Mujiyanto, and Saleh (2020) found that students' attitudes exert a moderate influence on their writing skills. However, Apryani (2015) provided empirical evidence indicating a negative relationship between students' attitude towards writing and their writing performance. The inconclusive findings on the relationship between attitude and writing performance underline the criticality of the present study. The starting point is to understand and assess students' attitude and their influence on writing behaviour from drafting until completion, such as seeking feedback from lecturers and proofreading. Therefore, it is essential that the relationship between students' attitude and writing behaviour is extensively examined (Jabali, 2018).

Taken together, it can be concluded that the difficulty and demands of writing tasks have caused many students to become apprehensive towards writing. They believe their writing skills to be not up to par with expectations. Some of them find it hard to have a supportive mental state to facilitate their development of writing skills. Many students even have a negative attitude towards this productive language skill. Therefore, identifying and understanding factors that may affect students' writing behaviour is crucial to find an effective approach to developing their writing skills. The present study, therefore, hopes to provide some insights into the matter by investigating the influence of psychological state, confidence, and attitudes on writing. While studies on these learner factors are not new, the present research contributes to the pool of literature and evidence through the comparison of all three learner factors to writing

behaviour among students from three different fields of studies, i.e. social sciences & humanities, science & technology and business & administration.

Research Questions:

1. What are the students' psychological state, confidence, and attitudes towards writing behaviour?

2. Are there any significant relationships between the students' psychological state, confidence, attitudes factors and students' writing behaviour?

3. Which factor contributes to their writing behaviour the most?

3. Methodology

A quantitative research method was employed using a survey design in the present study. According to Abuhamda, Ismail, and Bsharat (2021), quantitative research involves statistical data that can be quantified; therefore, the researchers' time and effort in interpreting the results and explaining the outcome of their study can be tremendously reduced. Sarangam (2021) also posits that quantitative analyses could reduce personal bias to a great extent. Furthermore, a survey using a questionnaire is quite common and cheap, and has been used to obtain information from a wider group of individuals for decades. In the present study, the instrument used to collect the data was a 43-item questionnaire with multiple-choice responses for the demographic profiles and numerical Likert scale responses ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) for the rest of the queries. Section A consisted of four (4) queries on gender, MUET results, and field of study. Section B contained seven (7) items querying psychological state towards writing. Section C had fourteen (14) items querying confidence towards writing, and Section D covered six (6) items on students' attitudes towards writing. The final section, Section E, had ten (10) items measuring the students' writing behaviour. The questionnaire was distributed randomly via Google Forms to the undergraduate students of a Malaysian public university. Due to the time constraint of the study, access to the survey link was closed after 84 responses were obtained. The data gathered were then analysed using SPSS V28. Both descriptive and inferential statistics were used in reporting and interpreting the findings. The significance level was set at 0.05 for inferential statistics.

4. Findings

The findings gathered to answer the research questions will be presented and discussed after the demographic profile section.

4.1 Demographic Profile

Table 1 shows the frequency distribution of the respondents' demographic profile which includes gender, MUET Band, and field of study. The respondents consisted of mostly females (79.8%), and most of the students had achieved Band 4 for their MUET (66.6%). The majority of the respondents (42.9%) undertook Social Science & Humanities studies, followed by those undertaking Science & Technology (35.7%) and Business & Administration (21.4%).

Table 1. Demographic profile of respondents

Variables	Percentages (N=84)
Gender	
Male	20.2% (17)
Female	79.8% (67)
MUET	
Band 2	7.1% (6)
Band 3	34.5% (29)
Band 4	66.6% (45)
Band 5	4.8% (4)
Fields of Study	
Science & Technology	35.7% (30)
Business & Administration	21.4% (18)
Soc. Sciences & Humanities	42.9% (36)

4.1.1 Research Question 1: What are the students' psychological state, confidence, and attitude towards writing?

Table 2. Students' psychological state

Item No	Psychological State	Mean
B1	I feel my heart pounding when I write in English under time constraints.	3.56
B4	My thoughts become jumbled when I have to write in English under a tight deadline.	3.45
B3	I tremble or sweat when I have to write in English under time pressure.	3.08
B2	My mind often goes blank when I start to write in English.	2.98
B6	I freeze up when I am unexpectedly asked to write in English.	2.68
B5	I panic when I have to write in English.	2.50
B7	I feel my whole body tense when I have to start writing in English.	2.50
	Overall Mean	2.96

Table 2 shows that the highest mean (3.56) was recorded for item B1 (*I feel my heart pounding when I write in English under time constraints*), followed by item B4 (*My thoughts become jumbled when I have to write in English under a tight deadline*) at 3.45. Item B3 (*I tremble or sweat when I have to write in English under time pressure*) recorded a mean of 3.08 and followed by item B6 (*I freeze up when I am unexpectedly asked to write in English*) at 2.68. Meanwhile, items B5 (*I panic when I have to write English*) and B7 (*I feel my whole body tense when I have to start writing in English*) recorded the lowest mean (2.50).

Table 3. Students' confidence

Item No	Confidence	Mean
C10	I always plan an outline before I write.	3.81
C9	I always finish writing before the deadline.	3.80
C8	I can focus on the main ideas when writing.	3.71
C2	I can organise sentences into a paragraph to express an idea when I write.	3.69
C14	I can edit my grammar errors when I write.	3.63
C1	I can think of many ideas during writing.	3.57
C3	I experience no problem spelling words correctly when writing.	3.47
C4	I can focus on my writing for at least 1 hour.	3.46
C7	I can think of appropriate words to describe my ideas when writing.	3.44
C5	I can articulate my ideas in writing easily.	3.36
C12	I can use proper grammatical structures when I am writing.	3.29
C6	I can correctly use verb tenses when writing.	3.27
C11	I can block out distractions while I am writing.	3.26
C13	I can continue writing even when I do not have ideas.	2.90
	Overall Mean	3.48

The highest mean (3.81) was recorded for item C10 (*I always plan an outline before I write*) followed by item C9 (*I always finish writing before the deadline*) at 3.80. The third highest mean (3.71) was recorded for item C8 (*I can focus on the main ideas when writing*) and item C2 (*I can organise sentences into a paragraph to express an idea when I write*) at 3.69. Next, item C14 (*I can edit my grammar errors when I write*) recorded a mean of 3.63 and item C1 (*I can think of many ideas during writing*) recorded a mean of 3.57. In addition, item C3 (*I experience no problem spelling words correctly when writing*) received a mean of 3.47 and item C4 (*I can focus on my writing for at least 1 hour*) recorded a mean of 3.46. Item C7 (*I can think of appropriate words to describe my ideas when writing*) was next at 3.44 followed by item C5 (*I can articulate my ideas into writing easily*) (mean = 3.36). Item 12 (*I can use proper grammatical structures when I am writing*) recorded a mean of 3.29, item C6 (*I can correctly use the verb tenses when writing*) at 3.27, and item C11 (*I can block out distractions while I am writing*) at 3.26. Item C13 (*I can continue writing even when I do not have ideas*) received the lowest mean (2.90).

Table 4. Students' attitudes

Item No	Attitudes	Mean
D1	Writing is a very important skill.	4.71
D6	I feel good when I complete my writing.	4.56
D3	I always pay attention to classes that teach writing skills.	4.04
D5	I enjoy collaborative writing with my classmates.	3.71
D4	I like to participate in writing-based activities during class.	3.50
D2	Writing is an easy skill for me.	3.62
	Overall Mean	3.95

As shown in Table 4, the highest mean (4.71) was received for item D1 (*Writing is a very important skill*) followed by item D6 (*I feel good when I complete my writing*) (4.56). Item D3 (*I always pay attention to classes that teach writing skills*) recorded a mean of 4.04 and item D5 (*I enjoy collaborative writing with my classmates*) came next (mean = 3.77). Meanwhile, item D4 (*I like to participate in writing-based activities during class*) recorded a mean of 3.69. The lowest mean (3.62) was recorded for item D2 (*Writing is an easy skill for me*).

Table 5. Students' writing behaviour

Item No	Writing Behaviour	Mean
E4	I ask for my friends' help when I experience difficulties in writing.	4.27
E1	I always check the language of my writing.	4.23
E9	I always add suitable examples when writing.	4.14
E10	I always take the initiative to proofread and edit my writing.	4.10
E8	I make sure that the content of each paragraph in my writing supports its topic sentence.	4.08
E5	I always try to keep writing when I experience difficulties in writing.	3.98
E7	I always make sure there is a topic sentence in each paragraph of my writing.	3.96
E2	I always write an outline before writing.	3.88
E3	I consult my lecturer when I experience difficulties in writing.	3.66
E6	I draft my ideas in Malay first before writing them in English.	2.73
	Overall Mean	3.90

Table 5 indicates that item E4 (*I ask for my friends' help when I experience difficulties in writing*) recorded the highest mean (4.27) for students' writing behaviour. The second highest mean (4.23) was recorded for item E1 (*I always check the language of my writing*) followed by item E9 (*I always add suitable examples when writing*) at 4.14. Next was item E10 (*I always take the initiative to proofread and edit my writing*) (mean of 4.10) followed by Item E8 (*I make sure that the content of each paragraph in my writing supports its topic sentence*) (mean = 4.08). Next was item E5 (*I always try to keep writing when I experience difficulties in writing*) (mean = 3.98) followed by item E7 (*I always make sure there is a topic sentence in each paragraph of my writing)* (mean = 3.96). The third lowest mean was item E2 (*I always write an outline before writing*) at 3.88. Meanwhile, item E3 (*I consult my lecturer when I experience difficulties in writing*) recorded the second lowest mean at 3.66, and the lowest mean (2.73) was recorded for item E6 (*I draft my ideas in Malay first before writing them in English*).

4.1.2 Research Question 2: Are there any significant relationships between the students' psychological state, confidence, attitude, and their writing behaviour?

Table 6. Relationship between the students' psychological state, confidence, attitude, and their writing behaviour

		Psychological State	Confidence	Attitudes
Writing Behaviour	Pearson Correlation	.046	.509**	.669**
	Sig. (2-tailed)	.679	< .001	< .001
	N	84	84	84

The finding (Table 6) shows no significant relationship between the students' psychological state and their writing behaviour [r = .046, p > 0.05]. However, a significant relationship was noted between their confidence and writing behaviour [r = .509, p < 0.05] and between their attitude and writing behaviour [r = .669, p < 0.05]. These findings draw three conclusions: (i) the students' psychological state did not influence their writing behaviour; (ii) the more confident they are, the better their writing behavior; and (iii) the more positive their attitude towards writing, the better their writing behaviour.

4.1.3 Research Question 3: Which factor contributes the most to the students' writing behaviour?

Table 7. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669[a]	.447	.440	.35854

[a] Predictors: (Constant), Attitude

Table 8. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.523	1	8.523	66.302	< .001[b]
	Residual	10.541	82	.129		
	Total	19.064	83			

[a] Dependent Variable: Writing Behaviour
[b] Predictors: (Constant), Attitude

Table 9. Coefficients[a]

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.690	.275		6.140	<.001
Attitude	.562	.069	.669	8.143	<.001

[a] Dependent Variable: Writing Behaviour

Table 10. Excluded Variables[a]

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
					Tolerance
1 PsychoState	.152[b]	1.857	.067	.202	.976
Confidence	.127[b]	1.174	.244	.129	.574

[a] Dependent Variable: Writing Behaviour
[b] Predictors in the Model: (Constant), Attitude

The stepwise multiple regression analysis (Table 7) shows a multiple correlation coefficient of .669, thus indicating that approximately 44.7% of the variance in writing behaviour could be accounted for by the students' attitude. At step 1 of analysis, attitude entered into the regression equation and was significantly related to writing behaviour [$F(1,82) = 66.302$, $p < 0.001$] (see Table 8). Psychological state ($t = 1.857$, $p > 0.05$) and confidence ($t = 1.174$, $p > 0.05$) did not enter into the equation at step 2 of the analysis (Table 10). The regression model for predicting writing behaviour using the coefficients in Table 9 is as follows:

$$\text{Predicted writing behaviour} = 1.690 + 0.562\,(\text{Attitudes}) \tag{1}$$

Thus, it seems reasonable to conclude that attitude contributes the most to the students' writing behaviour as the model presents a regression coefficient of 0.562 related to attitude. A unit increase in attitude is associated with a 0.562 unit increase in writing behaviour.

4. Discussion and Conclusion

The present study was designed to determine the influence of confidence, psychological state, and attitude on students' writing behaviour. Towards this end, three objectives were set: (1) to

investigate students' psychological state, confidence, and attitudes towards writing, (2) to identify any significant relationships between the student's psychological state, confidence, attitudes factors and students' writing behaviour, and (3) to determine which of the factors contributes the most to the students' writing behaviour. Notable findings from the descriptive analysis are that (i) the students had their hearts beating fast when they had to write in English under pressure; (ii) they always plan their writing outline; and (iii) they thought that writing was an important skill that had the highest mean under the psychological state factor, confidence factor, and attitudes factor, respectively. Based on the writing behaviour descriptive analysis, the students strongly agreed that they would seek their friends' help when encountering difficulty in writing. This finding aligns with a pre-post test by Lyman and Keyes (2019) which reported peer support as able to reduce writing anxiety and improve writing scores.

The second research question seeks to assess the relationships between students' psychological state, confidence, and attitude towards writing and students' writing behaviour. This study found no relationship between psychological state and writing behaviour, which contradicts Bunnell (2022) and Bhagat (2017) who emphasised the importance of students' healthy psychological state for meaningful learning to occur. Conversely, the present study found a significant relationship between confidence and writing behaviour, which is congruent with Mardiansyah (2018) and Spix and Brasier (2018) who noted the relationship between confidence and students' writing behaviour. The current study also determined attitude to be significantly related to writing behaviour, which corresponds to Graham et al. (2007) and Pamuji (2015). In summary, the results for the second research question demonstrated the association between students' behaviour and confidence and attitude. This highlights the need for educators and curriculum designers to embed writing activities that cultivate higher confidence and positive attitude among students.

On the factor that primarily contributes to writing behaviour, the stepwise multiple regression analysis identified attitude to exert the highest influence on writing behaviour. Attitude was also discovered by Getie (2020) and Zahroh et al. (2020) to be the most fundamental element in shaping students' writing behaviour, though this finding differs from a small part of the literature (e.g., Apryani, 2015). The alignment of the current findings with the majority of the literature can be attributed to the fact students' attitude influences their perception towards writing tasks. A positive perception will assist them in simplifying and understanding the importance of a writing task (Ellis, 1994). Such suggests the criticality to mould students' positive perception toward writing.

Limitations of the study suggest some avenues for future research. A larger sample size would improve the applicability of the findings. Future studies may also consider comparing the writing behaviours of younger and older students, or between male and female students. Future studies may also analyse the influence of the instructional time period on students' writing behaviour. The findings of this study therefore highlight the importance of providing frequent writing opportunities in the classroom for students to exercise their writing muscles while cultivating a positive attitude towards writing among students. Educators are recommended to encourage peer support as a strategy to nurture students' writing proficiency and indirectly

provide an opportunity to learn to provide constructive feedback. It is hoped that the results of this study have enriched the writing behaviour literature and can be incorporated by relevant stakeholders in improving university students' writing proficiency.

References

Abdul Ghaffar, M., Khairallah, M., & Salloum, S. (2020). Co-constructed rubrics and assessment for learning: The impact on middle school students' attitudes and writing skills. *Assessing Writing*, *45*, 100468. https://doi.org/10.1016/j.asw.2020.100468

Abuhamda, E. A. A., Ismail, I. A., & Bsharat, T. R. K. (2021). Understanding quantitative and qualitative research methods: A theoretical perspective for young researchers. *International Journal of Research, 8*(2), 71–87. http://dx.doi.org/10.2501/ijmr-201-5-070

Apryani, W. H. (2015). *The relations among attitude, motivation, interest, and students' speaking ability* (Unpublished thesis). State University of Malang, Indonesia.

Azkarai, A., & Kopinska, M. (2020). Young EFL learners and collaborative writing: A study on patterns of interaction, engagement in LREs, and task motivation. *System*, *94*, 1–15. https://doi.org/10.1016/j.system.2020.102338

Bhagat, V. (2017). *Introduction to psychology and behaviour science*. United States: LuLu.

Bray, A., Byrne, P., & O'Kelly, M. (2020). A short instrument for measuring students' confidence with 'key skills' (SICKS): Development, validation and initial results. *Thinking Skills and Creativity*, *37*, 100700. https://doi.org/10.1016/j.tsc.2020.100700

Bunnell, P. J. (2022). How does the psychological state affect learning outcomes. Retrieved from https://www.psychreg.org/how-does-psychological-state-affect-learning-outcomes/

Carter, A. G., Creedy, D. K., & Sidebotham, M. (2017). Critical thinking evaluation in reflective writing: Development and testing of Carter Assessment of Critical Thinking in Midwifery (reflection). *Midwifery*, *54*, 73–80. https://doi.org/10.1016/j.midw.2017.08.003

Dhadhodara, N., & Joshi, B. (2017). The writing attitude of higher education students. *Horizons of Holistic Education*, *4*(3–4), 111–120.

Dhanya, M., & Alamelu, C. (2019). Factors influencing the acquisition of writing skills. *International Journal of Innovative Technology and Exploring Engineering*, *8*(7C2), 259–263.

Ellis, N. (1994). *Implicit and explicit language learning*. San Diego, CA: Academic Press.

Farahian, M., Avarzamani, F., & Rajabi, Y. (2021). Reflective thinking in an EFL Writing course: To what level do portfolios improve reflection in writing*? Thinking Skills and Creativity*, *39*, 1–12. https://doi.org/10.1016/j.tsc.2020.100759

Freeling, B. S., Doubleday, Z. A., Dry, M. J., Semmler, C., & Connell, S. D. (2021). Better writing in scientific publications builds reader confidence and understanding. *Frontiers in Psychology*, 3484. https://doi.org/10.3389/fpsyg.2021.714321

Getie, A. S. (2020). Factors affecting the attitudes of students towards learning English as a foreign language. *Cogent Education*, *7*(1), 1738184. https://doi.org/10.1080/2331186X.2020.1738184

Golparvar, S. E., & Rashidi, F. (2021). The effect of task complexity on integrated writing performance: The case of multiple-text source-based writing. *System*, *99*, 1–11. https://doi.org/10.1016/j.system.2021.102524

Gong, W. (2022). An empirical study on the correlation between critical thinking ability and L2 argumentative writing competence. *Frontiers in Educational Research*, *5*(2), 89–95. https://dx.doi.org/10.25236/FER.2022.050217

Graham, S. (2019). Changing how writing is taught. *Review of Research in Education*, *43*(1), 277–303. https://doi.org/10.3102/0091732X18821125

Graham, S., Berninger, V., & Fan, W. (2007). The structural relationship between writing attitude and writing achievement in first and third-grade students. *Contemporary educational psychology*, *32*(3), 516–536. https://doi.org/10.1016/j.cedpsych.2007.01.002

Graham, S., Liu, X., Aitken, A., Ng, C., Bartlett, B., Harris, K. R., & Holzapfel, J. (2018). Effectiveness of literacy programs balancing reading and writing instruction: A meta-analysis. *Reading Research Quarterly*, *53*(3), 279–304. https://doi.org/10.1002/rrq.194

Gray-Grant, D. (2017). Why the best writers have the most emotional intelligence. Retrieved from https://www.visualthesaurus.com/cm/wc/why-the-best-writers-have-the-most-emotional-intelligence/#:~:text=They%20show%20great%20empathy.,what%20they%20want%20to%20write

Guay, F., Gilbert, W., Falardeau, E., Bradet, R., & Boult, J. (2020). Fostering the use of pedagogical practices among teachers to support elementary students' motivation to write. *Contemporary Educational Psychology*, *63*, 101922. https://doi.org/10.1016/j.cedpsych.2020.101922

Hermansson, C., & Lindgren, E. (2019). Writing as a cognitive process. Retrieved from https://www.cambridge.org/elt/blog/2019/12/19/writing-cognitive-process/

Hsu, H. (2020). The impact of task complexity on patterns of interaction during web-based asynchronous collaborative writing tasks. *System*, *93*, 1–13. https://doi.org/10.1016/j.system.2020.102328

Jabali, O. (2018). Students' attitudes towards EFL university writing: A case study at An-Najah National University, Palestine. *Heliyon*, *4*(11), e00896. https://doi.org/10.1016/j.heliyon.2018.e00896

Jiang, D., & Zhang, L. J. (2020). Collaborating with 'familiar' strangers in mobile-assisted environments: The effect of socializing activities on learning EFL writing. *Computers & Education*, *150*, 1–13. https://doi.org/10.1016/j.compedu.2020.103841

Jou, Y. (2017). Hidden challenges of tasks in an EAP writing textbook: EAL graduate students' perceptions and textbook authors' responses. *Journal of English for Academic Purposes*, *30*, 13–25. https://doi.org/10.1016/j.jeap.2017.10.001

Julian, D. M., Simaibang, B., & Mulyadi, M. (2021). The correlations among learning motivation, self-confidence, and writing ability of students' descriptive text. *JPGI (Jurnal Penelitian Guru Indonesia)*, *6*(1), 142-148.

Kellogg, R. T. (1999). *The psychology of writing*. New York: Oxford University Press.

Li, J., & Mak, L. (2022). The effects of using an online collaboration tool on college students' learning of academic writing skills. *System*, *105*, 1–14. https://doi.org/10.1016/j.system.2021.102712

Lin, L. H. F., & Morrison, B. (2021). Challenges in academic writing: Perspectives of Engineering faculty and L2 postgraduate research students. *English for Specific Purposes*, *63*, 59–70. https://doi.org/10.1016/j.esp.2021.03.004

Ling, G., Elliot, N., Burstein, J. C., McCaffrey, D. F., MacArthur, C. A., & Holtzman, S. (2021). Writing motivation: A validation study of self-judgment and performance. *Assessing Writing*, *48*, 1–15. https://doi.org/10.1016/j.asw.2020.100509

Lyman, M., & Keyes, C. (2019). Peer-supported writing in graduate research courses: A mixed methods assessment. *International Journal of Teaching and Learning in Higher Education*, *31*(1), 11–20.

Maagerø, E., Siljan, H., & Veum, A. (2021). Going from oral to written discourse: Norwegian students' grammatical challenges when writing persuasive texts. *Linguistics and Education*, *66*, 1–10. https://doi.org/10.1016/j.linged.2021.101001

Mardiansyah, R. (2018). A correlation between self-confidence and essay writing achievement. *Edukasi: Jurnal Pendidikan dan Pengajaran*, *5*(2), 154-166.

Martin, A. J., Collie, R. J., & Curwood, J. S. (n.d.). *Students'* motivation and engagement in writing: Do they have the 'write' stuff? Retrieved from https://www.educationmattersmag.com.au/students-motivation-and-engagement-in-writing-do-they-have-the-write-stuff/#:~:text=Effects%20of%20writing%20motivation%20and,writing%20tasks%2C%20and%20higher%20literacy

Masrom, U. K., Nik Mohd Alwi, N. A., & Mat Daud, N. (2015). The role of task complexity and task motivation in language production. *GEMA Online: Journal of Language Studies*, *15*(2), 33–49. https://ejournal.ukm.my/gema/article/view/8361

Meissel, K., Yao, E. S., & Meyer, F. (2022). Teacher judgment (in)accuracy: Differential relations with student progress in writing. *Contemporary Educational Psychology*, *69*, 1–11. https://doi.org/10.1016/j.cedpsych.2022.102067

Moses, R. N., & Mohamad, M. (2019). Challenges faced by students and teachers on writing

skills in ESL Contexts: A literature review. *Creative Education*, *10*(13), 3385–3391. https://doi.org/10.4236/ce.2019.1013260

Musgrove, L. E. (1998). Attitudes toward writing. *The Journal of the Assembly for Expanded Perspectives on Learning*, *4*, 3. https://trace.tennessee.edu/jaepl/vol4/iss1/3

Naber, J., & Wyatt, T. H. (2014). The effect of reflective writing interventions on the critical thinking skills and dispositions of baccalaureate nursing students. *Nurse Education Today*, *34*(1), 67–72. https://doi.org/10.1016/j.nedt.2013.04.002

Nabiryo, N. R., & Sekiziyivu, S. (2019). The influence of classroom environments on English language writing instruction and learning. *Journal of Language Teaching and Research*, *10*(1), 68–75. http://dx.doi.org/10.17507/jltr.1001.08

Norman, M., & Hyland, T. (2003). The role of confidence in lifelong learning. *Educational Studies*, 29(2–3), 261–272.

Pamuji, A. (2015). The correlation among attitude, reading comprehension, and writing achievement of English education study program students of Sriwijaya University. *Jurnal Adminika*, *1*(1).

Prat-Sala, M., & Redford, P. (2012). Writing essays: Does self-efficacy matter? The relationship between self-efficacy in reading and in writing and undergraduate students' performance in essay writing. *Educational Psychology*, *32*(1), 9-20. https://doi.org/10.1080/01443410.2011.621411

Qiu, X., & Lee, M. (2020). Regulated learning and self-efficacy beliefs in peer collaborative writing: An exploratory study of L2 learners' written products, task discussions, and self-reports. *System*, *93*, 1–15. https://doi.org/10.1016/j.system.2020.102312

Ruiz-Funes, M. (2015). Exploring the potential of second/foreign language writing for language learning: The effects of task factors and learner variables. *Journal of Second Language Writing*, *28*(2015), 1–19. https://doi.org/10.1016/j.jslw.2015.02.001

Sanders-Reio, J., Alexander, P. A., Reio Jr, T. G., & Newman, I. (2014). Do students' beliefs about writing relate to their writing self-efficacy, apprehension, and performance?. *Learning and Instruction*, *33*, 1-11. https://doi.org/10.1016/j.learninstruc.2014.02.001

Sarangam, A. (2021). Quantitative data – A comprehensive guide for 2021. Retrieved from https://www.jigsawacademy.com/blogs/business-analytics/quantitative-data/

Shi, L., & Baker, A. (2022). Innovations in teaching L2 writing: How changes in teachers' SCK and PCK impact learners' perceptions and writing outcomes. *System*, *106*, 1–14. https://doi.org/10.1016/j.system.2022.102788

Spacey, J. (2020). 7 types of mental state. Retrieved from https://simplicable.com/en/mental-state

Spix, T. A., & Brasier, D. J. (2018). Using blogs as practice writing about original neuroscience papers enhances students' confidence in their critical analysis of research. *Journal of*

Undergraduate Neuroscience Education, *16*(2), A120.

Teng, M. F., Wang, C., & Zhang, L. J. (2022). Assessing self-regulatory writing strategies and their predictive effects on young EFL learners' writing performance. *Assessing Writing*. *51*, 1–16. https://doi.org/10.1016/j.asw.2021.100573

The Writing Post. (2021). Writing as a recursive process. Retrieved from https://thewritingpost.com/2021/06/28/writing-as-a-recursive-process/

Tyng, C. M., Amin, H. U., Saad, M. N. M., & Malik, A. S. (2017). The influences of emotion on learning and memory. *Frontiers in Psychology*, *8*, 1–22. https://doi.org/10.3389/fpsyg.2017.01454

Vardi, I. (2000). Developing critical writers at the undergraduate level: Some insights from critical thinking pedagogy and linguistics. In R. James, J. Milton, & R. Gabb, *Research and development in higher education* (vol. 22). Melbourne: HERDSA.

Wang, H. (2021). Exploring the relationships of achievement motivation and state anxiety to creative writing performance in English as a foreign language. *Thinking Skills and Creativity*, *42*, 1–8. https://doi.org/10.1016/j.tsc.2021.100948

Wang, L., Lee, I., & Park, M. (2020). Chinese university EFL teachers' beliefs and practices of classroom writing assessment. *Studies in Educational Evaluation*, *66*, 1–11. https://doi.org/10.1016/j.stueduc.2020.100890

Yu, S., Jiang, L., & Zhou, N. (2020). Investigating what feedback practices contribute to students' writing motivation and engagement in Chinese EFL context: A large scale study. *Assessing Writing*, *44*, 1–15. https://doi.org/10.1016/j.asw.2020.100451

Zahroh, R., Mujiyanto, J., & Saleh, M. (2020). Students' attitudes toward teachers' written corrective feedback and their writing skill. *English Education Journal*, *10*(1), 9–17. http://journal.unnes.ac.id/sju/index.php/eej

Zhai, M. (2021). Collaborative writing in a Chinese as a foreign language classroom: Learners' perceptions and motivations. *Journal of Second Language Writing*, *53*, 1–12. https://doi.org/10.1016/j.jslw.2021.100836

Zotzmann, K., & Sheldrake, R. (2021). Postgraduate students' beliefs about and confidence for academic writing in the field of applied linguistics. *Journal of Second Language Writing*, *52*, 100810. https://doi.org/10.1016/j.jslw.2021.100810