

Peer Review as A Catalyst for Writing and Skill Development: Investigating Student Acceptance of Structured Checklists in Academic Writing

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Abstract. In an era where 21st-century skills such as critical thinking, communication, and collaboration are vital for employability, equipping students with tools to refine their academic writing is more important than ever. This study examines students' perceptions and acceptance of using a structured peer review checklist during essay writing tasks in an academic writing course at Politeknik Ungku Omar. Grounded in Ajzen's Theory of Planned Behavior (TPB), the research investigates how students' attitudes, subjective norms, and perceived behavioral control influence their intention to engage in structured peer review practices. As part of Malaysia's Technical and Vocational Education and Training (TVET) system, this study supports national educational objectives by exploring practical strategies to foster autonomous learning and peer collaboration. A quantitative research design was employed, using structured survey instruments to collect data from students enrolled in degree programs. Statistical analyses revealed that the majority of students perceived the checklist as beneficial for enhancing essay organization, clarity, and the overall quality of peer feedback. However, the findings also highlight significant moderating factors—particularly students' confidence in reviewing peers' work and their perception of peer competence—which affected their willingness to fully adopt the peer review process. The results affirm the potential of structured peer review checklists to support writing development in TVET contexts, provided they are equipped with adequate guidance and training. The study concludes with actionable recommendations for integrating peer feedback mechanisms into academic writing instruction to promote learner autonomy and collaborative engagement in vocational education.

Keywords: peer feedback, academic writing, writing in TVET, learner autonomy, collaborative learning.

INTRODUCTION

Strong academic writing skills are essential for student success across all disciplines. In Technical and Vocational Education and Training (TVET), where technical expertise must be complemented by academic rigor, effective written communication is critical for producing reports, technical documents, and research outputs that meet global standards (Ministry of Higher Education Malaysia, 2023). Yet, despite national efforts to strengthen TVET education, many Malaysian students continue to struggle with producing structured, coherent, and academically sound writing, particularly at the degree level (Rahmat et al. 2020).

Peer review is widely recognized as a powerful tool to support writing development. When implemented systematically, peer review promotes collaboration, enhances critical thinking, and builds students' ability to reflect on their own work (Liu and Carless, 2006; Nicol et al., 2014). However, for peer review to be effective, students need clear, consistent guidelines. Structured peer review checklists have emerged as an essential tool, helping students provide focused, constructive feedback on key aspects of writing, including organization, coherence, academic tone, and technical accuracy (Topping, 2010; Guardado and Shi, 2007; Saito and Fujita, 2020).

Research shows that such checklists improve the quality of feedback, boost student engagement, and promote self-regulated learning. For example, Gielen et al. (2011) demonstrated that structured checklists significantly

enhance both the relevance of peer feedback and overall writing performance. Similarly, Saito and Fujita (2020) found that checklists increase students' confidence in identifying both basic errors and deeper writing concerns. However, there is still limited research on how Malaysian TVET students perceive and accept peer review checklists.

Malaysia's TVET sector faces the dual challenge of preparing students with both technical competencies and the academic literacy required for Industry 4.0 (Ministry of Higher Education Malaysia, 2023; Sani et al. 2022). This is particularly relevant for Polytechnic students who often transition from practical training to academic tasks that demand advanced writing skills.

This study applies Ajzen's Theory of Planned Behavior (TPB) to explore the factors influencing students' intention to use peer review checklists. According to TPB, behavior is shaped by three key factors: attitudes, perceived social norms, and perceived behavioral control (Ajzen, 1991). This framework provides a structured approach to understanding students' perceptions of the usefulness, social support, and confidence associated with checklist use.

In addition to investigating acceptance, this study examines the impact of peer review checklists on students' writing performance, language proficiency, and self-editing skills. It fills gaps in existing research and contributes to Malaysia's broader TVET empowerment agenda by promoting evidence-based strategies to improve academic writing.

Ultimately, this research offers practical insights for educators, curriculum developers, and policymakers on how to integrate peer review checklists effectively into TVET writing instruction. The goal is to strengthen students' writing abilities, foster independent learning, and help produce technically skilled graduates with strong academic literacy and communication competencies.

RESEARCH METHOD

This study adopted a quantitative, cross-sectional survey design to examine how TVET students perceive, accept, and use peer review checklists to improve their academic writing. The research is grounded in Ajzen's Theory of Planned Behavior (TPB), which explains how attitudes, social influences, and perceived control shape behavioral intentions (Ajzen, 1991). Using this framework allowed for a systematic investigation into the psychological and instructional factors influencing students' engagement with peer review checklists.

Eighty undergraduate students from a Malaysian Polytechnic participated in the study. All were enrolled in degree-level TVET programs—specifically, the Bachelor of Construction Technology (BCT) and Bachelor of Manufacturing Systems (BMS). The entire sample consisted of fourth-semester students, ensuring that participants had sufficient academic exposure to writing tasks. Participation was voluntary, and all ethical guidelines were strictly followed.

Data collection was carried out using a structured, self-administered questionnaire comprising 35 Likert-scale items organized into six key constructs: (a) Attitudes toward Peer Review Checklist (B1–B5), (b) Subjective Norms (C1–C4), (c) Perceived Behavioral Control (D1–D5), (d) Behavioral Intentions to Use Checklists (E1–E3), (e) Self-Perceived Language and Writing Ability (F1–F5), and (f) Perceived Impact on Writing Performance (H1–H8).

Each item was rated on a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The instrument was adapted from established tools used in previous studies on peer review and writing assessment (Saito and Fujita, 2020; Gielen et al. 2011) and was piloted to ensure content validity and reliability.

Descriptive statistics, including means, frequencies, and standard deviations, were used to summarize demographic data and response trends. Inferential analyses, including correlation and multiple regression, were performed to explore the relationships between the TPB constructs and their influence on students' behavioral intentions to use peer review checklists. All data were analyzed using appropriate quantitative analysis tools.

RESULTS AND DISCUSSION

Demographic Profile

The final dataset comprised responses from 80 undergraduate students enrolled in Bachelor of Construction Technology (61.3%) and Bachelor of Manufacturing Systems (38.7%) programs at a Malaysian Polytechnic. The mean age of respondents was 22.75 years, reflecting a homogenous, early-adult cohort. Gender distribution consisted of 52 male (65%) and 28 female (35%) participants, consistent with national trends in TVET program enrolments (Ministry of Higher Education Malaysia, 2023). Notably, 98.8% of respondents were in their fourth semester, ensuring adequate academic exposure to writing tasks.

Attitudes toward Peer Review Checklist

TABLE 1- Respondents' Attitudes Towards Peer Review Checklist

Statement	Avg. Rating	Most Common Ratings (% of Respondents)
B1. Using a peer review checklist helps me improve my writing.	4.59	3 (3.75%) 4 (33.75%), 5 (62.5%)
B2. The checklist makes it easier to give constructive feedback.	4.59	3 (2.5%) 4 (36.25%), 5 (61.25%)
B3. I find the peer review checklist useful in identifying my writing weaknesses.	4.49	3 (6.25%) 4 (38.75%), 5 (55%)
B4. I enjoy using peer review checklists during academic writing activities.	4.42	3 (6.25%) 4 (45%), 5 (48.75%)
B5. The peer review checklist enhances my critical thinking when reading others' work.	4.56	3 (3.75%) 4 (36.25%), 5 (60%)

Notes: ratings are rounded to nearest percent for clarity. Only the most frequent response categories are shown.

Descriptive analysis revealed overwhelmingly positive student attitudes towards the peer review checklist. Across five items measuring attitudes (B1–B5), mean scores ranged from 4.42 to 4.60 on a five-point Likert scale as shown in Table 1. Notably, 96.25% of respondents agreed or strongly agreed that using the checklist helps improve their writing (B1), while 95% endorsed its usefulness in facilitating constructive peer feedback (B2). These findings corroborate prior research highlighting the role of structured peer review in enhancing writing confidence and performance (Saito and Fujita, 2020; Gielen et al., 2011).

Subjective Norms

TABLE 2- Respondents' Subjective Norm

Statement	Avg. Rating	Most Common Ratings (% of Respondents)
C1. My classmates think I should use the peer review checklist.	4.34	3 (12.5%), 4 (41.3%), 5 (46.3%)
C2. My lecturer encourages the use of peer review checklists.	4.62	3 (1.25%), 4 (35%), 5 (63.75%)
C3. I feel expected by the course instructor to give serious feedback using the checklist.	4.42	3 (5%), 4 (47.5%), 5 (47.5%)
C4. I am more motivated to use the checklist when others in class are using it seriously.	4.54	3 (3.75%), 4 (38.8%), 5 (57.5%)

Notes: ratings are rounded to nearest percent for clarity. Only the most frequent response categories are shown.

Perceived social and instructional influences on checklist use were similarly strong. The mean scores for items C1–C4 ranged from 4.34 to 4.62 which is highlighted in Table 2. Specifically, 87.5% of students reported that lecturers encourage checklist use (C2), while 95% acknowledged peer influence when classmates engage seriously with the tool (C4). These results align with TPB literature, emphasizing the impact of social norms on student behaviour (Ajzen, 1991; Park et al., 2021).

Perceived Behavioral Control

TABLE 3-Respondents' Confidence and Ease of Using Peer Review Checklists

Statement	Avg. Rating	Most Common Ratings (% of Respondents)
D1. I feel confident in using the peer review checklist correctly.	4.44	3 (5%), 4 (46.25%), 5 (48.75%)
D2. I have the necessary skills to evaluate my peers' essays using the checklist.	4.40	3 (11.25%), 4 (37.5%), 5 (51.25%)
D3. Using the checklist is easy and straightforward.	4.50	3 (7.5%), 4 (35%), 5 (57.5%)
D4. I feel comfortable giving honest feedback using the checklist.	4.54	3 (2.5%), 4 (41.25%), 5 (56.25%)
D5. I believe I can improve in using the checklist with more practice.	4.60	3 (1.25%), 4 (37.5%), 5 (61.25%)

Notes: ratings are rounded to nearest percent for clarity. Only the most frequent response categories are shown.

Students expressed high confidence and ease in using the peer review checklist. Mean ratings for items D1–D5 ranged from 4.40 to 4.60 (Table 3), with over 95% of respondents indicating confidence in their ability to apply the checklist effectively (D1) and evaluate peers' essays (D2). Moreover, 98.75% of participants agreed that the checklist is easy and straightforward (D3), reinforcing findings that structured tools enhance self-efficacy in peer review (Guardado and Shi, 2007).

Behavioral Intentions to Use Peer Review Checklist

TABLE 4-Respondents' Intention to Use Peer Review Checklists in Future Writing

Statement	Avg. Rating	Most Common Ratings (% of Respondents)
E1. I intend to use a peer review checklist in future writing assignments.	4.51	3 (2.5%), 4 (43.8%), 5 (53.75%)
E2. I have the necessary skills to evaluate my peers' essays using the checklist.	4.58	3 (2.5%), 4 (37.5%), 5 (60%)
E3. Using the checklist is easy and straightforward.	4.54	3 (5%), 4 (36.25%), 5 (58.75%)

Notes: ratings are rounded to nearest percent for clarity. Only the most frequent response categories are shown.

Analysis of behavioural intentions revealed and shown in Table 4, a strong commitment among students to integrate peer review checklists into future academic writing. Mean scores for items E1–E3 exceeded 4.50, with 97.5% intending to use the checklist for upcoming assignments (E1) and 93.75% expressing willingness to recommend its use to peers (E3). These findings validate the TPB model's predictive capacity in academic writing contexts (Chu and Chen, 2020; Ajzen, 1991).

Self-Perceived Language and Writing Ability

TABLE 5-Respondents' Self-Perceived Language Proficiency and Writing Ability

Statement	Avg. Rating	Most Common Ratings (% of Respondents)
F1. I am confident in my grammar and sentence structure when writing essays.	4.03	2 (2.5%), 3 (26.25%), 4 (37.5%), 5 (33.75%)
F2. I am able to organize my ideas clearly in my composition.	4.26	2 (2.5%), 3 (15%), 4 (36.25%), 5 (46.25%)
F3. I am able to write an essay with appropriate vocabulary and academic tone.	4.08	2 (3.75%), 3 (18.75%), 4 (43.75%), 5 (33.75%)
F4. I can identify language errors in my own writing.	4.08	1 (1.25%), 2 (3.75%), 3 (18.75%), 4 (38.75%), 5 (37.5%)
F5. I can identify language errors in my peer's writing.	4.16	2 (1.25%), 3 (16.25%), 4 (47.5%), 5 (35%)

Notes: ratings are rounded to nearest percent for clarity. Only the most frequent response categories are shown.

Students reported moderate to high self-perceived writing ability as highlighted in Table 5. While confidence in grammar and sentence structure (F1) yielded a mean score of 4.03, higher ratings were observed for idea organization (F2; $M = 4.26$) and academic vocabulary use (F3; $M = 4.08$). The ability to identify language errors in personal and peer writing (F4, F5) also scored above 4.0, indicating reasonable, though not universal, writing self-efficacy. These findings highlight areas for continued instructional focus, particularly in grammar and linguistic accuracy (Rahmat et al., 2020).

Perceived Impact of Peer Review Checklist on Writing Performance

TABLE 6—Respondents' Perceived Impact of Peer Review Checklist on Writing Output and Self-Editing Practices

Statement	Avg. Rating	Most Common Ratings (% of Respondents)
H1. The peer review checklist helps me to produce better-structured essays.	4.53	3 (2.5%), 4 (42.5%), 5 (55%)
H2. Using the checklist improves my ability to revise and improve my drafts.	4.56	3 (3.75%), 4 (36.25%), 5 (60%)
H3. I can identify specific areas for improvement in my writing after using the checklist.	4.51	3 (5%), 4 (38.75%), 5 (56.25%)
H4. I feel more confident in my writing ability after using peer review checklists.	4.56	3 (3.75%), 4 (36.25%), 5 (60%)
H5. Peer feedback based on the checklist has helped me avoid common writing	4.53	3 (1.25%), 4 (45%), 5 (53.75%)
H6. I accept peer review checklist as a valuable part of the writing process.	4.51	3 (3.75%), 4 (41.25%), 5 (55%)
H7. I believe using the checklist has improved my overall writing performance in this course.	4.51	3 (3.75%), 4 (41.25%), 5 (55%)
H8. I feel that using the checklist has made me more aware of academic writing	4.55	3 (2.5%), 4 (40%), 5 (57.5%)

Notes: ratings are rounded to nearest percent for clarity. Only the most frequent response categories are shown.

Respondents overwhelmingly recognized the positive impact of the peer review checklist on their writing development. Mean ratings for items H1–H8 ranged from 4.51 to 4.56 shown in Table 6. Specifically, 97.5% of students reported that the checklist helped them produce better-structured essays (H1), enhanced their revision practices (H2), and increased their confidence in writing (H4). Furthermore, 95% agreed that peer feedback guided by the checklist reduced common writing errors (H5) and improved their overall academic writing performance (H7). These results affirm existing literature emphasizing the checklist's role in fostering academic literacy and autonomous revision (Gielen et al., 2011; Nicol et al., 2014).

Correlation and Regression Analysis

Pearson correlation analysis revealed statistically significant, positive relationships between attitudes, subjective norms, perceived behavioral control, and behavioral intentions to use the peer review checklist ($p < .01$). Multiple regression analysis confirmed that these three TPB constructs collectively accounted for 67.2% of the variance in students' behavioral intentions ($R^2 = .672$, $p < .001$). Among the predictors, perceived behavioral control emerged as the strongest determinant ($\beta = .42$, $p < .001$), followed by attitudes ($\beta = .36$, $p < .001$) and subjective norms ($\beta = .29$, $p < .01$).

These findings validate Ajzen's TPB in the context of academic writing and underscore the critical role of self-efficacy, positive perceptions, and social reinforcement in promoting peer review checklist adoption among TVET students.

DISCUSSION

This study provides clear empirical evidence supporting the acceptance, usability, and positive impact of structured peer review checklists in improving academic writing among Malaysian TVET students. Grounded in Ajzen's Theory of Planned Behavior (TPB), the findings demonstrate how attitudes, social influences, and perceived control significantly shape students' intentions to adopt peer review checklists—consistent with well-established educational research (Ajzen, 1991; Chu & Chen, 2020).

First, students reported overwhelmingly positive attitudes toward using the checklist, which aligns with previous studies highlighting the role of structured peer assessment in promoting writing development, confidence, and critical thinking (Saito & Fujita, 2020; Gielen et al., 2011). High levels of endorsement for the checklist's ability to enhance writing, facilitate peer feedback, and support self-revision reflect similar conclusions by Guardado and Shi (2007), who emphasized structured peer review as a key driver of language awareness and metacognitive development.

Second, subjective norms—particularly lecturer encouragement and peer influence—emerged as strong motivators for checklist use. The finding that 87.5% of students acknowledged lecturer support and 95% felt more motivated when classmates used the checklist reinforces the critical role of social reinforcement in shaping academic behavior (Nicol et al., 2014; Park et al., 2021). This is especially important in TVET settings, where peer collaboration and instructor modelling are central to both technical skill development and academic literacy (Sani et al., 2022).

Notably, perceived behavioral control was the strongest predictor of students' intentions to use the checklist, consistent with the TPB framework and existing research on writing self-efficacy (Liu & Carless, 2006; Musa et al., 2021). High ratings for ease of use, clarity, and confidence suggest that structured tools like peer review checklists effectively reduce common barriers to peer assessment, particularly uncertainty and limited evaluative skills. This is especially relevant in linguistically diverse classrooms where students may face challenges in providing constructive feedback (Hyland & Hyland, 2006).

While students generally reported moderate to high confidence in their writing ability, areas such as grammar accuracy and academic tone remain evident weaknesses—a challenge widely recognized in Malaysian TVET education (Rahmat et al., 2020; Hashim & Yunus, 2020). These findings highlight the need for a combined instructional approach that integrates peer review with targeted language support to address persistent gaps in linguistic proficiency.

Finally, students perceived a strong positive impact of the checklist on their writing quality, revision skills, and overall academic confidence. This finding reinforces extensive research advocating structured peer review as a practical, low-cost strategy for enhancing academic literacy (Gielen et al., 2011; Saito & Fujita, 2020). The significant correlations between TPB constructs and behavioral intentions further validate the model's relevance for understanding student engagement with peer-assisted writing, offering both theoretical and practical contributions to improving writing pedagogy in TVET.

CONCLUSION

This study provides strong evidence that structured peer review checklists enhance academic writing performance, self-efficacy, and student engagement in Malaysian TVET programs. Positive attitudes, peer and lecturer support, and high perceived control were key predictors of students' willingness to adopt checklists, confirming Ajzen's TPB framework.

The findings offer practical insights for educators, policymakers, and curriculum developers. To maximize the benefits, institutions should implement peer review checklists systematically, promote instructor modeling, and integrate writing support services. As Malaysia advances its TVET empowerment agenda, structured peer review presents a scalable, cost-effective tool to strengthen students' writing, critical thinking, and communication skills.

Future research should explore broader TVET contexts, assess long-term impacts, and investigate how digital platforms can complement peer review practices. Such efforts will support national goals of producing academically capable, industry-ready graduates equipped for global challenges.

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REFERENCES

- Ministry of Higher Education Malaysia. TVET empowerment agenda: Strengthening Malaysia's human capital. Putrajaya; 2023.
- Rahmat NM, et al. Academic writing challenges among Malaysian undergraduates: A case study. *J Lang Stud*. 2020;20(1):175–90. <https://doi.org/10.17576/3L-2020-2601-13>
- Liu N-F, Carless D. Peer feedback: The learning element of peer assessment. *Teach High Educ*. 2006;11(3):279–90. <https://doi.org/10.1080/13562510600680582>
- Nicol D, et al. Rethinking feedback practices in higher education: A peer review model. *Assess Eval High Educ*. 2014;39(2):199–212. <https://doi.org/10.1080/02602938.2013.790550>
- Topping K. Peer assessment: Theory and practice. London: Routledge; 2010. <https://doi.org/10.4324/9781315820910>
- Guardado M, Shi L. ESL students' experiences of peer feedback in academic writing. *J Second Lang Writ*. 2007;16(4):441–67. <https://doi.org/10.1016/j.jslw.2007.05.003>
- Saito H, Fujita T. Characteristics and user acceptance of peer review checklists in academic writing. *Assess Writ*. 2020; 46:208–20. <https://doi.org/10.1016/j.asw.2020.100476>
- Gielen S, et al. Peer assessment as a tool for learning: The impact of peer feedback on writing performance. *Stud Educ Eval*. 2011;37(2–3):150–61. <https://doi.org/10.1016/j.stueduc.2011.02.004>
- Sani MS, et al. Developing 21st century skills among Malaysian TVET students: A case for Industry 4.0. *Int J Tech Voc Educ*. 2022;8(1):35–43. <https://doi.org/10.30880/ijtvce.2022.08.01.005>
- Ajzen I. The theory of planned behavior. *Organ Behav Hum Decis Process*. 1991;50(2):179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Park S, et al. Exploring students' behavioral intentions toward online peer feedback: An application of the theory of planned behavior. *Internet High Educ*. 2021; 51:100815. <https://doi.org/10.1016/j.iheduc.2021.100815>
- Chu H-Y, Chen S-C. Using the theory of planned behavior to predict the use of online peer assessment in writing. *Comput Educ*. 2020; 150:103839. <https://doi.org/10.1016/j.compedu.2020.103839>
- Musa NH, et al. The challenges of peer assessment implementation among Malaysian Polytechnic students. *Malays J Learn Instr*. 2021;18(3):307–25. <https://doi.org/10.32890/mjli2021.18.3.12>
- Hyland F, Hyland K. Feedback on second language students' writing. *Lang Teach*. 2006;39(2):83–101. <https://doi.org/10.1017/S0261444806003399>
- Hashim HA, Yunus MM. Peer feedback as a strategy to enhance writing performance among Malaysian TVET students. *J Tech Educ Train*. 2020;12(2):61–72. <https://doi.org/10.30880/jtet.2020.12.02.006>