University students' cyclical self-assessment process mediated by artificial intelligence in academic writing

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Abstract

This study was designed to investigate the cyclical self-assessment process in the Academic Writing class mediated by Artificial Intelligence (AI). This narrative inquiry elicited data from three university students having different writing proficiency levels: high, middle, and low levels at one university in Indonesia. The data was collected through reflective notes and interviews. The data was then analysed using thematic analysis. The study revealed two significant findings. First, the three university students with different writing proficiency levels engaged in different stages of cyclical self-assessment caused by two main factors, namely learning motivation and level of trust in AI. The more motivated university student was to learn, the more likely they were to seek external feedback actively. Additionally, their level of trust in Automated Written Corrective Feedback (AWCF) and Automated Writing Evaluation (AWE) engaged them in an evaluation and revision process that engaged them in a cyclical self-assessment process that would improve their final results. Second, Artificial Intelligence (AI) could facilitate an effective cyclical self-assessment process with various features. The implication of the study is discussed.

Keywords: academic writing; artificial intelligence; self-assessment; university students


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Writing and academic literacy are fundamental to higher education, as university students must possess these skills to produce academic papers such as theses, monographs, and journal articles (Hyland, 2013). Despite their significance, university students face multiple obstacles in academic writing. An empirical study in Indonesia found that university students faced difficulties in academic writing, including parts of speech, tenses, spelling, prepositions, vocabulary, punctuation, cohesion, discourse markers, writing paragraphs with a clear focus, creating clear and coherent academic essays, paraphrasing, and in-text citations (Bram & Angelina, 2022). The study also revealed that students require assistance, such as feedback, to identify areas for improvement (Chen & Tseng, 2021; Jusslin & Widlund, 2021). However, seeking feedback directly from other parties takes time and effort. Recent studies aimed to lessen those issues by providing new writing tools that facilitate Automated Written Corrective Feedback (AWCF) and Automated Writing Evaluation (AWE) (Ebadi & Rahimi, 2019; Nazari et al., 2021; Wilson & Roscoe, 2020; Zhang, 2020). AWCF and AWE offer quick and accurate detection of various writing problems, complete direct corrective feedback in real-time, and instant score that give students more time to reflect and revise their work (Barrot, 2021; Shermis et al., 2013). However, university students must acquire evaluative skills to respond to the non-dialogic AWCF and AWE feedback and develop internal feedback (Jiang & Yu, 2022; Yan & Carless, 2022).

University students must engage in a reflective practice that results in self-assessment to improve their learning after receiving feedback from numerous sources (Yan & Brown, 2017). Student self-assessment generally entails a reflective process in which students must evaluate their learning (Bourke, 2018). Brown and Harris (2013) added that self-assessment allows students to assess their learning progress concerning the learning targets. Similarly, Panadero et al. (2016) argued that self-assessment is a meaningful process in which students seek and use feedback from various sources, reflect on it, and then assess their learning performance against predetermined criteria. In the same vein, Yan and Brown (2017) noted that the self-assessment process involves students collecting information about their performance, assessing, and reflecting on the quality of their learning process and outcomes in light of predetermined criteria in order to identify their strengths and weakness. Therefore, students should conduct the self-assessment process under their authority because they are agentic and
autonomous (Yan et al., 2020). Consequently, self-assessment is crucial in helping students become independent and lifelong learners.

Several scholars have discussed the benefits of the self-assessment process to promote vocabulary learning, self-efficacy, student agency, self-regulation, academic achievement, and motivation (Micán & Medina, 2017; Nieminen et al., 2021; Nieminen & Tuohilampi, 2020; Yan, 2020; Yan et al., 2020). Micán and Medina (2017) conducted a mixed-method study investigating how self-assessment improved Colombia University students’ vocabulary, fluency, and overall learning process. Furthermore, Nieminen and Tuohilampi (2020) examined two groups of summative and formative self-assessments, who majored in mathematics, and whether it promotes different affordances for agentic learning. Similarly, Nieminen et al. (2021) compared two groups of self-assessment (SA) for formative and summative purposes, who majored in mathematics, regarding self-efficacy beliefs and course achievement. Moreover, Yan (2020) conducted a study in a one-year master’s program in Hong Kong related to self-assessment practices at various self-regulated learning (SRL) phases. Then, Yan et al. (2020) investigated how a self-assessment diary intervention in economic learning affected students’ academic performance, self-regulation, and motivation through a quasi-experimental approach. From all of those studies, it can be seen that none of those studies explored the implementation of the cyclical self-assessment process by Yan and Brown (2017) in the writing context.

Yan and Brown's (2017) proposed the cyclical self-assessment process that consists of determining assessment criteria or standards, seeking feedback, self-reflection, and calibration. The first stage of the self-assessment process is determining criteria or standards as the base for assessing students' work. The criteria can be formal, such as the rubric provided by the lecturer, and students' internal goals or prior performance. If the students cannot undertake self-reflection on their work immediately, they must proceed to the second stage, which is seeking feedback. Seeking feedback is divided into two sources that are from external and internal. The external sources can be obtained from the lecturer or peers. Meanwhile, the internal sources come from students' perceptions. After the students receive adequate feedback, they come to the third stage, self-reflection. They have to reflect on the quality of their work based on the feedback they have received, and they have to evaluate their work and whether it needs improvement. If the students choose to revise their work, calibration takes place. In the calibration process, the students must alter their work to be closer to the criteria or standards, or they can also adjust the criteria or standards to be closer to their work.

Because none of the studies explored the implementation of cyclical self-assessment by Yan and Brown (2017) in the writing context, this study tries to investigate the implementation of cyclical self-assessment by Yan and Brown (2017) in Academic Writing classes mediated by AI, namely Scribo in the
Indonesian context. This study was necessary to better understand whether Scribo, as the AWFC and AWE, could promote an effective cyclical self-assessment process in Academic Writing. Therefore, the current study aimed to investigate the cyclical self-assessment experienced by three university students with different writing proficiency levels mediated by Scribo in an Academic Writing course in one of the universities in Indonesia by using a narrative inquiry approach. The present study proposed a research question: How did university students with different writing proficiency levels engage in a cyclical self-assessment process in Academic Writing with the aid of AI?

METHOD

Research Design

As this qualitative study sought to investigate university students' experience in the cyclical self-assessment process during a writing course facilitated by Scribo, we utilised a narrative inquiry approach that enables us to showcase various research voices (Barkhuizen et al., 2014). Lessard et al. (2018) emphasised that narrative inquiry studies experience as perceived through storytelling. In narrative inquiry, stories and research collaborated in the form of either story as research data or storytelling as outcomes in the presentation to obtain an in-depth understanding of the participants' experiences (Barkhuizen et al., 2014). In this case, we would like to get a deeper understanding of the cyclical self-assessment experienced by university students with different writing proficiency levels with the aid of Scribo.

Context and Participant

Scribo (https://www.literatu.com/#/) is Artificial Intelligence that facilitates students to improve their writing skills by providing feedback...

![Picture 1. The automated score provided by Scribo](image-url)
personalised to their writing ability and writing score, which could be improved with the precise advice provided by Scribo. Additionally, it has many features that will be useful in promoting cyclical self-assessment, such as peer review, looking for help, and scoring features.

The participants of this study were three university students who majored in the English Education Department at one of the universities in Indonesia. We sought their writing grades from the previous semester to determine their writing proficiency level. Out of thirty-nine students with different writing proficiency levels, we purposively chose three students from the high, middle, and low levels of writing proficiency that met the inclusion criterion set, reflecting engaging data in the preliminary study related to self-assessment. The participants' confidentiality is protected through the use of pseudonyms. All demographic data of the participants are presented in Table 1.

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Age</th>
<th>Gender</th>
<th>Writing Proficiency Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nana</td>
<td>20</td>
<td>Female</td>
<td>High Proficiency Level (HP)</td>
</tr>
<tr>
<td>2</td>
<td>Bram</td>
<td>19</td>
<td>Male</td>
<td>Middle Proficiency Level (MP)</td>
</tr>
<tr>
<td>3</td>
<td>Lia</td>
<td>19</td>
<td>Female</td>
<td>Low Proficiency Level (LP)</td>
</tr>
</tbody>
</table>

**Data Collection**

To maintain the research's ethical standards, the researchers sought permission from the gatekeeper of the class, the lecturer, and the participants, who signed the consent form. After getting permission, the researchers joined the Academic Writing class through Zoom meetings to observe and record the meetings. Afterward, we shared the link for the reflective notes, which formed with a narrative frame, that the university students should fill out after finishing the task in Scribo. A narrative frame is a written story template with incomplete sentences and varying lengths of blank spaces (Barkhuizen, 2014). Follow-up interviews were conducted for an hour each with the three university students to collect deeper information about their cyclical self-assessment process on doing the writing task. All those interviews were screen recorded. Then the researchers collected their worksheet in Scribo as the artefact. The data from one reflective note and two interviews were collected in Bahasa Indonesia, and then translated into English to be readable to global readers. To ensure the accuracy of the translated data, a translator-moderator from within the research team was responsible for the translation. After that, the other researchers within the team then reviewed the translated data to ensure its quality.
Data Analysis

The collected data were then analysed using thematic analysis. There were three main steps in thematic analysis: reading the transcribed data multiple times, coding and categorizing the data, and reorganizing the data under thematic headings (Barkhuizen et al., 2014). In analysing data from the interview, first, we listened to the recorded interviews several times before transcribing the data. Second, we transcribed the data that was in Bahasa. Third, we read the transcribed data multiple times to find the crucial incidents to make coding easier and translate the selected data. Meanwhile, in analysing data from the reflective note, we started from the third step by reading the reflective note several times to look for the critical incident. So until the coding process, the data was still in Bahasa, and once the coding was completed, we translated the data into English. Fourth, categorised the data with the same idea or information into sub-themes: determining performance criteria, seeking feedback, self-reflection, calibration process, learning motivation, and level of trust in AI. Fifth, the sub-themes were reorganised into two thematic headings: the stages of the cyclical self-assessment process experienced by university students facilitated by AI and the factor influencing the effective cyclical self-assessment process.

The data compiled under thematic headings were then examined to determine whether there were any similarities or differences between each participant. We attempted to present the data and provided some explanations about the data being presented after determining the pattern of the data on each sub-theme. Then, to construct a discussion of the study, we analysed the data by comparing them with relevant studies with the same or different findings.

FINDINGS

This narrative inquiry study found evidence that each of the university students with different writing proficiency levels engaged in slightly different stages of the cyclical self-assessment process in writing mediated by AI. Additionally, the study found that two factors influenced the different stages of the cyclical self-assessment they took, namely learning motivation and personal belief towards the automated feedback and automated score provided by AI.

The Stages of the Cyclical Self-Assessment Process Experienced by University Students Facilitated by AI

Determining Performance Criteria

In writing, the three university students with different writing proficiency levels agreed to adopt the formal criteria as the predetermined criteria based on the lecturer’s instruction and writing rubric (Yan & Brown, 2017). Before writing
their Introduction, they were asked to make an outline based on the selected topic.

“Before writing my entire Introduction, I read a number of relevant articles and made an outline based on the lecturer’s instructions on the structure. After that, I wrote my Introduction using a rubric as a guide.” (N/ Reflective notes.03)

“I read a few pertinent articles and, using the teacher’s explanations as my guide underlined the crucial passages in each one before writing my full Introduction. After that, I prepared my Introduction while checking the rubric.” (L/ Reflective notes.03)

The extracts above show that the university students created their Introductions per the lecturer’s instructions about the structure. Additionally, after they wrote the Introduction in Scribo, they revealed that they still briefly looked at the writing rubric provided in Scribo.

“I simply skimmed the rubric when I entered my Introduction into Scribo because I had already composed it based on the rubric.” (B/ Interview 1. 24)

The three university students reported checking the rubric to ensure they had already fulfilled all aspects.

**Seeking Feedback**

With the aid of Scribo, the three university students reportedly used solicit feedback from external sources to engage in the cyclical self-assessment process. They all passively received automated written feedback from Scribo. However, they reflected that some feedback from Scribo was inappropriate in the context of their Introduction. Consequently, they required further feedback from the peer and the lecturer by using Scribo’s peer review feature and looking for help.

“When I used Scribo to check my Introduction, I found the feedback from AI to be helpful for enhancing the grammar and vocabulary. However, it would be much more beneficial if the suggestions for improvements made more sense since not all terms need to be converted to synonyms. I sought further feedback about my introduction from friends and teachers because I thought AI’s input was insufficient.” (N/ Reflective notes.9)

They all reported actively seeking feedback from their peer; however, the peer review feature in Scribo was set the peer randomly throughout the class. Consequently, the three university students revealed different attitudes toward the feedback they received from their peers. Bram and Lia revealed that the feedback they received from their peer was helpful in boosting their confidence and identifying the point missing by them.
“The feedback about Scribo from my peer is all positive; there are no negative comments. My peer gave overall ratings that were quite good. Then, yesterday, a little grammatical error that I neglected to correct was noticed by my peer during peer review. Even though my peer’s comments were simply general and complimentary, I believe they were helpful because they gave me a boost of confidence in my work.” (B/ Interview 1. 37)

“At first, I wanted to accept all of the feedback from Scribo, but my peer stopped me from doing so when it came to the hard sentence section. There was a sentence revision proposal from Scribo, but my peer objected to it, saying the suggestion had a different meaning than the sentence I had written. As a result, I chose not to accept that feedback from Scribo. In my opinion, peer review is really beneficial because it makes me aware of some errors in my work.” (L/ Interview 1. 32)

In contrast, Nana felt that the feedback she received from her peer could have been more helpful. Since Nana did not receive constructive feedback as she expected, she then actively asked some questions related to her work to the lecturer by making use of Scribo’s “looking for help” feature.

“I once used Scribo’s "looking for help" feature to ask many questions to the lecturer. However, not all of my questions were addressed; some were not.” (N/ Interview 1. 37)

Bram and Lia were also reported to use Scribo’s feature to look for help to ask a question to the lecturer.

“I won’t ask for feedback directly from the lecturer since I’m embarrassed. However, if I use Scribo to seek comments, then absolutely yes. I utilized Scribo's looking for help feature to ask the lecturer a question.” (B/ Interview 1/ 34)

“I just asked one question to the lecturer through Scribo, but the lecturer responded with more than ten feedbacks on my work. Even though it was hard for me to revise all of that feedback because the feedback was indirect, I still accepted all of the feedback and corrected it by myself.” (L/ Interview 1. 38)

Scribo’s “looking for help” feature was helpful for the three university students as the media to ask for feedback from the lecturer indirectly. Additionally, the lecturer provided detailed indirect feedback that could help them improve their work. However, it was found that they needed help coming up with the correct response for the change of indirect feedback.
Self-Reflection

They reported reflecting on their work quality without difficulty because they had all received adequate feedback in the earlier stage. Nana acknowledged that she had accepted the lecturer’s feedback, and recognized that those areas needed improvement.

“Obviously, I gave it some more thought, but before doing so, I double-checked the areas the lecturer had earlier highlighted to see whether anything actually needed to be improved. I received all of the lecturer’s feedback, and thus everything was revised.” (N/ Interview 1. 40)

Similarly, Bram exhibited the same attitude in response to the lecturer’s feedback. He said that he thought his work could have been improved before the lecturer gave him feedback. Nevertheless, after receiving the lecturer’s constructive criticism, he evaluated that his work was poor.

“Previously, straight after the peer review, I did not peek at my Introduction, and I felt that there was no need for it. However, it turned out that the lecturer pointed out some parts that were incorrect the following week. But before the lecturer showed out the incorrect parts, I felt nothing was off. In my perspective, the Introduction’s quality was still not good enough.” (B/ Interview 1. 44)

Furthermore, Lia showed that she could recognize the weaknesses in her work based on the feedback she received from many external sources.

“Because I received much feedback, I could easily see that my introduction still needed improvement, particularly in creating strong, intriguing, and understandable sentences. The majority of them were still excessively wordy and difficult to comprehend.” (L/ Interview 1. 41)

Drawing from those reflections, it can be inferred that the three university students would participate in the calibration process.

Calibration Process

The Scribo-facilitated writing process enabled the three university students to receive enough feedback from external sources such as Scribo, peers, and the lecturer. This allowed them to identify which parts needed to be revised quickly. So, all of them went through the calibration process, in which they had to bring the standards closer to the quality of their work or the quality of their work closer to the standards (Yan & Brown, 2017). In this instance, the three university students attempted to improve the quality of their work by making revisions in response to the feedback they had received.
“The second revision process began when I revised the writing of my Introduction completely based on feedback from the lecturer and Scribo. Additionally, I quickly reviewed the rubric during revision to see if the other criteria – aside from the writing structure – were good or not. because I believe that the structure and sequence of the writing have more or less met the requirements of the criteria.” (N/ Interview 1. 47)

“At the revision stage, I didn’t pay much attention to the rubric; instead, I made changes based on the lecturer’s suggestions during the class Zoom meeting and the feedback she provided via Scribo. Because there were numerous citation errors based on the lecturer’s input. Afterward, I corrected based on the lecturer’s feedback in Scribo. Additionally, I received more feedback from Scribo, and I revised it as well. I reviewed my work again after I changed it; who knows whether there was an error I missed.” (B/ Interview 1. 51)

“I largely revised based on feedback from Scribo and the lecturer, but earlier, a friend had provided criticism on a few parts, which I immediately revised out of fear of forgetting. As a result, I read it through myself and made the first revision based on feedback from Scribo. Since most of them are from Scribo and focus more on writing mistakes like grammar and vocabulary, I change everything first. Only after all of Scribo’s suggestions for revision were implemented followed by the lecturer’s suggestions for revision. Because the lecturer’s input is primarily relevant to the subject, such as government policy and previous studies, the order is as such.” (L/ Interview 1. 44)

The three university students mostly should have paid more attention to the rubric in the calibration process. They revised based on the various external sources they received only.

The Factors Influencing the Effective Cyclical Self-Assessment Process

Learning Motivation

The study found that learning motivation and level of trust in AI were two factors that influenced how well the cyclical self-assessment process worked and affected the learning outcomes. Nana and Bram had an excellent level of motivation to learn.

“…because I think the lecturer's opinion is more reliable. It is unrelated to grades, but lecturers already have a lot of experience, so if they offer advice, it will undoubtedly be more reasonable and acceptable. Since my goal is to learn, I must really comprehend.” (N/ Interview 1. 32)

On the other hand, Lia did not indicate the learning motivation factor, which engaged her in the cyclical self-assessment process.
Level of Trust in AI

The level of trust in feedback and score provided by Scribo was also found to be one of the factors that influenced the effectiveness of the cyclical self-assessment process. Nana appeared to be the only one who did not trust the score given by Scribo since she found that there was still some error, so it engaged her to seek further feedback.

“I forgot the exact score, but I think the score was 65. I simply ignored the Scribo score because I frequently receive 55 or 65, even though I already believed my work was good enough. Since there was still an error like that when I checked again, I did not truly consider Scribo’s score.” (N/ Interview 1. 63)

In contrast, Bram and Lia showed a high trust in the score provided by Scribo even after they found out that there were some errors in the automated feedback it gave

“In my opinion, my revised Introduction still lacks quality, but it was already better. However, I was still determined about submitting it because the score on Scribo was already high enough. As a result, I did so, and I was happy with the score.” (B/ Interview 1. 57)

DISCUSSION

Three University Students with Different Writing Proficiency Levels Experienced Different Stages of the Cyclical Self-Assessment Process

According to Yan and Brown’s (2017) cyclical self-assessment process, various steps must be done sequentially to conduct an effective self-assessment process. However, the three university students with different writing proficiency levels went through different stages of cyclical self-assessment, especially in seeking feedback and the calibration stage.

When conducting a self-assessment, students should first determine and implement the assessment criteria for the self-assessment (Yan & Carless, 2022). In this study, the three university students with different writing proficiency levels developed their Introductions according to the lecturer's explanation of the Introduction's structure. They double-checked their work with the writing rubric provided in the Scribo. It can be concluded that they all adopted formal criteria in writing. This might be caused by the study being conducted in a formal educational setting, so all university students turned out to determine formal criteria as their predetermined criteria in conducting the self-assessment process. Even though they agreed to use the formal criteria provided by the lecturer, they each continued to monitor their self-assessment process (Yan & Brown, 2017; Yan et al., 2021).
Seeking feedback turned out to be one of the essential parts of the self-assessment process (Yan & Brown, 2017). The study revealed that with the aid of Scribo, three university students received adequate external feedback from Scribo, peers, and lecturers. Yan et al. (2021) emphasised that self-assessment without external feedback is problematic because it is susceptible to never exposed and critically addressed biases. The three university students showed different reliance on the external feedback they received. The high-level student emphasised that she gained more from the lecturer’s constructive feedback than from her peer’s complimentary remarks to conduct the self-assessment process. This is in line with Zong et al. (2021), who emphasised that peer feedback, concise feedback is unhelpful for the recipient. Similarly, Adachi et al. (2018) found that one of the challenges in peer assessment is the student's need for feedback literacy. Meanwhile, the other students exhibited a positive attitude in response to the peer feedback they received.

The middle level felt more confident with the positive feedback he received from his peer, which was in contrast with the high level. Furthermore, the low-level student felt greatly helped by the peer feedback, which prevented her from accepting all of Scribo’s feedback. This is in line with Shang (2022), who reported that online peer feedback is more useful than automated corrective feedback in writing performance. The middle and low-level students reported receiving minor feedback from the lecturer because they needed to seek it actively. However, the participants all agreed that the lecturer written corrective feedback is the most reliable for them to engage in revising process. Park (2018) reported that the students were delighted when they received lecturer feedback and used it to improve their work. Similarly, Teng (2022) reported that students claimed that lecturers’ feedback is more professional and targeted, which helps them engage in revising. Consequently, students must respond to and address the points highlighted through the lecturer’s WCF and revise the work accordingly (Adrefiza & Fortunasari, 2020). In addition, using Scribo helped the students reduce their negative emotions to seek feedback from the lecturer directly.

Feedback and reflection are interrelated components of the self-assessment process (Yan & Brown, 2017). Furthermore, Dunlosky and Lawson (2012) added that without feedback, reflection could be personally biased with overconfidence. Therefore, after university students receive adequate and constructive feedback from external parties to reflect on the quality of their work, self-reflection can be done effectively. Yan and Carless (2022) students evaluate their performance in the light of the predetermined criteria and various reference data sources. The study revealed that the three university students reflected on their work quality and identified their weaknesses in self-reflection. Yan and Brown (2017) pointed out that feedback prompts self-reflection when the students actively seek it out. However, in contrast, the participants of this study revealed that they all did the self-reflection based on the feedback received, even if they passively received or actively sought feedback from external.
The three university students engaged in the calibration process during the Scribo-facilitated writing process. They demonstrated that they revised the work based on the feedback from Scribo, peers, and lecturers. They modified their predetermined criteria in revising that was no longer based on the formal criteria but based on the feedback they received. This is in line with Panadero et al. (2020), who reported that the use of predetermined criteria decreased after receiving feedback. The three university students demonstrated different revision patterns. The high-level student revised her work twice, while the others only revised it once.

**The Impact of Different Stages of Cyclical Self-Assessment in the Final Result**

Scribo-mediated writing has proven effective in promoting the cyclical self-assessment process, as the three university students went through the calibration process. However, two factors, learning motivation and level of trust in AI, caused them to experience different stages of the cyclical self-assessment process. Those factors impact their final results. Li et al. (2014) confirmed that different proficiency levels of writing could explain their varying degrees of trust in AWE. The high-level student revealed that she had a high learning motivation and a low level of trust in AI and peer feedback, which led her to seek constructive feedback from the lecturer actively. Meanwhile, the middle-level student showed a high learning motivation as he still tried to revise the lecturer’s feedback, but he also showed a high trust in Scribo’s score, preventing him from improving his work. It was proven by the calibration process stopped due to his self-satisfaction with Scribo’s score. This is in contrast with the finding of Nazari et al. (2021), who reported that the score provided by AI engaged the students in more revision. In contrast, the low-level student showed low learning motivation, proven by revising the work as the deadline approached. Additionally, she showed a high trust in Scribo’s score because she was disappointed she could not revise her work based on Scribo’s feedback due to the lack of time. This is in line with Yan and Brown (2017), who reported that one of the factors which stop the calibration process was task deadlines.

In the end, after the students’ worksheets were checked related to the content, the result showed that the high-level student still got the highest score among others since she did not directly accept all the feedback she received from Scribo, she was also more accountable for her work by consistently evaluating and revising it. Meanwhile, even though the middle-level student has a high motivation for learning, he nevertheless scored the second-highest score because he stopped the revision process. He felt his work was sufficient given that he received a high score on Scribo. At the same time, it still required some development regarding the content. Then, the low-level student who revised the work as the due date drew near received the lowest score. This was due to both languages used, and the content was still not very excellent. It could be because
she was unable to revise her work in terms of the language used based on Scribo’s feedback due to lack of time, and she could not revise the lecturer’s feedback properly.

CONCLUSION

The study examined the cyclical self-assessment process of three university students with varying writing proficiency levels (high, middle, and low) as they used AI-mediated writing. The results of this study emphasised some conclusions. First, the three university students experienced different stages of the cyclical self-assessment process that were caused by different learning motivations and levels of trust in AI. The higher the learning motivation and the lower level of trust in Scribo’s score, the more likely they would actively seek feedback from external sources, evaluate the work, and revise it until it is good enough. In contrast, the higher level of trust in Scribo could prevent the students from revising their work due to their self-satisfaction with Scribo’s score. Consequently, it impacted their final results.

Second, the study revealed that Scribo is a suitable medium to promote the cyclical self-assessment process. Scribo features, namely peer review and looking for help, can assist them in seeking external feedback indirectly. Given that constructive external feedback plays a significant part in effective cyclical self-assessment, this study presents an insightful implication for promoting critical feedback literacy among peers so that peer feedback would be helpful in conducting a cyclical self-assessment process.

This study was limited to three university students in an academic writing activity conducted in-class setting. Therefore, further research should investigate the cyclical self-assessment process used outside class while writing more complex papers like a thesis, dissertation, etc. To produce beneficial results, the researchers will advise future researchers to provide the participants with training in providing constructive feedback.

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