



The Effects of Reflective Learning Integrated Process Writing Instructions on High School Students' Paragraph Writing Performance and Perception

Gebisa Tefera¹, Rufael Disasa², Ebisa Daba³

¹ Mada Walabu University, Department of English Language and Literature, Bale Robe, Ethiopia

^{2,3} Wollega University, Department of English Language and Literature, Nekemte, Ethiopia

Corresponding author Email: gebisatefera2014@gmail.com

Info Article

Received: 8 July 2025

Revised: 10 Sept 2025

Accepted: 20 Sept 2025

Online Version: 28 Sept 2025

Abstract

This study examines the effects of reflective learning integrated process writing instructions on high school students' paragraph writing performance and perception. It also examines the correlation between students' paragraph writing performance and perception. A quasi-experimental research design and mixed method approach were employed, and a purposeful convenience sampling technique was used. Leka Nekemte High School, Nekemte town, West Oromia, Ethiopia, and grade eleven students were the participants in the study. Two intact sections were chosen as the experimental group ($n = 30$) and the other as the control group ($n = 30$). The data were collected through tests, questionnaires, and semi-structured interviews. The study's findings revealed that the experimental group, which practiced paragraph writing through reflective learning, integrated process writing instructions, outperformed the control group, which conventionally practiced paragraph writing. Additionally, it indicates the experimental group developed a higher positive perception than the control group. These findings highlight the need for reflective learning integrated process writing instructions to improve high school students' paragraph writing performance and develop a positive perception of paragraph writing.

Keywords: Integrated; Perception; Reflective learning; Process writing; Writing performance

This is open access article under the [CC-BY](#) licence



INTRODUCTION

The pedagogical shift from a teacher-centered approach to -student-centered approach to teaching and learning processes in the late 20th century and early 21st century has been changing the role of teachers and students (Braine, 2003; Gover, Loukkola, & Peterbauer, 2019). Teacher-centered approach limited students' creativity, critical thinking skills, and students' autonomous learning ability, as teachers mainly transmitted knowledge while students received it passively (Zohrabi, Torabi, & Baybourdiani, 2012). In contrast, according to the Student-centered approach, teachers are regarded as the facilitators and organizers of the teaching learning activities, while the students are seen as knowledge constructors. They construct their own knowledge through interaction with themselves, peers, their teachers, and their teaching and learning materials. The success of teaching and learning English as a foreign language depends on the extent to which students understand and effectively apply the approaches and strategies introduced in the syllabus design and curriculum development (Brown & Lee, 1994; Negash, 2006). They are expected to develop their own learning methods and approach. Therefore, the focus of foreign

language teaching and learning approach has been shifted from a teacher-centered approach to a student-centered approach (Yunus, Dalle, Hudriati, & Strid, 2024).

Student-centered instructions require students' active participation, task engagement, collaboration, and self-monitoring (Ahmad, 2015). Ethiopia introduced this approach in 1994 through its education and training policy, aiming to improve students' learning outcomes. Accordingly, EFL syllabi, curricula, and textbooks were redesigned to support active student participation (Gover et al., 2019; Terefe Gemechu, Ayenew Warota, Bouckaert, & Kebede Debela, 2020).

Despite the pedagogical shift from the teacher-centered approach to the student-centered approach, different studies revealed that the teaching and learning process still relies on a teacher-centered approach (Ahmad, 2015; Gover et al., 2019). Teachers act as primary sources of information, and students seek direct guidance from their teachers. Although the textbooks are designed in a student-centered approach, their practical implementation in the classroom is limited, and students show minimal understanding of the student-centered approach. Research highlights the difficulties faced by students, who find it hard to engage in critical thinking, generate ideas, organize their work, and cope with learning anxiety (Chen, 2022; Kurniasih, Sholihah, Umamah, & Hidayanti, 2020; Rashid, Hui, & Islam, 2021). As a result, investigating the effective implementation of this emerging approach, the student-centered approach becomes a concern and a needy area of research in teaching English as a foreign language learning. Students' physical presence in the classroom does not necessarily guarantee access to learning. According to this approach, students need to be active participants to activate their thought processes. Thus, students' task engagement is critical to learning. It facilitates putting effort into task completion, participating in discussions related to the task, collaboration with another person to complete the task, self-monitoring of task performance, and developing a sense of accomplishment related to task completion (Ahmad, 2015).

In paragraph writing instructions, as one element of this change, the conventional product-oriented approach to teaching paragraph writing instruction has been replaced by a process-oriented approach to teaching writing instructions. However, its practical implementation is under question (Adula, 2018; Okasha & Hamdi, 2014). The process-oriented approach positions teachers as facilitators, allowing students to take charge of selecting topics, generating ideas, organizing content, and handling grammar and punctuation marks. Students are encouraged to concentrate on the writing process rather than solely on the result, which is thought to enhance the quality of paragraph writing (Graham & Harris, 1997; Ngonyama, 2018).

On the other hand, students' negative perceptions of paragraph writing present another challenge that affects high school students' paragraph writing performance. Research on perceptions indicated that negative perceptions affect their paragraph writing performance (Radjaban & Humanika, 2024). This implies that students' perceptions of paragraph writing highly affect their paragraph writing performances.

Local studies indicate poor writing abilities among high school and university students in Ethiopia. Research) finds that numerous students struggle to fulfill syllabus expectations due to insufficient background knowledge, low engagement, and a lack of exposure (Whalen & Paez, 2021). Teachers frequently report feeling rushed for time and express frustration with the writing skills of their students. This ongoing issue underscores the critical need to enhance EFL writing instruction in Ethiopia.

The Constructivism theory of learning and teaching process serves as the foundation for process writing, as it requires students to build their own understanding (Suhendi, 2018). To enhance the effectiveness of process-oriented paragraph writing instructions, scholars recommend the incorporation of transformative strategies, such as reflective learning. Reflection, which is a key aspect of critical thinking, assists students in approaching writing tasks with concentration and diligence (Castelli, 2011; Hellberg & Fauskanger, 2023; Sugerman, 2000). Therefore, this study hypothesized that combining reflective learning with process-oriented writing instruction may have a beneficial impact on students' writing skills and their perceptions.

LITERATURE REVIEW

Reflection on learning and paragraph writing performance

Reflection in learning is an essential strategy that enables students to gain a deeper understanding of their experiences. Reflection can help students to learn from their mistakes and their successes to apply what they have learned in new situations. Particularly, reflective practice plays a very crucial role in paragraph writing instructions (Abbas, 2016; Hemmati & Soltanpour, 2012; van der Loo, Krahmer, & van Amelsvoort, 2019; Wanore, 2022). Reflective learning helps students to pinpoint their areas of strength and weakness and to build goals for their own growth during paragraph writing. Researchers suggested integrating techniques like reflection-supported learning to improve writing. Reflection is the process of changing understanding into conception (Helyer, 2015). This process engages the students in the learning process and contains self-assessment (Xhaferi & Xhaferi, 2017). Learning through reflection is one of the most interesting experiences students might have at all levels of education. It enables the students to construct meaning by relating the received information to their prior knowledge. Thus, EFL teachers should help their students practice reflective learning while paragraph writing (Zulfikar & Mujiburrahman, 2018).

Related studies

Recent studies highlight the impacts of reflective learning integrated with writing instructions on students' paragraph writing performance. (Ranjdoost & Sahebkhair, 2025) investigated the effects of electronic vs reflection-supported learning on the argumentative writing of Iranian intermediate EFL learners. The finding revealed that the electronic supported group yielded a superior outcome to the reflective-supported group. (Deti, Ferede, & Tiruneh, 2023) Conducted the study on the effects of reflection-supported teaching and learning of writing on students' writing attitudes and writing achievement goal orientations. The findings indicated that reflection supported learning of writing has a positive effect on students' writing attitude and writing achievement goal orientations. They also discovered the favorable effects of reflection-supported writing instruction on university students' writing attitudes. It makes assignments engaging and fosters a positive outlook. Moreover, the findings revealed that students could write better by engaging in reflective writing. EFL teachers are expected to supplement their writing instruction by having students reflect on their own writing under guidance. (Abbas, 2016) Conducted the effects of reflection-supported process-based writing teaching on Iraq students' writing performance and attitude. Therefore, this study aims to examine the effect of reflective learning integrated process writing instructions on the high school students' paragraph writing performance and their perception towards paragraph writing.

RESEARCH METHOD

Research Design

This study employed a mixed-method approach and a quasi-experimental research design. A mixed research approach was used in this study to provide a better understanding of the research problem than either approach (Chih-Pei & Chang, 2017). It was conducted in 2024 in the second semester at Leka Nekemte high school, Nekemte town, East Wollega zone, Oromia regional state, and Ethiopia. Nekemte town is found to the west of Addis Ababa, the capital, at 330 KM. The school was selected as the study site for two main reasons. First, it is based on the complaint heard from communities, and classroom observation indicated that it needs an intervention in paragraph writing. Second, it is one of the catchment areas of Wollega University for which the university is striving for the well-being of the societies in various sectors, out of which education is the pillar one. Thus, the current researchers decided to conduct an experimental study if the reflective learning integrated process writing instructions intervention has a positive effect on students' paragraph writing performance and their perceptions.

Participants of the Study

The study recruited two intact sections of government grade eleven students at a high school in Ethiopia. Specifically, at Leka Nekemte high school, Nekemte town, East Wollega Zone, Oromia regional state, Ethiopia. One section experimental group (N=30), and the second section was a control group (N=30). They started learning English when they were in grade three as a compulsory subject, and a Purposive convenience sampling technique was used to select the participants of the study.

Procedures of the Study

To carry out this research, a quasi-experimental design with a pretest and posttest design was employed. From the thirteen sections of grade 11 students, two intact sections were chosen as a sample—one section as an experimental group (N=30) and the other section as a control group (N=30). Before administering the pretest, a test-retest was used to check the reliability of the test. Students in both sections were requested to write a paragraph as a pretest about a topic of their choice. No context was given to elicit a sample text that would reflect students' writing styles in the most basic and authentic way possible. Two raters were assigned to score using rubrics, and their scores were compared to see the uniformity of their score. Then, an intervention was given for the experimental group for 12 weeks or for three months. The students in the experimental group were taught paragraph writing through a reflective learning integrated process, writing instructions for teaching paragraph writing, whereas the control group was taught conventional way. Again, a posttest was given for both groups to compare the effect of the intervention on the students' paragraph writing performance. Similarly, pre-perception survey questionnaire and post-perception survey questionnaire were also administered before and after intervention for both groups to compare the effect of an intervention on their perception towards paragraph writing.

Instruments and Data Collection Techniques

The study employed three instruments to collect the data for the current study. Paragraph writing test and perception survey questionnaires a major data gathering tools to answer the research questions of the current study. Besides, a semi-structured interview was also employed to triangulate with the data collected through major tools to increase the validity and accuracy of the information.

Paragraph writing test

A paragraph writing test, pretest, and posttest were used as a major data gathering tool to see the participants' paragraph writing performance before and after the intervention. Before administering the pretest, a test-retest was used to check the reliability of the test. Then, the correlation coefficient (r) of the content of the test was computed, and the results are displayed in the table below.

Table 1: Reliability statistics of the paragraph writing test					
No	Group	1 st time $\bar{X} \pm SD$	2 nd time $\bar{X} \pm SD$	r	Sig.
1	Experimental	4.65 ± 1.06	4.68±1.08	0.991	0.000
2	Control	4.78± 0.98	4.80±1.02	0.954	0.000

As can be seen from the table above, the paragraph writing test was reliable with $r > 0.95$ and sig. Value < 0.01 . The figure indicated that the paragraph writing test could be used as the first instrument of data collection. Moreover, to measure the students' paragraph writing performance, the author borrowed the rating rubrics designed by Okasha & Hamdi (2014). It consists of five important elements of the paragraph, such as content, organization, vocabulary, grammar, and mechanics, and the Likert scale, such as very high, high, medium, low, and very low, was employed to score the student's grade. Moreover, to measure the students' paragraph writing performance Likert scale was employed; the value allocation and interpretation were discussed in the following table.

Table 2: Likert scale value allocation and interpretation

Likert scale	Value allocation	Interpretation
1	1.00 – 1.49	very low
2	1.50 – 2.49	low
3	2.50 – 3.49	Medium
4	3.50 – 4.49	High
5	4.50 – 5.00	Very high

Perception Survey Questionnaire

The second major data gathering tool was a perception survey questionnaire. It was intended to find out the students' perception of paragraph writing. A perception survey questionnaire was administered to both groups before and after the intervention to assess their perceptions of the paragraph writing activity. The survey includes Likert scale questions regarding their perceptions towards paragraph writing activity, their confidence in writing ability, and their views on the usefulness of reflective learning integrated process writing instructions for teaching paragraph writing. The results of students' responses between the experimental group and the control group in the pre-survey questionnaire and post-survey questionnaire were compared to check the effects of reflective learning integrated process writing instructions on students' perceptions towards paragraph writing. Then, to check the reliability of the questionnaire items, Cronbach's alpha was computed for 10 items of the perception survey questionnaire, and the results could be displayed in the following tables as follows.

Table 3. Reliability statistics of perception survey questionnaires towards paragraph writing

Cronbach Alpha	Number of items
.791	10

Moreover, to interpret the Likert scale data gathered through the perception survey questionnaire, value allocation and interpretation of the value could be stated as follows.

Table4. Likert scale value allocation and interpretation

Likert scale	Value allocation	Interpretation
1	1:00 - 1.49	Strongly disagree
2	1.50 - 2.49	disagree
3	2.50 – 3.49	Moderately agree
4	3.50 – 4.49	Agree
5	4.50 – 5.00	Strongly agree

Therefore, the researchers of this study analyzed students' perception survey questionnaires as indicated in the above table.

Interview

An in-depth semi-structured interview technique consisting of 10 questions was used to collect qualitative data to triangulate with the data collected through tests and perception survey questionnaires. These questions were not rigid in nature, but they were flexible and allowed the participants to think and express their own answers freely. The advisors checked if they were consistent with the data that was intended to be gathered via tests and questionnaires. To do so, from the experimental group, five students were randomly selected after the intervention was given to them. They were asked about the effect of reflective learning integrated process writing instructions to teaching paragraph writing, and their perceptions towards paragraph writing. It helps to execute rigorous individual interviews to reveal their viewpoint on specific ideas or situations. Interview sessions were organized during their free time on their opposite shift. The interview session took approximately 30 minutes. It was conducted by using their mother tongue to gather detailed information from the students. Lastly, their answers were narratively analyzed thematically.

Data analysis technique

The quantitative data collected via paragraph writing tests before and after the intervention were analyzed using SPSS version 27 to analyze descriptive and inferential statistics. The mean score was determined to represent the arithmetic average of each group and to approximate the difference in scores between the experimental and control groups. The standard deviation was calculated to analyze the average distance from the Mean of all scores in the distribution for each group. Added to that, inferential statistics were computed to check the result of the intervention, whether it brought a statistically significant change or not. Thus, t-value, sig. Value and effect size were computed.

RESULTS AND DISCUSSION

Results of Quantitative Data

This section displays the results of quantitative and qualitative data collected by tests (pretest and posttests), perception survey questionnaires, and semi-structured interviews. To answer the research question, quantitative data from paragraph writing tests were gathered and examined. "Is there statistically a significant difference in the posttest paragraph writing performance mean scores between the experimental group who received training on reflective learning integrated process writing instructions and the control group who practiced paragraph writing conventional way?". To understand the effects of the intervention offered to the experimental group on students' paragraph writing performance, the quantitative data were analyzed using an independent samples t-test. Both descriptive statistics and inferential statistics were calculated and displayed. The inferential statistics can be calculated to check the t-value and level of significance. Furthermore, the qualitative data from a semi-structured interview were examined using the theme analysis approach to investigate the effect of the intervention on improving the experimental group's paragraph writing performance.

An Independent Samples t-test results of the pretest

An independent samples t-test was conducted to compare the pretest performance of the experimental group (N=30) and the control group (N=30) across five writing components (Content, organization, vocabulary, grammar, and punctuation marks) and a pretest grand mean. It is intended to assess the baseline equivalence before the potential intervention is given to the experimental group.

Table 5: Results of pretest of experimental and control groups in paragraph writing

	Groups	N	Mean	SD	t-value	P-value	Df
Contents	Exp.	30	2.0333	.71840	-.901	.371	58
	Cont.	30	2.2000	.71438			
Organization of ideas	Exp.	30	2.1667	.69893	-1.48	.142	58
	control	30	2.4000	.49827			
Vocabulary choice	Exp.	30	2.1333	.68145	-1.52	.133	58
	Cont.	30	2.3667	.49013			
Grammar	Exp.	30	1.9000	.80301	.495	.622	58
	Cont.	30	1.8000	.76112			
Mechanics	Exp.	30	2.0667	.78492	.158	.875	58
	Cont.	30	2.0333	.85029			
Pretest G/ mean	Exp.	30	2.0600	.41072	-.979	.322	58
	Cont.	30	2.1600	.38020			

Note: Exp.=experimental group, Cont.= control group

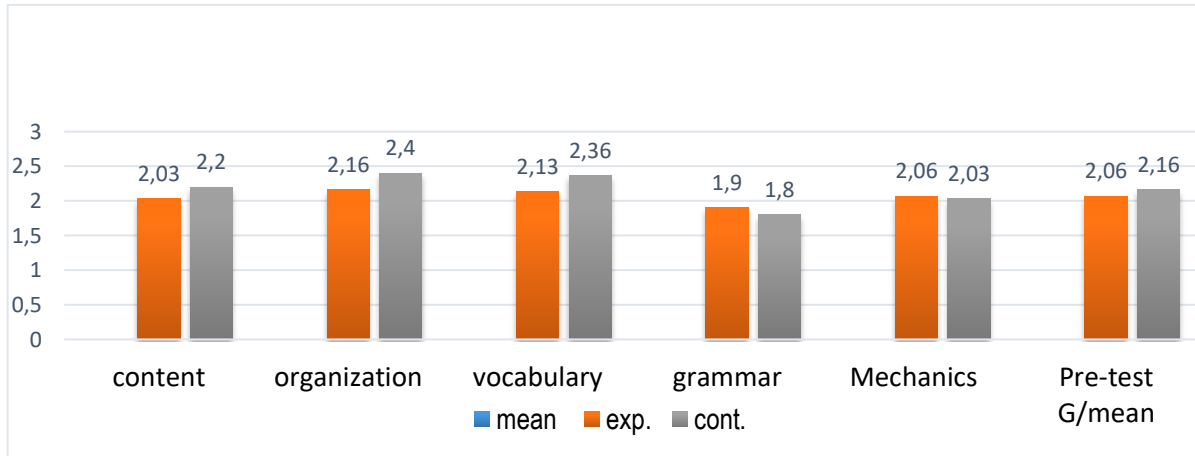


Figure 1: The result of the pretest mean score of the Experimental and the control Groups

As illustrated in Table 4 above, an independent samples t-test was run to compare the mean score gained by the experimental and the control groups. The result indicated there was not this much mean score difference, and the findings also revealed that there was no statistically significant difference between the experimental and the control groups across all domains of the paragraph writing test. The experimental and control groups showed similar baseline performance in all evaluated writing domains at the pretest stage. Thus, there was initial equivalency between the groups, as evidenced by the tiny and non-statistically significant observed mean differences. To assess possible therapy impacts, post-intervention outcomes could be examined in more detail. In addition to that, the bar graph (Figure 1) demonstrated the equivalence of their performance from the very beginning.

An Independent Samples t-test results of the posttest

This report analyzes the posttest performances of two groups (experimental=30; control=30) across five writing domains (contents, organizations, grammar, and mechanics) and a composite grand mean. Independent T-tests were conducted to assess group differences.

Table 6: Results of posttest data of experimental and control groups

	Group	N	Mean	SD	t-value	p-value	Effect size	df
contents	Exp.	30	2.9333	.52083	3.779	<.001	.976	58
	Cont.	30	2.4333	.50401				
Organization of ideas	Exp.	30	2.9667	.49013	3.364	<.001	.869	58
	Cont.	30	2.5333	.50742				
vocabulary choice	Exp.	30	2.9000	.54772	3.434	<.001	.878	58
	Cont.	30	2.4333	.50401				
grammar	Exp.	30	2.9667	.55605	3.638	<.001	.939	58
	Cont.	30	2.4667	.50742				
mechanics	Exp.	30	2.8333	.53067	2.994	<.004	.773	58
	Cont.	30	2.4333	.50401				
Posttest G/ mean	Exp.	30	2.9200	.27593	5.744	<.001	1.483	58
	Cont.	30	2.4600	.34099				

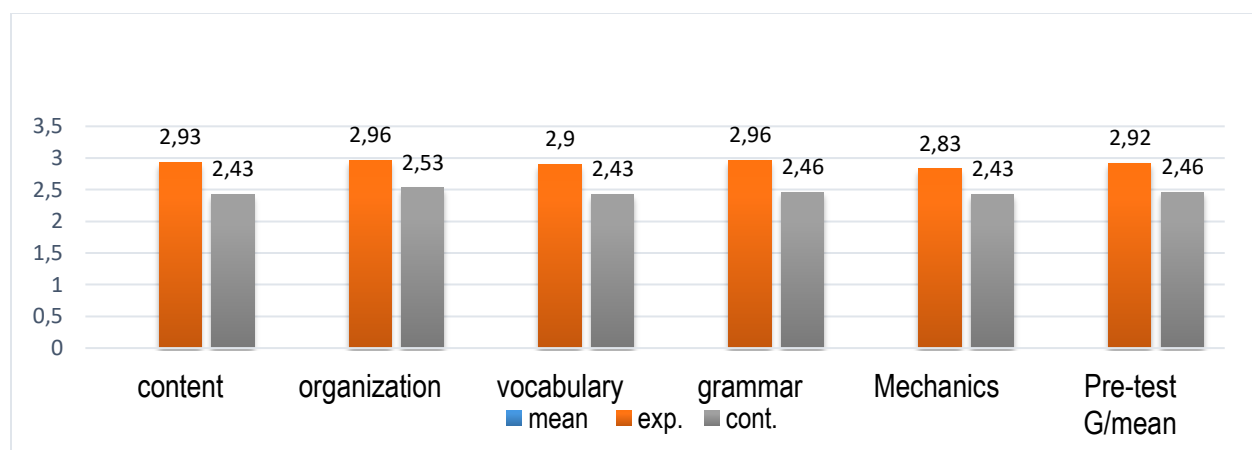


Figure 2: The Result of Posttest Mean Score between the Experimental and the Control Groups

Note: Exp. = experimental group, Cont.= control group

As illustrated in Table 6 above, an independent samples t-test was conducted for the posttest to compare the mean scores between the experimental and the control groups across all domains of paragraph writing, such as content, organization, vocabulary, grammar, and punctuation marks. The result indicated that the experimental group scored more than the controlled group in all domains. In addition to that, in all domains of posttest results demonstrated statistically significant differences (all $P < 0.05$), the results of Cohen's d effect ranged from 0.77 (mechanics) to 1.48 (Grand Mean), indicating from large to very large practical effects (as per Cohen's benchmarks: 0.2 = small, 0.5 = medium, and 0.8 = large). Notably, the experimental group Mean vs the control group mean (2.29 vs 2.46) showed the largest effect ($d = 1.48$), signifying the substantial difference. Content ($d = 0.98$) and grammar ($d = 0.94$) exhibited the strongest domain-specific effects. Thus, the reflective learning integrated process writing instructions to teaching paragraph writing has enabled the experimental group to perform better than the control group. The experimental group achieved significantly higher scores in the posttest with large practical effects in all writing domains, and these results support the efficacy of the intervention. Besides, the bar graph (Figure) shows that the experimental group outperformed the control group in all domains of paragraph writing - content, organization, vocabulary choice, grammar, and mechanics. This demonstrates the positive impacts of the intervention on students' paragraph writing performance.

Data presentation of students' semi-structured interview

Five students were selected from the experimental group and interviewed individually at different times. The data was captured through hard copies. The real identities of the students were omitted and identified as student1, student2, student3, student4, and student5. The students were asked to reflect on the effects of the reflective learning integrated process writing instructions on the students' paragraph writing performance. The findings are organized according to the following questions.

Do you think that reflective guided questions help you to improve paragraph writing? How?

Student1: *Reflective guided questions help me to evaluate my paragraph critically. Because it helps me to check my mistakes in constructing manageable topic sentences, logically organize my ideas, choose appropriate vocabulary, use accurate grammar, and correct mechanics. Besides, it develops the spirit of teamwork with my classmates, and it gives us the opportunity to learn from each other. So I found it very important.*

Student 2: *For me, reflective guided questions help me to go back and check my work. Through reflective guided questions, I critically evaluate what I have done in the first draft, and it helps me to eliminate errors in organization, vocabulary choice, grammar, and mechanics. Added to that, it helps me to generate ideas for my paragraph in detail. Thus, reflective learning training helps me to improve my overall paragraph writing ability.*

Student 3: *Practicing reflective learning through the process approach writing instructions enables me to identify my weaknesses and strengths during paragraph writing. It activates my critical thinking skills, it enhances my engagement in tasks, it improves my interaction with peers, and it allows me to evaluate the content of my writing, organization, word choice, accurate grammar use, and correct mechanics use.*

Student 4: *As for me, reflective learning strategies are very important. Because it makes me revisit my work and improve the mistakes I made in the first draft, such as eliminating irrelevant content, arranging disorganized ideas logically, eliminating inappropriate vocabulary, omitting grammar errors, and correcting wrongly punctuated sentences, thus, reflective guided questions enable me to improve my paragraph writing skills and ability.*

Student 5: *Reflection in learning is one of the best strategies I found in the paragraph writing instructions. Because it helps me to examine my writing after I write the first draft critically, it makes me examine the content, organization, vocabulary choice, grammar, and mechanics in my writing. Then, I write it helps me to write neat and good-quality paragraphs. Therefore, the integration of reflective guided prompt questions into process approach paragraph writing instructions is essential in improving writing performance.*

As can be seen from the students' interview responses above, reflective learning integrated process writing instruction helps them in improving their paragraph writing performance. The findings highlight the positive impacts of reflective learning integrated with process writing instructions in improving students' writing performance. It facilitates critical thinking, task engagement, and active participation, enhances evaluation skills, and increases collaboration among the students to help each other and share knowledge.

Therefore, teachers should help students in practicing reflective learning integrated process writing instructions while writing paragraphs at all levels of education, and particularly at the high school level.

An Independent Samples t-test results of pre-perception questionnaires data by Groups

The purpose of the study was to compare perceptions of students towards paragraph writing difficulties between an experimental group (N=30) and a control group (N=30), across ten challenges. The goal was to determine if the experimental group, presumed to receive an intervention, reported different levels of difficulties compared to the control group.

Table 7 Results of pre-perception questionnaires data by Groups.

	Group	N	Mean	SD	t- value	p-value	DF
Practicing writing helped me become a good writer.	Exp.	30	2.4	.49827	.000	1.000	58
	Cont.	30	2.4	.49827			
Reflection helped me to generate ideas when writing a paragraph.	Exp.	30	2.4	.50401	.519	.605	58
	Cont.	30	2.41	.49013			
Reflection helped me organize my ideas logically.	Exp.	30	2.41	.50401	-.255	.799	58
	Cont.	30	2.44	.50742			
I belief I can construct a manageable topic sentence	Exp.	30	2.5	.50855	.510	.612	58
	Cont.	30	2.49	.50401			
I belief I can write supporting sentences without difficulty.	Exp.	30	2.45	.50855	.254	.800	58
	Cont.	30	2.43	.50742			
I belief I write concluding sentences accurately.	Exp.	30	2.44	.50742	.255	.799	58
	Cont.	30	2.43	.50401			
I belief I write with correct grammar.	Exp.	30	2.42	.50401	.000	1.000	58
	Cont.	30	2.43	.50401			
Reflection helped me to write with clarity.	Exp.	30	2.43	.50401	.000	1.000	58
	Cont.	30	2.43	.50401			
I belief I use cohesive devices properly.	Exp.	30	2.50	.49013	-.261	.795	58
	Cont.	30	2.49	.49827			
I belief I do have ideas to write a	Exp.	30	2.5	.50855	.254	.800	58

	Group	N	Mean	SD	t- value	p-value	DF
paragraph	Cont.	30	2.49	.50742			
Perception G/ mean	Exp.	30	2.46	.1476			
	Cont.	30	2.43	.12954	.744	.460	58

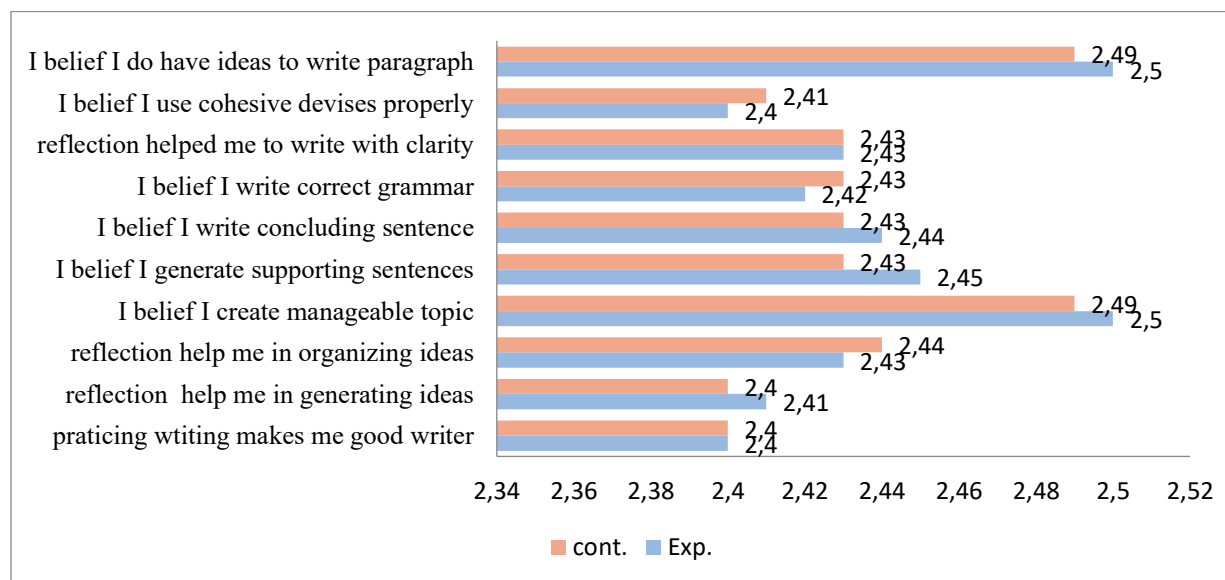


Figure 3 Comparison of experimental and control groups' pre-perception data mean score

Note: exp. = experimental group, Cont.=control group

As indicated in Table 7 above, an independent sample t-test was computed for each 10 items and a grand mean perception score. The five Likert scale measures were employed. All items nearly showed identical means between groups (Experimental = 2.43, Control = 2.37; $p = 0.605$). The grand mean scores were also comparable (Experimental 2.46, control 2.43, p-value 0.460). Low standard deviation (range: 0.49 to 0.51), and there is no statistically significant difference between them. Besides, all T-values are closer to zero (range: -.0261 to 0.519), with p-values for all 10 items and grand Mean above 0.05, confirming that there are no meaningful differences. Thus, it indicates that both groups have similar perceptions from the very beginning. Added to that, the bar graph (figure 3) above indicates both groups have similar perceptions towards paragraph writing. Thus, this implies that it is possible to conduct a study to see the effect of reflective learning on their paragraph writing performance and their perception.

An Independent Samples t-test of post-perception questionnaire data

This study aimed to compare and analyze students' post-survey perceptions data between the experimental and control groups towards paragraph writing. The responses were measured on a Likert scale, and the analysis measures the differences across ten writing perception-related challenges and computes the perception Grand Mean results.

Table 8 Results of post-perception questionnaires data by Groups.

	Group	N	Mean	SD	t- value	p- value	Effect size	Df
Practicing writing helped me become a good writer.	Exp.	30	3.466	.5074				
	Cont.	30	2.466	.5074	7.33	<.001	1.97	58
Reflection helped me to generate ideas when writing a paragraph.	Exp.	30	3.400	.4982				
	Cont.	30	2.533	.5074	6.67	<.001	1.72	58
Reflection helped me organize my ideas logically.	Exp.	30	3.433	.5040				
	Cont.	30	2.533	.5074	6.89	<.001	1.78	58

	Group	N	Mean	SD	t-value	p-value	Effect size	Df
I can construct a manageable topic sentence	Exp.	30	3.433	.5040	7.40	<.001	1.91	58
	Cont.	30	2.466	.5074				
I belief I develop supporting sentences without difficulty.	Exp.	30	3.500	.5085	7.37	<.001	1.90	58
	Cont.	30	2.533	.5074				
I belief I write concluding sentences accurately	Exp.	30	3.500	.5085	7.61	<.001	1.96	58
	Cont.	30	2.500	.5085				
I belief I write with correct grammar	Exp.	30	3.466	.5074	7.63	<.001	1.97	58
	Cont.	30	2.466	.5074				
Reflection helped me to write with clarity	Exp.	30	3.466	.5074	7.63	<.001	1.90	58
	Cont.	30	2.466	.5074				
I belief I use cohesive devices properly	Exp.	30	3.433	.5040	7.40	<.001	1.91	58
	Cont.	30	2.466	.5074				
I belief I do have ideas to write a paragraph	Exp.	30	3.433	.5040	7.40	<.001	1.91	58
	Cont.	30	2.466	.5074				
Post-perception G/mean	Exp.	30	3.453	.1591	25.50	<.001	1.89	58
	Cont.	30	2.490	.1322				

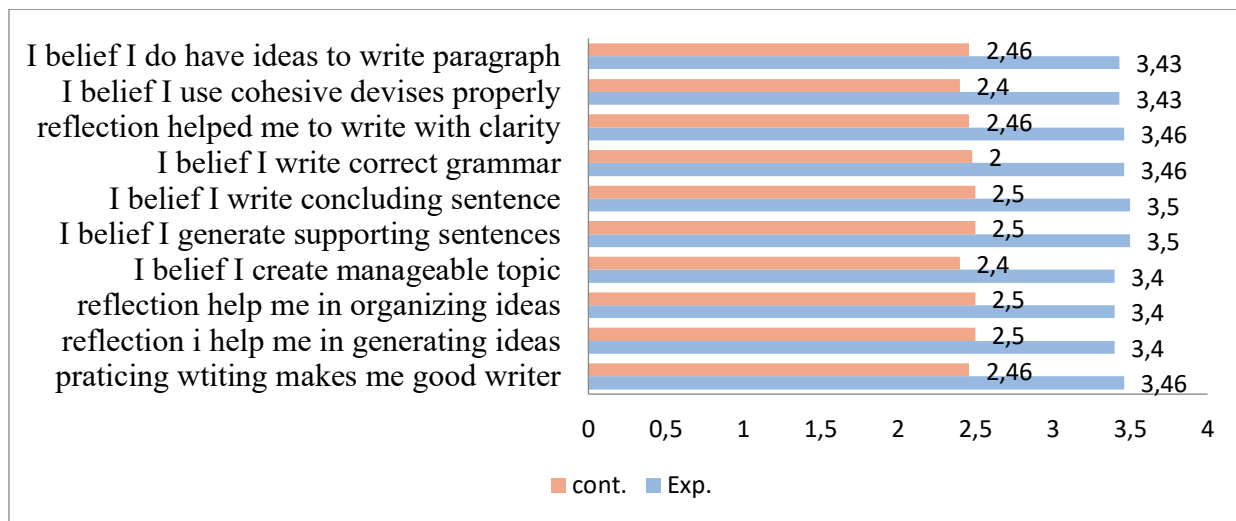


Figure 3 Comparison of experimental and control groups' pre-perception data mean score

Note: Exp. = experimental group, cont. = control group

As shown in Table 8 above, an independent samples test was run to compare mean scores between the experimental and control groups to examine the students' perception towards paragraph writing. The finding revealed that the experimental group scored higher than the control group in all items. The finding also showed statistically significant differences ($P < .001$) with large effect sizes (Cohen's d 1.72 -1.97), indicating the experimental group developed positive perception of paragraph writing than the control group after they took the intervention. Added to that, the experimental group's post-perception grand Mean (3.45 ± 0.16) was significantly higher than the control group's (2.49 ± 0.13), $t(58) = 25.50$, $p < .001$, $d = 1.89$. Moreover, the bar graph (Figure 4) indicated clearly that the experimental group outperformed the control group. This implies that reflective learning, integrated process writing instructions, to teaching paragraph writing have a positive impact on the students' perceptions towards paragraph writing.

Data presentation of semi-structured interview questions for student perception towards paragraph writing.

Five students were selected from the experimental group and interviewed individually at different times. The data was captured through hard copies. The real identities of the students were omitted and identified as student1, student2, student3, student4, and student5. The students were asked to reflect on the effects of the reflective learning integrated process writing instructions on the students' perception. The findings are organized according to the following questions.

Does Reflective learning improve your belief in paragraph writing?

Student1: *The training has changed my beliefs very much. It helped me to develop confidence in paragraph writing without any anxiety. So the training improved my feelings towards paragraph writing.*

Student 2: *The training improved my belief that it enhances my confidence in writing paragraphs through self-critical reflection on the task and collaboration with others. It also trains me how to implement process-approach writing instructions effectively. Thus, it helps me a lot.*

Student 3: *Definitely, reflective guided questions helped me **learn** how to write an outline, organize my ideas, **make** appropriate vocabulary choices, use accurate grammar, and correct mechanics use. So it improved my feelings very much, and now I have developed confidence in writing paragraphs.*

Student 4: *Practicing reflective learning through process writing instruction has helped me a lot. I have received much input on how to practice writing a composition in English. For example, first it trains me how to generate ideas, how to organize ideas, how to choice words, how to use correct grammar as well as punctuation marks. Then, I learn how to practice writing through multiple drafts and how to help each other through interaction with classmates. Therefore, the training helped me improve my confidence.*

Student 5: *For me, the intervention helped me so much. I got very invaluable input from the training. For instance, how to brainstorm ideas, how to arrange ideas, how to choose vocabulary, and accurate grammar and correct mechanics. These help me to develop confidence in writing paragraphs without any struggle. As a result, I have developed positive feelings.*

The Pearson correlation coefficient analysis of the posttest and post-perception grand mean data

The analysis examines the relationships between participants' posttest performance ("posttest grand mean results") and their self-reported perceptions ("post perception Grand mean results") to determine if a statistically significant association exists between the two variables.

Table 9: The Results of Pearson Correlation Coefficient between posttest and post-perception data

Correlations			
		The posttest Grand mean result	Post perception Grand mean result
The posttest Grand mean result	Pearson Correlation	1	.558**
	Sig. (2-tailed)		.000
	N	60	60
The Post perception Grand mean result	Pearson Correlation	.558**	1
	Sig. (2-tailed)	.000	
	N	60	60

** . Correlation is significant at the 0.01 level (2-tailed).

As shown in Table 9 above, a Pearson correlation coefficient was computed to assess the linear relationship between the two continuous variables. Both variables were measured for the same samples of 60 participants. The analysis tested for significance at a two-tailed α level of 0.001. A statistically

significant positive correlation was found between the posttest scores and post perceptions scores ($r=.558$, $P<.001$, $N=60$). The strength of the relationship is moderate, as per conventional interpretation of Pearson's (Small=.10, medium=.30, large=.50). The coefficient of determination ($r^2=.311$) indicates that approximately 31% of the variance in posttest scores can be explained by post perceptions scores, and vice versa. This moderate association highlights a meaningful link between objective outcomes and subjective experiences in the study context. Therefore, the finding indicated that there is a significant positive correlation between the posttest result and the post perception result, $r(58)=.558$, $P<.001$.

CONCLUSION

This study provides vigorous evidence that integrating reflective learning into the process-based approach to teaching paragraph writing instructions significantly enhances high school students' paragraph writing performance and fosters positive perceptions towards paragraph writing. The experimental group's marked improvement in content coherence, organizational structures, vocabulary choice, grammar, and mechanics highlights the efficacy of reflection in learning in bridging metacognitive awareness with practical paragraph writing skills. Furthermore, the shift in students' perceptions from viewing writing as a daunting task to embracing its manageable, iterative process emphasizes the pedagogical value of reflection in building confidence and autonomy.

These findings have a critical implication for EFL instruction in Ethiopia and similar contexts. Teachers should prioritize reflective practices, such as reflective guided questions, self-assessment, peer reviews, and teacher feedback, to complement the process-based approach to writing instructions. Policy makers and curriculum designers must advocate for teachers' training programs that emphasize reflective pedagogies, ensuring alignment with national educational goals.

While this study offers valuable insights, its quasi-experimental design and focus on one high school limit generalizability. Future research should explore longitudinal effects across diverse demographic and instructional settings. Additionally, investigating the specific reflective learning strategies (e.g., reflective guided prompt questions, self-assessment, peer reviews, and teachers' feedback) that most effectively enhance writing outcomes could refine pedagogical approaches. Qualitative explorations of students' reflective experiences may further illuminate the cognitive and emotional mechanics driving these improvements.

To sum up, reflective learning integrated process writing instructions to teaching paragraph writing instructions represents a transformative strategy for empowering EFL students, aligning with global educational trends towards metacognitive, student-centered learning. Its adoption in high school curriculum holds promises for nurturing proficient, confident writers equipped for academic and professional success.

References

- Abbas, P. (2016). The effect of reflection-supported process-based writing teaching on Iraqi EFL students' writing performance and attitude. *Arab World English Journal (AWEJ)*, 7(4).
- Adula, H. S. (2018). The practice of the process approach in writing classes: Grade eleven learners of Jimma preparatory and Jimma University community preparatory school in focus. *International Journal of English and Literature*, 9(5), 39-49.
- Ahmad, R. M. R. (2015). The Effectiveness of the Student-Centered Learning (SCL) Approach in Developing Some Writing Skills in English for the Secondary Stage Students. *Online Submission*.
- Bekele, G., Olana, T., & Ali, S. (2022). Global Journal of Foreign Language Teaching. *Language Teaching*, 12(4), 277-292.
- Braine, G. (2003). From a teacher-centered to a student-centered approach: A study of peer feedback in Hong Kong writing classes. *Journal of Asian Pacific Communication*, 13(2), 269-288.

- Brown, H. D., & Lee, H. (1994). *Teaching by principles: An interactive approach to language pedagogy* (Vol. 1): Prentice Hall Regents Englewood Cliffs, NJ.
- Castelli, P. A. (2011). An integrated model for practicing reflective learning. *Academy of Educational Leadership Journal*, 15, 15.
- Chen, A.-h. (2022). The Effects of Writing Strategy Instruction on EFL Learners' Writing Development. *English Language Teaching*, 15(3), 29-37.
- Chih-Pei, H., & Chang, Y.-Y. (2017). John W. Creswell, research design: Qualitative, quantitative, and mixed methods approaches.
- Deti, T., Ferede, T., & Tiruneh, D. (2023). The effect of reflection supported learning of writing on students' writing attitude and writing achievement goal orientations. *Asian-Pacific Journal of Second and Foreign Language Education*, 8(1), 29.
- Dinsa, M. T. (2023). EFL students' writing strategies use in Ethiopia: Gender and year level. *Cogent Education*, 10(2), 2256207.
- Gover, A., Loukkola, T., & Peterbauer, H. (2019). Student-centred learning: approaches to quality assurance. *EUA (European University Association)*.
- Graham, S., & Harris, K. R. (1997). Self-regulation and writing: Where do we go from here? (Vol. 22, pp. 102-114): Academic Press.
- Hailemariam, T., & Gebeyehu, T. A. (2020). Assessment on the Implementation of Process Approach in Teaching Writing Skill: The Case of Preparatory Schools in Hadiya Zone. *Science*, 8(3), 87-93.
- Hellberg, R., & Fauskanger, E. (2023). Learning of quality improvement theory—experiences with reflective learning from a student perspective. *International Journal of Lean Six Sigma*, 14(6), 1207-1226.
- Helyer, R. (2015). Learning through reflection: the critical role of reflection in work-based learning (WBL). *Journal of Work-Applied Management*, 7(1), 15-27.
- Hemmati, F., & Soltanpour, F. (2012). A Comparison of the Effects of Reflective Learning Portfolios and Dialogue Journal Writing on Iranian EFL Learners' Accuracy in Writing Performance. *English Language Teaching*, 5(11), 16-28.
- Kurniasih, K., Sholihah, F. A., Umamah, A., & Hidayanti, I. (2020). Writing Process Approach and Its Effect on Student'Writing Anxiety and Performance. *Jurnal Arbitrer*, 7(2), 144-150.
- Negash, T. (2006). *Education in Ethiopia: From crisis to the brink of collapse*: Nordiska Afrikainstitutet.
- Ngonyama, K. Z. (2018). *The effectiveness of the process, product and process-product approaches in the development of writing skills in the senior phase*. University of Zululand.
- Okasha, M. A., & Hamdi, S. A. (2014). Using Strategic Writing Techniques for Promoting EFL Writing Skills and Attitudes. *Journal of Language Teaching & Research*, 5(3).
- Radjaban, Y., & Humanika, E. S. (2024). Students' perceptions and challenges in using writing outlines to write an exposition. *English Language Teaching Educational Journal*, 7(2), 79-89.
- Ranjdoost, F., & Sahebkhair, F. (2025). The Effect of Reflection Supported Learning versus Electronic Supported Learning on Iranian Intermediate EFL Learners' Argumentative Writing. *Journal of Education Experiences*, 7(2), 51-68.
- Rashid, M. H., Hui, W., & Islam, J. (2021). Role Of Grammar In Language Teaching And Different Type's Components In English. *Veda's JOELL*.
- Sugerman, D. A. (2000). *Reflective learning: Theory and practice*: Kendall Hunt.

- Suhendi, A. (2018). Constructivist learning theory: The contribution to foreign language learning and teaching. *KnE Social Sciences*, 87–95-87–95.
- Terefe Gemechu, D., Ayenew Warota, M., Bouckaert, G., & Kebede Debela, B. (2020). 21 Outcomes and Challenges of the 1994 Ethiopian Education and Training Policy Reform *Public Administration in Ethiopia: Case Studies and Lessons for Sustainable Development* (pp. 565-589): Leuven University Press.
- van der Loo, J., Krahmer, E., & van Amelsvoort, M. (2019). *Reflection in learning to write an academic text. How does reflection affect observational learning and learning-by-doing in a research synthesis task?* Paper presented at the Frontiers in Education.
- Wanore, D. F. (2022). The effects of Reflective teaching on college of teacher education students' Paragraph writing performance: Experimental study.
- Whalen, K., & Paez, A. (2021). Student perceptions of reflection and the acquisition of higher-order thinking skills in a university sustainability course. *Journal of Geography in Higher Education*, 45(1), 108-127.
- Xhaferi, B., & Xhaferi, G. (2017). Enhancing learning through reflection—A case study of SEEU. *Seeu Review*, 12(1), 53-68.
- Yesuf, M. Y., & Anshu, A. H. (2022). The impact of the use of collaborative writing on attitude of EFL students towards learning writing skills. *International Journal of Education and Literacy Studies*, 10(3), 113-120.
- Yunus, M., Dalle, M. B., Hudriati, A., & Strid, J. E. (2024). Enhancing Paragraph Writing Proficiency: A Study of Students' Performance Post Global English Textbooks Exposure. *International Journal of Language Education*, 8(1), 127-141.
- Zohrabi, M., Torabi, M. A., & Baybourdiani, P. (2012). Teacher-centered and/or student-centered learning: English language in Iran. *English language and literature studies*, 2(3), 18.
- Zulfikar, T., & Mujiburrahman. (2018). Understanding own teaching: Becoming reflective teachers through reflective journals. *Reflective Practice*, 19(1), 1-13.

