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Research Article

Effects of Process-Genre Approach on Students' Writing Strategy Use in Paragraphs: Second-Year Wachemo University Students

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This study investigated the effects of a process-genre approach on EFL students' use of writing strategies when writing paragraphs. To ensure the reliability of the writing strategy inventory questionnaire, Cronbach's alpha was calculated. A quasi-experimental research design was used, and strategy questionnaires were used to collect data. The experimental and control groups were assigned using the lottery method. Independent and paired-sample *t*-tests were used to determine if there was a statistically significant difference due to treatment between the students' before and after treatments. Before treatment, the students completed the writing strategy questionnaires, and after 12 weeks of treatment, they were given after-treatment questionnaires. The results revealed that students in the experiment group outperformed the control group in terms of using different writing strategies based on the process-genre approach. The study concluded that the process-genre approach could significantly improve students' paragraph writing. Therefore, university-level English language teachers are strongly recommended to be aware of the role of the process-genre approach and to follow the process-genre model in improving their students' use of writing strategies in writing paragraphs.

1. Introduction

In today's globalized world, English is a crucial language that plays a pivotal role in facilitating communication in various fields, including science, education, business, and entertainment [1]. Therefore, learning English has become essential in this era of globalization to develop competence in the language and communicate effectively and efficiently on an international level. To communicate in English, one must develop the four essential skills of reading, listening, speaking, and writing, in addition to mastering the language's vocabulary and grammar.

Writing is an essential aspect of teaching English as a foreign language (EFL) or English as a second language (ESL) in classrooms across all grade levels. It is a valuable skill that helps engage students in thinking, understanding, creating ideas, communicating, and learning. According to August and Shanahan [2], writing is one of the four English language skills that requires increased effort. It has a direct relationship with thinking and expressing ideas in writing. Piovisan [3] defines writing as the process of discovering the most effective language skills for communicating thoughts and feelings. Similarly, Vahiddastjerdi and Hayatisamian [4] describe writing as an act of communication, a purposeful means of addressing an audience. Writing is a complex skill that demands both physical and mental effort [5].

Writing plays a significant role in improving second or foreign language abilities, not only in accuracy but also in acquiring various structures [6]. Writing promotes creativity, imagination, and understanding. It is a thinking process that involves the brain organizing ideas to express oneself through writing. Writers need to be imaginative and creative when putting their thoughts into words. Despite the importance of writing skills, scholars [7, 8] have identified low writing abilities among students in English. In L2 contexts, students face different problems while using their writing strategies to write effective sentences, paragraphs, and essays [9–12].

One of the ways to improve students' paragraph writing abilities is through writing strategies at every grade level. ESL/EFL teachers use writing strategies in their teaching and learning processes to boost EFL students' writing performance. In his study, Zeleke [13] analyzed the impacts of writing strategy training on improving students' writing abilities. He found that they could boost their writing skills by using writing strategies properly. These writing strategies play crucial roles in ESL/EFL writing skill development and are meant to distinguish between skilled and less-skilled writers [14].

The concern about enhancing writing abilities has increased since 1980 due to the proposal of various teaching and writing approaches [10]. In recent years, numerous studies have investigated the impact of product, process, and genre approaches on the writing strategies employed by EFL students [15–20]. Various studies have shown that each writing-teaching approach has its own set of advantages and drawbacks. For instance, the product approach emphasizes imitation, repetition, free writing, and controlled writing as its strong points. However, it overlooks the importance of developing writing skills. On the other hand, the process approach does not focus on linguistic knowledge but emphasizes language skills such as planning, brainstorming, drafting, editing, revising, and the final draft. While the genre approach emphasizes genre conventions, readers, and purposes, it may limit learners' creative ideas about the content.

The process-genre approach (hereafter PGA) is dominant in teaching writing skills. Badger and White [21] propose an effective writing methodology (product, process, and genre). According to Goa [22], Babalola and Litinin [23], the process-genre approach is a combination of two approaches that can help students develop writing skills. It utilizes both process and genre approaches. This allows planning, editing, publishing, and communication using the appropriate language for the situation [24, 25]. This explains why, according to Meyers [26], teaching writing involves different strategies. As a first step, examine the idea and consider the topic, goal, and audience. As part of the prewriting stage, brainstorming, grouping, and free writing are all done. Selecting and outlining are the next steps in managing. At the next stage, the authors create a first draft; they write quickly to record thoughts and take notes. Afterward, the draft must be corrected and read, and any material added or omitted must be added or omitted. Finally, the last step is to generate a clean copy, edit, print, check carefully for errors, and then make another clean copy. Therefore, writing strategies provide students with opportunities to practice brainstorming, grouping, free writing, first draft, second draft, editing, and final draft. These strategies empower students to develop their writing skills and provide them with a more comprehensive set of academic writing skills.

The procedures of the process-genre approach proposed include the preparation stage, modeling and reinforcing stage, planning stage, joint constructing stage, independent constructing stage, and revising stages [15, 21]. The process-genre models help students learn how to use five writing strategy categories [12, 27, 28] to improve their paragraph writing skills; these writing strategies are as follows: the first one is cognitive writing strategies that involve the mental process that allows learners to understand and practice the new language by different methods that include remembering, connecting, generating ideas, modeling, and reinforcing [27, 29–31]. The second one is meta-cognitive writing strategies that refer to thinking about the writing process, which enables learners to control their cognitive process when learning, which comprises planning, monitoring, and evaluating [28–30, 32, 33]. The third one is compensation writing strategies that help learners solve problems in all four skills during foreign language learning [34–37]. The fourth is social writing strategies that require interaction with others, which help students learn from sharing or interacting with others and include feedback, revising, and editing [29, 30]. The fifth one is affective writing strategies that regulate learners' attitudes and temperaments. Students acknowledge and control their feelings during writing tasks [29, 30]. Therefore, writing strategies need to be taught to enhance students' writing abilities at every grade level.

There have been several international studies conducted to explore the writing abilities of learners and the impact of the process-genre approach on developing writing skills. One such study was conducted by Huang [32], who carried out quasi-experimental research to examine the effects of a process-genre approach on the quality of writing, genre knowledge, and meta-cognitive strategies of EFL learners in the argumentative genre. The results indicated that the process-genre writing instruction was effective in enhancing the writing quality of the students in all subscores, and the improvement was sustained even 6 weeks after the intervention. Huang's findings also revealed that the participants incorporated acquired meta-cognitive strategies and genre knowledge into their writing tasks, with a greater emphasis on global aspects during pre-task planning.

Reonal [38] also conducted a descriptive and qualitative study, designing and developing process-genre-based writing exercises to address students' writing weaknesses. Her process genre approach offered students the opportunity to learn about the purpose and structure of expository writing through cause and effect, classification, and process, as well as the rewriting, writing, revising, and editing processes, as well as how to apply that knowledge to construct a text individually or in a group.

Chow [39] conducted a study that explored the impact of training Malaysian ESL students in process-genre writing knowledge and strategies to write expository essays. Students who received process-genre writing instruction were able to communicate their ideas more effectively in their writing and develop more relevant content to support the purpose of their writing task. On the other hand, students who received product-based instruction did not show the same level of improvement. However, the study also found that instruction in process-genre strategies did not lead to better idea organization or improvement in language ability.

In a few local studies (i.e., "Habitamu [12]"), students' writing strategies and the process approach to teaching writing have been explored. This study employed a descriptive study design. The results showed that students were not familiar enough with writing skills. Also, the findings showed that teachers have a high theoretical orientation toward

teaching process-writing strategies but lack skills in instructing students how to express themselves, which suggests that many writers use process-writing strategies. However, not enough attention was given to studies investigating the effect of the process-genre approach on teaching writing and how learners use paragraph writing strategies in learning to write. The present researchers were inspired to undertake this study because they thought students should utilize different writing strategies through the process-genre approach.

The current study differs from the above-mentioned international and local studies in different ways. In one study, Malaysian ESL students were trained on applying process-type writing techniques to expository writing [38, 39], while in another study, Huang [32], the process-genre approach was examined for its effect on EFL students' writing quality, genre knowledge, and metacognitive strategies in argumentative genres. However, the present study investigated the effect of the process-genre approach to teaching writing on students' writing strategies used in the EFL classroom.

The study investigated the process approach to teaching writing and students' use of writing strategies in the writing classroom [12], and the results showed that the teachers had a high theoretical orientation to learning process-writing strategies but lacked skills in instructing students how to write. However, the current study is on the effect of the process genre approach in teaching writing on students' use of paragraph writing strategies in learning writing and their performance.

The third difference was the research setting and context. The present study was undertaken at the university level [12, 38, 39]. The above studies have been conducted in high schools and preparatory schools. As a result, the current study focused on the effect of the process-genre approach to teaching writing on EFL students' use of writing strategies in paragraph writing classes at the university level, where the basic writing skills course is offered to second-year undergraduate students. Thus, the researchers observed problems with this course, particularly at the paragraph writing level. This is because students did not use writing strategies practically. Thus, the main purpose of the present study is to investigate the effects of the process-genre approach to teaching writing on students' use of writing strategies in writing paragraphs in terms of cognitive writing strategies, meta-cognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies.

Accordingly, the study tried to prove or disprove the following null and alternative hypotheses.

H0: There is not a statistically significant difference between the mean scores of the experimental and control group students' use of writing strategies before the intervention in terms of cognitive writing strategies, meta-cognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies.

H1: There is a statistically significant difference between the mean scores of the experimental and control group students' use of writing strategies after the intervention in terms of cognitive writing strategies, meta-cognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies.

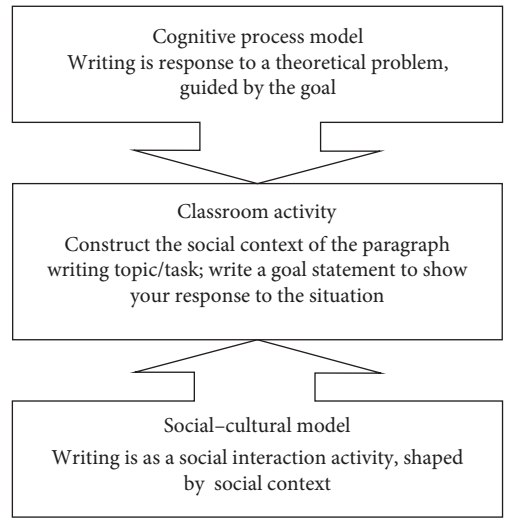

Figure 1: Theoretical framework of the study adapted from Flower and Haye [44] and the researchers.

2. The Theoretical Framework of the Study

In this study, the theory adopted by Van Lier [40], among all theories, the sociocognitive theory of teaching writing has a theoretical framework of this study. Thus, cognitive processes and sociocultural theories are common theories in teaching writing to students at upper primary and secondary schools in university-level writing courses. However, the mental process theory in teaching writing focuses on brainstorming and planning strategies. This theory neglects sociocultural factors, such as the target readers' possible reaction to texts [41]. In connection to this, Chandrasegaran [42] states that the sociocultural theory of teaching writing focuses on rhetorical moves and organization structure, and the thinking processes are involved in the discourse moves.

The researchers are motivated by the limitations of cognitive process theory and sociocultural theory in teaching writing. Thus, this theoretical framework is advanced in the case of this study and has helped provide a framework to support this articulation of how cognitive processes and sociocultural theories shape writing knowledge, which provides a complete account of the range of factors and contributes to expertise. Ivanič [43] stated that discourses on writing and learning to write are one of the theoretical foundations of teaching writing because integrated into his framework are cognitive and social–cultural approaches to understanding teaching writing. It was suggested by Chandrasegaran [42] that a sociocognitive theory to teach writing takes into account the sociocultural contexts, thinking processes in enacting each genre practice, and reader expectations to overcome the shortcomings of cognitive process theory and sociocultural theory.

Figure 1 explains how a sociocognitive theoretical framework for teaching writing is realized in pedagogical texts and

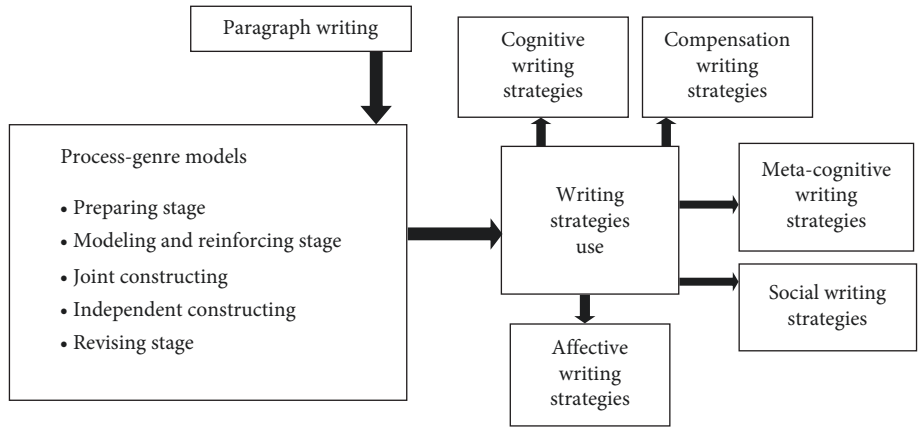

Figure 2: Conceptual framework (adapted from Yan [15] and Badger and White [21] and the researchers).

classroom activities for teaching paragraph writing in an English classroom. Paragraph writing teaching manuals are prepared to be used in lessons and are guided by the objective of encouraging students to engage in goal-directed thinking during paragraph writing and to incorporate in that thinking perceptions of the social–cultural context of the paragraph writing tasks.

In this study, the model was modified by Flower and Hayes [44] so that writing is a problem-solving, decision-making activity directed by a goal, providing the premise for instruction in the different lessons on the unit and in the setting of goals. However, goal setting is taught not purely as a cognitive process but as situated in the construction of the social situation of the paragraph.

The concept of theoretical framework goals is explained to students as their response, in their role as writers, to the social situation containing the writing task is to practice the different exercises that focus on paragraph writing, and the goals require students to create the social context by describing possible preceding events that make paragraph writing necessary, the identity, expectations, and perception of the reader, the writer's personality, and relationship with the reader, and so on. Thus, the cognitive and sociocultural models of writing integrated, as depicted in Figure 1, help to provide the foundation for teaching social contexts and situated mental processes as a first step to improving paragraph writing.

A conceptual framework is a gathering of ideas that are characterized and deliberately coordinated to give a center, reasoning, and apparatus for the incorporation and translation of data [45]. Also, Glatthorn [46] states that "the conceptual framework identifies the concepts included in a complex phenomenon and shows their relationships (p. 87)." Therefore, the conceptual framework has emphasized the effects of the process genre approach to teaching writing on students' paragraph writing performance.

Accordingly, the effect of the process genre approach is the independent variable of this study. The process genre approach has integrated the strengths of the process approach and the genre-based approach that helps paragraph writing in the writing classroom. Babalola and Litinin [23] describe the process-genre approach as a synthesis of process models and genre models that emerged as a result of the limitations of both process approaches and genre approaches to developing writing skills. The researchers modified different scholars' models for this current study to show that Yan, Badger, and White's model of the teaching-learning cycle works in an EFL writing classroom on how to use writing strategies to improve paragraph writing performance. The first stage refers to the preparation stage. At this stage, students choose topics by relating them to their experiences. The second stage refers to modeling, reinforcing, and planning. The purpose of this stage is to introduce and examine a model of a specific genre and plan activities based on it. During the fourth stage, learners and teachers construct a text together. In the next step, learners develop relevant language forms through exercises and manipulation of the text. In the fifth stage, learners create an independent text as a complete product. The last stage refers to revision. The students' drafts will be revised and edited by their classmates or the teachers at this stage. The above-discussed models are the base that will help the researchers produce results on how to use writing strategies that help improve paragraph writing performance.

In its basic concept, paragraph writing is one of the fundamental writing skills that is being investigated in this study. Thus, the study aimed to investigate the effects of the process genre approach on the use of students' paragraph writing strategies in writing classroom. In this regard, the conceptual framework portrayed under Figure 2 was adapted from [15, 21]. It is thus clear to state that the conceptual relationships among independent (i.e. process-genre approach) and the dependent variables (i.e. use of students' writing strategies) are argued being supported with various scholarly views.

Thus, this study investigates the effect of the process genre approach to teaching writing on the students' use of writing strategies in paragraph writing. The dependent variables are the students' use of writing strategies in paragraph writing as a result of different treatment and control groups tested before and after the intervention. As has been discussed earlier, the process genre approach is an input. This approach is a combination of teaching writing approaches that support the process genre approach to writing, and it brings the process of writing and the generic structure together.

Students' use of writing strategies is the outcome that results in improvements in basic writing skills, especially in paragraph writing. Paragraph writing emphasizes using writing strategies in terms of cognitive writing strategies, meta-cognitive writing strategies, compensation writing strategies, and social/affective writing strategies. In this sense, the modified approach employed the process genre approach, which could help improve the performance of paragraph writing by using writing strategies.

3. Materials and Methods

3.1. Design of the Study. The main purpose of this study was to investigate the effects of the process-genre approach of teaching writing on EFL students' writing strategy use in writing paragraphs. This study intends to have a quasi-experimental research design. This plan is a piece of experimental research that the research participants are not likely to assign randomly. This design is a part of the experimental design in that the research participants are not assigned randomly [47]. There are two variables in this quasi-experimental research: the independent variable of this study is the process-genre approach to teaching writing, and the dependent variable of this study is the students' use of writing strategies in writing paragraphs. Therefore, quasi-experimental research has been selected and employed for the current study that investigates the effect of the independent variable on the dependent variables and includes two groups: the control and the experimental group.

3.2. Participants and Sampling Techniques. One hundred and twelve students enrolled in the Public Administration and Development Management (PADM) department, College of Business and Economics, Wachemo University (WCU), were chosen as the study sample. The reason behind that choice is that students with basic writing skills are thought to have acquired the level of paragraph writing necessary for university students and have become more familiar with text genres. One of the researchers taught both groups, which consisted of 56 students each: an experimental group and a control group. The experimental group received training for 12 weeks on using writing strategies to enhance their paragraph writing and improve their overall performance.

The participants for this research were selected from the PADM departments of WCU, located on the main campus. The students were chosen using a purposive sampling technique, exclusively from those taking the basic writing skills course. Because there are two classes in this department, the researchers assigned one section as the experimental group and another as the control group from this department using the lottery method.

3.3. Quantitative Data Collection Instruments. In this study, the researchers used a questionnaire to collect data about students' characteristics and backgrounds. Questionnaires can help gather information from numerous respondents [48]. The data for determining the research hypothesis were collected using a writing strategy inventory questionnaire.

This research developed a writing strategy questionnaire to identify writing strategies that are beneficial when writing paragraphs. The writing strategies questionnaire was used before and after the intervention to examine the effects of the process-genre approach on students' writing strategy use. This study used a writing strategies questionnaire [12] adapted and modified from Petric and Czárl's, as cited in Habtamu [12], that assesses how students utilize writing strategies when writing paragraphs through the process genre approach. The taxonomies of writing strategies align well with the study's objectives. Consequently, Petric and Czárl used a 5-point Likert scale with options ranging from (1 = never true, 2 = rarely true, 3 = sometimes true, 4 = usually true, and 5 = always true). Thus, the writing strategy questionnaire was structured and organized as a list of statements that each expressed an opinion on paragraph writing strategies. To determine whether students utilized writing strategies during the writing process, the researchers utilized process-genre models.

There are five numbered sections with different items in the writing strategies questionnaire designed to assess writing strategies. These items are related to writing strategy items. The questionnaire is the Writing Strategies Inventory developed by Petrić and Czarl, as cited in Habtamu [12], which has been translated into Amharic transcription, but according to the grade level and the purpose of writing paragraphs, in this study, there was no translation into Amharic. The inventory consists of different items and includes five dimensions addressing cognitive writing strategies (items 1–15), meta-cognitive writing strategies (items 16–30), compensation writing strategies (31–35), social writing strategies (36–40), and affective writing strategies (items 41–44). These subdivisions of questionnaires about students' writing strategies were referred to in Supplementary Material 1 [12].

3.4. Validity and Reliability of Instruments. Establishing reliability and validity in research is essential to ensuring that the data are sound and replicable and that the results are accurate. Reliability refers to the accuracy of data, while validity ensures that the procedure measures what it intends to measure [49]. The validity and reliability of the items are required to be verified before actual data collection. Therefore, the researchers used different mechanisms in the writing strategy inventory questionnaires to check the validity and reliability of the main study.

3.4.1. Validity of the Instruments. It is important to assess a research instrument's ability to measure what it is intended to measure [50]. Whenever conducting quasi-experiments, researchers should consider biases that could adversely affect internal or external validity. Internal validity refers to the influence that factors the researcher desires will have on the results of a study [51]. In other words, Mackey and Gass [51] stated that internal validity is concerned with the slightest factors that may be uncontrollable, as well as outside influences that may influence outcomes. As this is crucial in quasi-experimental studies, "experimental treatment" must be held responsible for changes in the dependent variable to establish causation [52]. Therefore, the researchers took the necessary steps to ensure that validity threats were controlled as far as possible.

Accordingly, to check the content validity and structure of the questionnaire, experts' and scholars' views were used to evaluate whether the questions were essential and useful or not [53]. Therefore, research supervisors were used to validate the questionnaire items by translating them into Amharic. The researchers asked language specialists from the Department of English Language and Literature at Wolaita Sodo University for feedback. Comments were given on the obtained data, which were from the writing strategies questionnaire items. Due to this reason, the researchers adapted the questions from a standard questionnaire [54] to ensure the validity of the writing strategy questionnaire content.

3.4.2. Reliability of the Instruments. The reliability of the questionnaire was checked by using Cronbach's alpha. The questionnaires have been evaluated for internal consistency using Cronbach's alpha [55]. The researchers developed the Paragraph Writing Strategies Inventory questionnaire, and Cabejas [56] showed its internal consistency, as measured by Cronbach's alpha. This suggests that Cronbach's alpha value of 0.70 is satisfactory and acceptable. As with the previous study, this main study achieved a high Cronbach's alpha result in both groups (0.787 and 0.841) before and after treatment, respectively. Therefore, it can be concluded that the student's use of the writing strategies scale is reliable based on the aforementioned data.

With SPSS and Cronbach's alpha, the reliability of the questionnaires was assessed in the experimental and control groups using writing strategies before and after the intervention. For both groups, alpha values of 0.787 and 0.841, respectively, were calculated to measure the alpha before and after the intervention. Based on the study results, it was determined that the questionnaires were generally reliable [57]. Therefore, the questionnaire's reliability was quantified using SPSS.

3.5. Procedures of Data Collection. At WCU, a process-genre approach was used in the paragraph writing activities after the sample students were identified and the data collection instruments were determined. EFL professionals who teach EFL writing skills evaluate paragraph writing tasks and topics. They also designed academic writing tasks or activities. Considering the comments made by the professionals, amendments were made to the writing topics, tasks, and other procedures included in the teaching material. These amendments were based on paragraph writing levels.

Before the intervention, the researchers distributed and administered questionnaires on writing strategies. These questionnaires were given in the first session without giving any guidance or support to the students, as the questionnaire's very purpose was to examine the students' use of writing strategies in terms of cognitive writing strategies, meta-cognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies, and to identify the experimental and control groups of students who used relatively similar writing strategies in their writing paragraphs.

Based on the results of the assessment of strategy use before-intervention using a 5-point Likert scale, two sections of students with similar results were selected as samples for the study. Next, the two sections of students were randomly assigned to experimental ($n = 56$) or control ($n = 56$) groups based on a lottery system. Then the researchers prepared a teaching manual and paragraph writing lesson plan about the importance, features, structure, types of paragraphs, and use of writing strategies. This was in terms of cognitive writing strategies, meta-cognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies. This teaching manual and paragraph writing lesson plan were assessed by experts whether the above-mentioned contents were included in the process-genre models. After that, the training was carried out for the experimental group.

The experimental group students were trained to refresh their knowledge about how to apply the process-genre models in the experimental class (preparing, modeling and reinforcing, planning, joint construction, independent text construction, and revising) and how to use writing strategies to improve writing performance. The treatment was for 3 months and took 2 hr per session from weeks 2 to 13. The paragraph writing treatment started on May 26, 2022, and ended on August 18, 2022. In this regard, the treatment took 12 weeks. This treatment was based on Yan [15] and Badger and White [21]. Here, they were trained to learn about the essential features of a successful paragraph. They also received sample paragraph writing lessons and formed a 5-point Likert scale to assess their use of writing strategies for improving paragraph writing. These 5-point Likert scales focused on cognitive writing strategies, meta-cognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies. After the intervention, writing strategy questionnaires were distributed for 1 week in the end. The writing strategies questionnaire was administered through the same procedure used in the before-intervention.

3.6. Data Analysis. The purpose of this section was to present how quantitative data were analyzed. As part of this study, the quantitative analysis focused on the responses to the questionnaire on writing strategy use by using the independent sample *t*-test, paired sample *t*-test, and the effect size.

To examine if there is a statistically significant difference between the students who receive training in the experimental class and the students who do not receive training in the control group on the use of strategies of writing, the researcher focused on how to improve the performance of paragraph writing, and the following procedures were applied to analyze the results of the use of strategies of writing questionnaire.

First, the items of the questionnaire were categorized into the five subsections on the use of writing strategies, and the items were categorized into the five subsections on the pilot study. In the before-and-after questionnaire, each statement was rated on a scale of 1–5, where 1 indicated "never true" and 5 indicated "always true." The student's score for each group was then calculated by multiplying the number of items in the group by the rating of each statement. The minimum score a student could receive for a group was equal to the number of items in the group, while the maximum score would be five times the number of items in the group.

Table 1: The magnitude of effect size.

Relative size	Effect size	Percentage of CG below the mean of EG (%)
Small	0.00–0.20	58
Medium	0.21–0.50	69
Moderate	0.51–0.80	79
Large	0.81–1.20	88
Very large	>1.21	97

The writing strategy frequency levels were used to analyze students' use of writing strategies. As studied by Habtamu [12], writing strategies are divided into three frequency levels: high (mean 3.5 or higher), medium (mean 2.5–3.5), and low (mean 2.499 or lower).

Second, the independent-samples *t*-test was computed on SPSS version 26 to examine if there is a statistically significant difference between the experimental and control groups in the use of writing strategies about taking on more responsibility for their paragraph writing. The significance level was set at 0.05 (5%).

Third, the paired samples *t*-test was computed on the SPSS version 26 to examine if there is a statistically significant difference between the students' before-and after-treatment use of strategies of writing. The significance level was taken at 0.05 (5%).

Fourth, Cohen's *D* was computed to determine effect sizes in SPSS version 26. This was done to examine if there is a statistically significant difference between students' before- and after-treatment writing strategies. In Cohen's *D*, the effect sizes of paired sample *t*-tests of students' use of writing strategies are 0.00–0.20 (small effect), 0.21–0.50 (medium effect), 0.51–0.80 (moderate effect), 0.81–1.20 (large effect), and >2.00 (very large effect), adapted from Cohen [58]. Based on Cohen's *D* analysis test, the researchers determined how the process-genre approach affected students' use of writing strategies. Cohen, as cited in Sawilowsky [59], noted the students utilized cognitive, metacognitive, compensation, social, and affective writing strategies. The formula is presented in Table 1.

$$M_2 - M_1, \tag{1}$$

$$\text{Cohen's } D = \frac{\left(\sqrt{\mathbf{SD1^2} + \mathbf{SD2^2}}\right)}{2}. \tag{2}$$

4. Results

The main objective of this study was to investigate the effects of the process-genre approach on EFL students' writing strategies in writing paragraphs, focusing on WCU. This section presents the results of the study. Accordingly, the presentation of results begins with the test results, followed by the results of the questionnaire.

4.1. Findings on Students' Use of Writing Strategies in Writing Paragraphs. The findings obtained through the questionnaires from the control and experimental groups are presented in the following consecutive tables (see Tables 2–6).

4.1.1. Descriptive Statistics of Students' Use of Writing Strategies before the Intervention. In Table 2, the descriptive statistics result was computed to compare the overall mean scores and standard deviation of the experimental and control groups before the intervention. This study focused on how to use writing strategies, including cognitive writing strategies (remembering, connecting, generating ideas, modeling, and reinforcing), meta-cognitive writing strategies (planning, monitoring, and evaluating), compensation writing strategies, social writing strategies, and affective writing strategies. This was done before the intervention with the questionnaires. Thus, Table 2 demonstrates that the descriptive statistics result was computed to compare the overall mean scores and standard deviation of the experimental and control groups before the intervention.

From Table 2, it can be seen that cognitive writing strategies, metacognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies were among the never-used writing strategies by the experimental group. Based on the mean of five writing strategies before the intervention ($M = 2.46$, 2.48, 2.46, 2.43, and 2.23), respectively. The results suggest that most students do not use writing strategies when writing paragraphs, and before the intervention, in the control group, the most rarely employed category of writing strategies for all students was the category of cognitive writing strategies, metacognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies ($M = 2.59$, 2.55, 2.66, 2.98, and 2.56), respectively. Of the five categories of writing strategies, all categories (cognitive writing strategies, metacognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies) exhibited lower means, and they were described as having lower writing strategy use in the experimental group. On the other hand, five categories of writing strategies (cognitive writing strategies, metacognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies) exhibited medium use of writing strategies in the control group, and they were described as medium strategies.

4.1.2. Descriptive Statistics of Students' Use of Writing Strategies after the Intervention. In Table 3, the descriptive statistics result was computed to compare the overall mean scores and standard deviation of the experimental and control groups after the intervention. This study focused on how to use writing strategies, including cognitive writing strategies (remembering, connecting, generating ideas, modeling, and reinforcing), meta-cognitive writing strategies (planning, monitoring, and evaluating), compensation writing strategies, social writing strategies, and affective writing strategies. This was done after the intervention with the questionnaires. Thus, Table 3 demonstrates that descriptive statistical results were computed to compare the mean score and standard deviation of both the control and experimental groups after the intervention.

Table 2: Descriptive statistics of the overall mean of students' use of writing strategies beforethe intervention.

Category	Group	*N*	Minimum	Maximum	Mean	Std. deviation
Cognitive writing strategies	EG	56	1.00	5.00	2.46	1.089
	CG	56	1.00	5.00	2.59	1.141
Meta-cognitive writing strategies	EG	56	1.00	5.00	2.48	0.942
	CG	56	1.00	5.00	2.55	0.965
Compensation writing strategies	EG	56	1.00	5.00	2.46	1.098
	CG	56	1.00	5.00	2.66	1.186
Social writing strategies	EG	56	1.00	5.00	2.426	1.176
	CG	56	1.00	5.00	2.976	1.071
Affective writing strategies	EG	56	1.00	5.00	2.23	1.038
	CG	56	1.00	5.00	2.56	1.253

Table 3: Descriptive statistics of the overall mean of students' use of writing strategies after the intervention.

Category	Group	*N*	Minimum	Maximum	Mean	Std. deviation
Cognitive writing strategies	EG	56	1.00	5.00	4.18	0.688
	CG	56	1.00	5.00	3.61	1.089
Metacognitive writing strategies	EG	56	1.00	5.00	4.22	0.689
	CG	56	1.00	5.00	3.34	0.981
Compensation writing strategies	EG	56	1.00	5.00	4.24	0.665
	CG	56	1.00	5.00	3.56	1.178
Social writing strategies	EG	56	1.00	5.00	4.45	0.563
	CG	56	1.00	5.00	3.71	0.941
Affective writing strategies	EG	56	1.00	5.00	4.16	0.689
	CG	56	1.00	5.00	3.43	1.228

In Table 3, it can be seen that cognitive and social strategies were the most commonly used by the experimental group ($M = 4.18$, 4.45) and by the control group ($M = 3.61$, 3.71), which shows that both of them were used as high-level writing strategies. In addition, all experimental group students most commonly used metacognitive, compensation, and affective writing strategies ($M = 4.22$, 4.24, 4.16, respectively). However, control group students used, to some extent, meta-cognitive and affective writing strategies ($M =$ 3.34, 3.43, respectively). Among the five categories of writing strategies, each has a high mean, which the experimental group described as having a high use of writing strategies. The other two (metacognitive and affective writing strategies) showed medium use of writing strategies in the control group and were described as medium strategies.

4.1.3. Independent Sample t-Test Results for Students' Use of the Writing Strategies before- and after-Treatment. An independent-sample *t* test was conducted to examine if there was or was not a statistically significant difference between the experimental and control groups regarding the use of paragraph writing strategies, including cognitive writing strategies (remembering, connecting, generating ideas, modeling, and reinforcing), meta-cognitive writing strategies (planning, monitoring, and evaluating), compensation writing strategies, social writing strategies, and affective writing strategies, in the before- and after-treatment questionnaires. Thus, Table 4 demonstrates that an independent sample *t*-test was computed to compare the experimental and control groups' use of writing strategies before and after the intervention in writing paragraphs.

An independent sample *t* test was calculated by comparing the mean scores of the two groups in line with their use of cognitive writing strategies in their paragraph writing before treatment. There was no statistically significant difference between the two groups because the results showed that $t\ (110) = -0.955$ and $p\ (0.342) > 0.05$. Besides, the average mean of the control group ($M = 2.59$ with $\mathrm{SD} = 1.141$) was not significantly different from the average mean of the experimental group ($M = 2.46$ with $\mathrm{SD} = 1.089$). This means that the alternative hypothesis was not accepted, but the null hypothesis, which says so, was accepted. Table 4 shows whether there were significant differences between the two groups after treatment. It was found that there was a statistically significant difference between the means of the groups, i.e., $t\ (110) = 5.887$, $p\ (0.001) < 0.05$. The mean of the control group (i.e., $M = 3.61$; $\mathrm{SD} = 1.089$) is lower than that of the experimental group (i.e., $M = 4.18$; $\mathrm{SD} = 0.688$). Based on the findings, the null hypothesis was rejected, and the alternative hypothesis was accepted. In other words, the use of writing strategies in line with cognitive writing strategies, such as remembering, connecting, generating ideas, modeling, and reinforcing by the experimental group, outperformed those of the control group. Thus, it can be deduced that an

Table 4: Independent samples test results for students' use of the writing strategies before- and after-treatment.

			Levene's test for equality of variances		*t*-Test for equality of means						
			F	Sig.	*T*	DF	Sig. (2-tailed)	Mean *D*/ce	Std. error *D*/ce	95% Confidence interval of the difference	
										Lower	Upper
Cognitive writing strategies	BT	Equal variances assumed	0.479	0.490	−0.955	110	0.342	−1.98214	2.07661	−6.09750	2.13321
	AT	Equal variances assumed	9.919	0.002	5.887	110	0.001	8.62500	1.46500	5.72172	11.52828
Meta-cognitive writing strategies	BT	Equal variances assume	1.668	0.199	−0.838	110	0.404	−1.16071	1.38496	−3.90537	1.58395
	AT	Equal variances assumed	0.008	0.929	9.191	110	0.001	13.21429	1.43779	10.36491	16.06366
Compensation writing strategies	BT	Equal variances assumed	1.510	0.222	−1.184	110	0.239	−0.98214	0.82926	−2.62555	0.66126
	AT	Equal variances assumed	21.478	0.000	5.328	110	0.001	3.41071	0.64018	2.14203	4.67940
Social writing strategies	BT	Equal variances assumed	2.956	0.088	−0.944	110	0.347	−0.28571	0.30257	−0.88533	0.31390
	AT	Equal variances assumed	20.223	0.000	7.224	110	0.001	3.69643	0.51166	2.68243	4.71042
Affective writing strategies	BT	Equal variances assumed	6.327	0.013	−1.896	110	0.061	−1.33929	0.70643	−2.73926	0.06069
	AT	Equal variances assumed	17.670	0.000	5.017	110	0.001	2.91071	0.58012	1.76105	4.06038

Table 5: Paired sample *t*-test results of the CG in the before- and after-conventional treatment in the use of writing strategies.

Variables	Measurements	*N*	Mean	S.D	*t*-Value	DF	Sig	Effect size	Relative size	In (%)
Cognitive writing strategies	BT	56	2.59	1.141	−8.254	55	0.001	0.416	Medium	69
	AT	56	3.61	1.089						
Meta-cognitive writing strategies	BT	56	2.55	0.965	−7.977	55	0.001	0.38	Medium	69
	AT	56	3.34	0.981						
Compensation writing strategies	BT	56	2.66	1.186	−5.933	55	0.001	0.36	Medium	69
	AT	56	3.56	1.178						
Social writing strategies	BT	56	2.98	1.071	−19.570	55	0.001	0.34	Medium	69
	AT	56	3.71	0.941						
Affective writing strategies	BT	56	2.56	1.253	−4.906	55	0.001	0.33	Medium	69
	AT	56	3.43	1.228						

Table 6: Paired sample *t*-test results of the EG in the before- and after-conventional treatment in the use of writing strategies.

Variables	Measurements	*N*	Mean	S.D	*t*-Value	DF	Sig	Effect size	Relative size	In (%)
Cognitive writing strategies	BT	56	2.46	1.089	−16.756	55	0.001	0.69	Moderate	79
	AT	56	4.18	0.688						
Meta-cognitive writing strategies	BT	56	2.48	0.942	−20.883	55	0.001	0.73	Moderate	79
	AT	56	4.22	0.689						
Compensation writing strategies	BT	56	2.46	1.098	−14.783	55	0.001	0.70	Moderate	79
	AT	56	4.24	0.665						
Social writing strategies	BT	56	2.43	1.176	−49.303	55	0.001	0.74	Moderate	79
	AT	56	4.45	0.563						
Affective writing strategies	BT	56	2.23	1.038	−15.577	55	0.001	0.74	Moderate	79
	AT	56	4.16	0.689						

experimental group benefited from the treatment, with significant differences at the ($p = 0.001$) level between the two groups. By incorporating the process-genre approach, students develop their paragraph writing performance by identifying and utilizing appropriate organizational, syntactic, and language techniques for effective paragraph writing. This approach also supports students' writing abilities to recognize genre types, noting their unique textual features, language conventions, and structural elements. This influences their writing strategies for better paragraph writing outcomes.

In Table 4, an independent sample *t*-test was calculated to compare the mean scores of the two groups based on how well they used metacognitive strategies while writing paragraphs. It was found that no significant difference was found ($t\ (110) = -0.838$, $p\ (0.404) > 0.05$). This *t*-value revealed no significant difference at the 0.404 level between the two groups before the intervention. The average mean of the control group ($M = 2.55$; SD = 0.965) was not significantly different from the mean of the experimental group ($M = 2.48$; SD = 0.942). This confirms that the two groups were comparable in their metacognitive writing strategies used before the treatment. In Table 4, after treatment, an independent sample *t*-test was computed to see whether there was a significantly significant difference between the two groups. It was found that there was a statistically significant difference between the means of the groups, i.e., $t\ (110) = 9.191$, $p\ (0.001) < 0.05$. The overall *t*-value is also 9.191, indicating a significant difference at the 0.001 level between the two groups due to the process-genre approach used in the treatment. The average mean of the experimental group (i.e., $M = 4.22$; SD = 0.689) is higher than that of the control group (i.e., $M = 3.34$; SD = 0.981). This implies that the null hypothesis was not accepted, but the alternative hypothesis, which says so, was accepted. Thus, the process-genre approach to writing has improved students' writing because it involves meta-cognitive writing strategies, in which students are encouraged to plan, monitor, and evaluate their paragraph writing.

In Table 4, an independent sample *t*-test was computed to compare the mean scores of the two groups in line with their use of compensation writing strategies in their paragraph writing before the treatment. There was no statistically significant difference between the two groups because the results showed that $t\ (110) = -1.184$, $p\ (0.239) > 0.05$. Besides, the average mean of the control group ($M = 2.66$ with SD = 1.186) was not significantly different from the average mean of the experimental group ($M = 2.46$ with SD = 1.098). As per Table 3, an independent sample *t*-test was computed to see whether there was a significantly significant difference between the two groups after the intervention. It was found that there was a statistically significant difference between the means of the groups, i.e., $t\ (110) = 5.328$, $p\ (0.001) < 0.05$. The average mean of the control group (i.e., $M = 3.56$; SD = 1.178) is lower than that of the experimental group (i.e., $M = 4.24$; SD = 0.665). The overall item *t*-value is 5.328, indicating a significant difference at the (0.001) level

between the two groups. The experimental group performed well in using compensation writing strategies as a result of their treatment, which was the process-genre approach. Therefore, this approach encourages the use of compensation writing strategies to help writers effectively address any shortcomings in their writing. These strategies involve alternative modes of communication, including visual aids, multimedia, and other forms of writing. These strategies supplement weak areas in a text.

Table 4 shows the results of an independent sample *t*-test computed before treatment to compare the mean scores between the two groups using social writing strategies. It was found that there was not a statistically significant difference between the means of the groups, i.e., $t\ (110) = -0.944$, $p\ (0.347) > 0.05$. The average mean of the control group ($M = 2.98$; SD = 1.071) was not significantly different from the mean of the experimental group ($M = 2.43$; SD = 1.176). The results confirm that the two groups' use of social writing strategies in paragraph writing was comparable before treatment. Based on Table 4, an independent sample *t*-test was computed to determine whether the two groups differed significantly after treatment. It was found that there was a statistically significant difference between the means of the groups, i.e., $t\ (110) = 7.224$, $p\ (0.001) < 0.05$. The average mean of the control group ($M = 3.71$; SD = 0.941) is lower than that of the experimental group ($M = 4.45$; SD = 0.563). This result is attributed to the treatment (the process-genre approach) that benefited the experimental group. Process-genre writing encouraged learners to participate in their writing and make decisions that helped them produce more effective texts. This approach is based on the idea that students can learn best and create quality writing if they are engaged in meaningful activities. This includes observing their writing and engaging in peer review. This data suggests that nothing is impossible if ELT teachers try to support students' potential during their professional development careers.

An independent sample *t*-test result was computed to compare the mean scores of the control and experimental groups in line with affective writing strategies before treatment. It was found that there was not a statistically significant difference between the means of the groups, i.e., $t\ (110) = -1.896$, $p\ (0.061) > 0.05$. The average mean of the control group ($M = 2.56$; SD = 1.253) was not significantly different from the mean of the experimental group ($M = 2.23$; SD = 1.038). This confirms that the two groups were comparable in their writing strategies before treatment. Table 4 shows that an independent sample *t*-test was computed to determine whether the two groups differed significantly after treatment. It was found that there was a statistically significant difference between the means of the groups, i.e., $t\ (110) = 5.017$, $p\ (0.001) < 0.05$. The average mean of the experimental group ($M = 4.16$; SD = 0.689) is higher than that of the control group ($M = 3.43$; SD = 1.228). The experimental group of students benefited from the process-genre writing approach used in this study. Process-genre approaches are creative and efficient methods for helping students develop paragraph writing confidence. Moreover, affective writing strategies, such as encouraging students to find a better solution, rewarding themselves when finishing a paragraph, keeping a diary to write an effective paragraph, and trying to overcome feelings of frustration and sadness, are strongly supported by respondents.

Based on the results of the study, the second hypothesis states that "there is or is not a statistically significant difference between the mean scores of the two groups of students' writing strategies used in the before- and after-treatment periods." This study demonstrates that the use of a process-genre approach in an academic setting is effective in improving writing strategies, with the experimental group outperforming the control group after the intervention. The participants were homogeneous at the beginning of treatment, with no significant difference in the before-treatment scores of the two groups, while there was a significant difference in the results after treatment between the two groups. The experimental group scored higher than the control group. This shows that students perform impressively when using writing strategies after treatment. Moreover, after treatment, this study also showed that the experimental group treated with process-genre writing instruction outperformed the control group in terms of cognitive, meta-cognitive, compensation, social learning, and affective writing strategies use.

4.1.4. Paired Sample t-Test Results of Students' Use of Writing Strategies. In order to compare the difference in mean scores and standard deviations of the students' within-group differences in writing strategies, for testing before and after the intervention, a paired sample test was run. The results are presented in the following tables: Table 5 shows the results of the control group.

This paired-sample *t*-test shows how the control groups used cognitive writing strategies such as remembering, connecting, generating ideas, modeling, and reinforcing. Based on Table 5, the control group's mean score before treatment was ($M = 2.59$), while their mean score after treatment was ($M = 3.61$). The standard deviation of the before-treatment is 1.141, and that of the after-treatment is 1.089. The results of the paired-sample *t*-test ($t = -8.254$; DF = 55; $p = 0.001$) indicated that the mean scores of students in the control group differed statistically significantly regarding their use of cognitive writing strategies. The effect size is medium ($d = 0.416$), which means the control group students did not learn how to use them explicitly.

According to Table 5, the control group's performance improved when they used meta-cognitive writing strategies. The data indicate that the control group had a mean score of 2.55 before treatment and a mean score of 3.34 after treatment. The standard deviations, however, of the before and after training pieces are 0.965 and 0.981, respectively. In terms of applying meta-cognitive writing strategies, there was a statistically significant difference between the mean scores of students in the control group ($t = -7.977$; DF = 55; $p = 0.001$). The effect size is medium ($d = 0.38$).

As indicated in Table 5, the control group had a mean score of 2.66 before conventional treatment and a mean score of 3.56 after conventional treatment. The standard deviation

of the before-intervention sample is 1.186, whereas the standard deviation of the after-conventional treatment sample is 1.178. The results of the paired-sample t-test revealed a statistically significant difference between students' before- and after-intervention mean scores regarding compensation writing strategies ($t = -5.933$; DF = 55; $p = 0.001$). The effect size is medium ($d = 0.36$).

As shown in Table 5, the control group had a mean score of 2.98 before conventional treatment and a mean score of 3.71 after conventional treatment. The standard deviation before treatment was 1.071. The after-treatment standard deviation was 0.941. In Table 5, the paired-sample t-test results showed that there was a statistically significant difference between the students before and after-treatment mean scores during social writing strategies in the control group ($t = -19.570$; DF = 55; $p = 0.001$). The effect size is medium ($d = 0.34$), which indicates that in the control group, the students' use of writing strategies before and after the intervention was in line with social writing strategies. The reason why students did not use social writing strategies in paragraph writing.

In Table 5, according to statistical analysis of the use of affective strategies, the control group scored a mean of 2.56 before treatment and a mean of 3.43 after treatment. The computed SD before treatment is 1.253, and the resulting SD after treatment is 1.228. The paired-sample t-test analysis found a statistically significant difference between before and after treatment in affective writing strategies ($t = -4.906$, DF = 55; $p = 0.001$). The effect size is medium ($d = 0.33$).

As indicated in Table 5, the mean scores after treatment were also higher than before treatment in the overall writing strategies. In the control group, the mean scores after conventional treatment for cognitive writing strategies, meta-cognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies were 3.61, 3.34, 3.56, 3.71, and 3.43, respectively, but the mean scores before treatment for cognitive writing strategies, meta-cognitive writing strategies, compensation writing strategies, social writing strategies, and effective writing strategies were 2.59, 2.55, 2.66, 2.98, and 2.56, respectively. In Table 5, the t-value of the overall writing strategies was −8.254, −7.977, −5.933, −19.570, and −4.906, which indicates that the difference is significant at the (0.001) level, which implies that the students in the control group have also shown an improvement after learning through the conventional lecture method in the class.

Based on Table 6, the experimental group's total mean score before treatment was 2.46, while their total mean score after treatment was 4.18. The standard deviation of the before-treatment is 1.089, and that of the after-treatment is 0.688. The results of the paired-sample t-test ($t = -16.756$; DF = 55; $p = 0.001$) indicated that the average mean scores of students in the experimental group before and after treatment differed statistically significantly regarding their cognitive writing strategies. The effect size is moderate (0.69), which indicates that the process-genre approach enhances students' cognitive writing strategies, including remembering, connecting, generating ideas, modeling, and reinforcing.

On the other hand, as shown in Table 6, the experimental group had a mean score of ($M = 2.48$) before treatment and a mean score of ($M = 4.22$) after treatment. The standard deviations of the before and after treatments are 0.942 and 0.689, respectively. The mean scores before and after treatment were significantly different ($t = -20.883$; DF = 55; $p = 0.001$), which implies that all students applied paragraph writing strategies such as planning, monitoring, and evaluating paragraphs of their writing. The effect size is moderate (0.73), which indicates that the process-genre approach improves students' use of meta-cognitive writing strategies.

According to Table 6, before treatment, the experimental group had a total mean score of 2.46 and, after treatment, a total mean score of 4.24. There is a standard deviation of 1.098 for the before-treatment and a standard deviation of 0.665 for the after-treatment. A pair-sample t-test ($t = -14.783$; DF = 55; $p = 0.001$) revealed a statistically significant difference between before and after treatment in the use of compensation writing strategies for paragraph writing. The effect size is moderate (0.70), which indicates that the process-genre approach develops students' compensation strategies for paragraph writing. As a result, the students improved their paragraph writing performance by using synonyms, generating sentences, and creating sentences in their native language. They also checked the meaning of uncertain words and guessed the exact word to compensate for their poor performance.

Table 6 shows the experimental group's use of social writing strategies before treatment ($M = 2.43$) and after treatment ($M = 4.45$). The standard deviation before treatment is 1.176, and after treatment, it is 0.563. The paired-sample t-test analysis ($t = -49.303$; DF = 55; $p = 0.001$) revealed a statistically significant difference between students' before- and after-treatment mean scores in practicing social writing strategies. The effect size is moderate (0.74), which indicates that the process-genre approach enhances students' social paragraph writing strategies.

According to Table 6, the mean value (2.23) before treatment is less than the mean value (4.16) after treatment. Before treatment, the standard deviation was 1.038, and after treatment, it was 0.689. The result of the paired-sample t-test ($t = -15.577$; DF = 55; $p = 0.001$) showed a statistically significant difference between the students' average t-test scores regarding affective writing strategies before and after treatment. The effect size is moderate (0.74), which indicates that the process-genre approach improves students' use of affective strategies in paragraph writing.

Table 6 shows that overall writing strategies had higher mean scores after treatment than before treatment. In the experimental group, the mean scores after treatment for cognitive writing strategies (4.18), meta-cognitive writing strategies (4.22), compensation writing strategies (4.24), social writing strategies (4.45), and affective writing strategies (4.16), and the mean scores before the treatment of overall writing strategies were 2.46, 2.48, 2.46, 2.43, and 2.23, respectively. In Table 5, the t values (−16.756, −20.883, −14.783, −49.303, and −15.577) are calculated by comparing the total mean score of the experimental group's before- and after-

treatment writing strategies scores. The p-value test is 0.001, which indicates a statistically significant result for p-value is less than 0.05.

As shown in Tables 5 and 6, the comparison testing analysis of the two groups revealed statistically significant differences between the mean scores before and after treatment. Thus, the alternative hypothesis that "there is a statistically significant difference in the average score of the use of writing strategies by students in the group before and after intervention" was accepted at $0.001 < 0.05\%$. This indicates that the two groups showed statistically significant differences between the mean scores of students before and after treatment. According to Cohen's D analysis, the experimental groups of the cognitive writing strategy, meta-cognitive writing strategy, compensation writing strategy, social writing strategy, and affective writing strategy (0.69, 0.73, 0.70, 0.74, and 0.74) are higher than the control groups of the cognitive writing strategy, meta-cognitive writing strategy, compensation writing strategy, social writing strategy, and affective writing strategy (0.416, 0.38, 0.36, 0.34, and 0.33), respectively. Thus, the process-genre approach significantly influenced the use of writing strategies in the experimental group's writing paragraphs. This represents the same relative size as Cohen's D analysis of the overall use of writing strategies (79%) in control and experimental groups after intervention.

5. Discussion

The main objective of this study was to investigate how the process-genre approach to teaching writing impacts students' use of writing strategies when writing paragraphs. In the current researchers' view, coming up with effective and efficient paragraph writing strategies for EFL students in Ethiopia remains undocumented; in contrast, it becomes more questionable when argued in the Ethiopian university context. In the same token, even though experts claim various paragraph writing strategies in the EFL classrooms [60, 61], the current researchers focused on the five-paragraph writing strategies (cognitive writing strategies, metacognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies) in the writing classroom. In connection to the arguments reflected regarding strategies of paragraph writing, Octaviani [61] claimed that learning strategies influence the students' writing score, but Octaviani [61] further asserted that the successful students who get the highest score were reported for using cognitive and metacognitive strategies, while unsuccessful students who get the lowest score were claimed for using compensation, social, and affective writing strategies. In the case of the present study, however, the analysis of the quantitative data collected through a closed-ended questionnaire indicated that the given treatment improved students' process-genre models of writing strategies when writing paragraphs.

Based on the descriptive statistical analysis (see Tables 2 and 3), the findings of the current study revealed that teaching writing strategies is still a challenge in EFL writing classrooms, as both the experimental and control groups did not use writing strategies before the lesson. Besides, a previous study conducted by Pitenoee et al. [62] supported that not much attention has been given to the impact of cognitive strategies on content in students' writing. Al-Jarrah et al. [63] further stated that experienced writers are better at effective planning regardless of text content, while poor writers are unable to do so. On the other hand, Al-Jarrah et al. [63] further substantiated that, among all learning strategies, the metacognitive strategy is a higher-order executive skill. He again notes that once learners have a good command of a metacognitive strategy, they will become more independent and autonomous and will be more capable of planning, monitoring, and evaluating their learning process, thus becoming efficient learners.

Moreover, the current researchers again note that writing is a cardinal skill for effective communication practiced extensively in primary education, but the students are not exhibiting adequate writing proficiency in their higher education and at their workplace. However, according to the data from Tables 2 and 3, during their study time, the students' data in the experimental group reflected that using the process-genre writing approach frequently showed a significant improvement in the students' paragraph writing than conventional lecture methods; as a result, the results of descriptive statistics showed that the experimental group used higher writing strategies after the experiment. In connection with this analysis, Ramli [64] also claimed that a cognitive writing strategy had a significant impact, and this argument supports the ideas of [62]. Ramli [64] further noted that learners who are taught logical strategies spontaneously produce more correct and mature writing than their peers. The students who used a cognitive writing strategy approached the writing task with no apparent trepidation since they had been writing, revising, and editing for all these years. Similarly, Habtamu [12] depicts that experimental and control groups displayed mid-to-high levels of metacognitive writing strategies before treatment, while their after-treatment results showed a higher level of metacognitive writing strategies. Petric and Czárl, as cited in Habtamu [12], again state that both groups had medium-to-high levels of metacognitive writing strategies. In connection to this idea, Lv and Chen [65] also consolidated that the metacognitive writing strategy teaching approach embodies the teaching idea of being student-centered and is targeted to foster students' metacognitive strategies by monitoring and evaluating their abilities in English writing. In comparison to what Al-Jarrah et al. [63] argued, the statistical results of students' use of metacognitive writing strategies before and after treatment were presented.

After conducting an independent sample t-test for paragraph writing, the results of the questionnaire on writing strategies used after treatment showed a significant difference in the average scores of overall writing strategies used between the experimental and control groups. The difference was observed at the level of significance of 0.001, which means that the p-value is greater than 0.05 (see Table 4). This discovery suggests that the process-genre approach has a positive impact on the writing strategies used by students. It considers various aspects such as cognitive, metacognitive, compensation, social, and affective writing strategies. The study found a

significant improvement in overall writing strategy use in the experimental class after 12 weeks of treatment. Huang [32] conducted a similar study on the effect of the process-genre approach on meta-cognitive writing strategies that consider the audience. However, his findings after 6 weeks of treatment did not show a significant impact on the planning, monitoring, and evaluating factors.

Examining the effects of integrating writing strategy training into EFL writing instruction on learners' strategy use and writing performance took first-hand attention from researchers [66]. In the same token, a paired sample *t*-test was computed to determine whether there was a significant difference between the means of two within-groups and a paired sample *t*-test was computed. In connection with this claim, Chen's [66] study indicated that there were significantly positive differences in learners' using writing strategies and in writing proficiency favoring the experimental group. In the same way, the current researchers computed a paired sample *t*-test by comparing the before- and after-treatment use of writing strategies questionnaires. This implies that the experimental group showed significantly higher results in the after-treatment compared to the before-treatment of the writing strategies questionnaires. The *p*-value of 0.001 is also less than 0.05, which indicates a statistically significant difference between the treatment and control groups (see Tables 5 and 6). It implies that the experimental group of students performed better in their after-treatment compared to the before-treatment in terms of paragraph writing strategies such as cognitive writing strategies, meta-cognitive writing strategies, compensation writing strategies, social writing strategies, and affective writing strategies. This result rejects the corresponding null hypothesis but supports the statement that reads, "*Students who use the process-genre approach to their writing significantly differ in their use of paragraph writing strategies from students who learned writing through the conventional lecture method.*"

In connection with current research, Chow [39] and Nakhon et al. [67] showed how to assess the effectiveness of a process-genre approach in helping students develop writing strategies that improve their writing. Chen [66] further noted that writing strategy training can be integrated into EFL writing instruction and can have positive impacts on learners' strategic awareness and writing strategy use, as well as their writing performance. On the other hand, Habtamu's [12] findings indicated that most students used compensation writing, but his results showed that most students were not utilizing cognitive writing strategies, metacognitive writing strategies, social writing strategies, or affective writing strategies. Based on this study, it was confirmed that the process-genre approach affected students' writing strategies in writing paragraphs on different tasks.

6. Summary, Conclusion, and Recommendations

This is the last part of the article. It has three sections: the first section summarizes the study, the second section focuses on the conclusions that were drawn from the major findings, and finally, the third section makes recommendations for possible actions.

6.1. Summary. The purpose of the study is to identify the effects of the process genre approach in teaching writing on EFL students' writing strategy use in writing paragraphs and assess the possibility of attaining the objectives of the main study using different instruments such as writing strategy questionnaires. The population in this study was Public Administration students at WCU. The sample was restricted to 112 students (two groups of students) in public administration during the year 2022. One of these groups was assigned as an experimental group and the other as a control group by a lottery method. The study used a quasi-experimental design and followed a quantitative approach to data collection and analysis.

The experimental group of students received training on how to use process-genre models to enhance the use of writing strategies in writing paragraphs. However, those in the control groups were given their paragraph-writing lessons in conventional lecture methods. The treatment was preceded by the before-treatment questionnaire administration to determine the homogeneity of the students in the control and experimental groups in the use of the writing strategy in writing paragraphs. Then, the writing strategy use questionnaires were administered after the treatment to compare the two groups' mean scores on the use of writing strategies in writing paragraphs.

The researchers took the necessary steps to ensure instrument reliability (use of writing strategies in questionnaires). To validate the questionnaires, the researchers used Cronbach's alpha to measure the internal consistency of the items. They calculated Cronbach's alpha using SPSS to determine whether the questionnaire was reliable. Thus, the reliability coefficient of alpha was found to be 0.787 and 0.841 before and after treatment, respectively, which is an acceptable value. Quantitative data were then collected using these instruments and analyzed with means scores, standard deviations, independent samples *t*-tests, and paired samples *t*-tests. The study's results showed a significant difference in the use of writing strategies between the experimental and control groups, which means that the process-genre models were implemented in the experimental group.

6.2. Conclusions. The following conclusions have been made in relation to the objective of the study and based on the findings:

(i) The study aimed to investigate the effects of the process-genre approach on helping students improve their paragraph writing skills at WCU. A quasi-experimental design was used, where the experimental class received 12 weeks of treatment using the process-genre approach, while the controlled class was taught using conventional lecture methods in the classroom. The research utilized before- and after-treatment measures to determine any changes in students' writing strategies in writing paragraphs.

(ii) It was found that the process-genre models have a significant positive effect on the participants' use of writing strategies in writing paragraphs. This

indicates that the objectives of the main study can be attained using the intended data collection instruments as validated, reliable, and improved in this study.

6.3. Recommendations. Based on the findings of this study and the conclusions drawn, the following recommendations are forwarded:

(i) University-level English language teachers should focus on the process-genre approach to help enhance their students' use of writing strategies in writing paragraphs.

(ii) To be able to provide appropriate process-genre models on their students' writing, English teachers should be aware of the role of the process-genre approach in improving student learning through the use of writing strategies.

(iii) Curriculum developers, syllabus designers, and teaching materials writers must give attention to process-genre models so that teachers, educators, and teachers follow this direction.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that there are no conflicts of interest.

Authors' Contributions

Amanuel Kidane Albore, Getachew Seyoum Woldemariam, and Gemechis Teshom Chali are the researchers who designed the work, analyzed and interpreted the data, and wrote the discussion. They have made the necessary revisions, comments, and suggestions.

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Supplementary Materials

Questionnaires for students' paragraph writing strategy use. (*Supplementary Materials*)

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