Effects of a Constructivist Learning Environment on Developing Writing Skills in EFL Students

Gentjana Taraj
Department of Foreign Languages, Faculty of Education
'Aleksander Moisiu' University, Kampusi Universitar, Spitallë, 2000, Durrës, Albania
E-mail address: gentjanataraj@uamd.edu.al
ORCID: https://orcid.org/0000-0001-9865-3058

Anita Muho
Department of Foreign Languages, Faculty of Education
'Aleksander Moisiu' University, Kampusi Universitar, Spitallë, 2000, Durrës, Albania
E-mail address: anitamuho@uamd.edu.al
ORCID: https://orcid.org/0000-0001-8965-9714

Roman Králik
Theological Institute in Spišské Podhradie, Catholic University in Ružomberok
Spišská Kapitula 12, 034 01 Ružomberok, Slovakia
E-mail address: roman.kralik73@gmail.com
ORCID: https://orcid.org/0000-0002-1929-1894

ABSTRACT

Aim. This research investigates the effectiveness of constructivist-based learning in developing the writing skills of EFL students.

Methods. A sample of 60 second-year students from the Department of English Language at "Aleksander Moisiu" University was selected. The sample was divided into two groups, an experimental group (n=30) and a control group (n=30), on the basis of English proficiency levels. The instruments used for this study include an EFL writing skills test (pre- and posttest) and the Writing Quality Scale (Stuart and Barnett, 2024) for scoring the written essays. The control group received instruction through a traditional teaching method, whereas the experimental group was taught in a constructivist learning environment. The analysis focused on the in-

tegration of new linguistic input into students' writing tasks, assessing the lexical, grammatical, and textual elements they utilised to enhance their writing techniques.

Results. A comparison of the scores between the two groups revealed statistically significant differences in favour of the experimental group in terms of EFL writing skills. The findings suggest that students' writing skills improved over time with the implementation of the constructivist approach.

Conclusion. This study views the constructivist approach as a successful framework for teaching writing skills. However, the study's limitations should be addressed, and other areas of learning should be explored to further verify the positive effects of constructivism in language education.

Keywords: cognitive constructivism, new input, old knowledge, social constructivism, second language, writing skills

Introduction

Over the past few decades, the constructivist approach to learning has gained prominence in education, representing a move away from behaviourist and empiricist perspectives toward a more interactive and experiential model of learning. There is a distinct difference between the constructivist and traditional approaches to teaching, particularly in the way information is delivered. In a traditional classroom, information is directly transmitted to the students, making them passive recipients of knowledge. In contrast, a constructivist environment invites students to engage in meaningful activities that transform them from passive listeners to active learners. As a result, constructivism shifts the responsibility for learning from the teacher to the learner, necessitating teachers having a better understanding of the theory and its practical implementation to minimise the gap between theory and practice (Applefield et al., 2000).

In a second-language classroom, this requires that teachers not only acknowledge learners' linguistic backgrounds but also use that background to facilitate new learning. In fact, many instructional approaches, which account for the diversity of learners' knowledge and their active involvement in learning activities, have been developed and proven to be highly effective in second language learning. To a significant extent, these activities have been integrated with constructivist principles, supported by both theoretical frameworks and empirical data from second language classrooms (Ayaz & Sekerci, 2015; Marsh, 1998; Maypole & Davies, 2001; Mustafa et al., 2022; Nair & Sanai, 2018; Seçer & Yücel-Toy, 2020; Wolff, 2003).

Although constructivist theories in education are not new, their application in formal education systems, such as in Albania, faces several challenges (Leka & Beshiri, 2024; Taraj & Jani, 2019). These challenges primarily stem from the practical implementation of constructivist methods, especially in the teaching and learning process

of writing, where this approach is often viewed as particularly productive. The present study aims to investigate the dynamics of individual cognitive and social constructivist approaches to acquiring new knowledge. Specifically, it seeks to explore whether there is a positive shift from traditional learning paradigms toward a more constructive learning approach, particularly in writing tasks.

Cognitive vs. Social Constructivism: Understanding Learning Theories

Constructivism, as an approach to expanding knowledge, does not represent a single, unified theory. In contrast, constructivism as a paradigm consists of two major branches, cognitive constructivism and social constructivism, both of which emphasise the active role that students play in discovering new insights (Piaget, 1964; Vygotsky, 1986). Both approaches have developed theories concerning children's cognitive development and learning abilities, particularly in relation to writing skill outcomes.

To provide a clearer understanding of cognitive constructivism, let us revisit Jean Piaget's theory (1957, 1964), which has recently gained popularity in the education system. Piaget's theory is based on assumptions about how learners interact with their environment and how they integrate new information and knowledge with existing frameworks (Mascolo & Fischer, 2004). This process involves learners reforming or reframing their cognitive structures in response to their external environment, allowing them to incorporate new experiences into their way of thinking (Slavin, 2006). According to this theory, learners are active participants in the learning process, taking in new information and adapting it to fit their understanding (Naylor & Keogh, 1999). In other words, cognitive development arises from the interaction between the individual and their environment rather than through the passive accumulation of knowledge

Piaget's work (1952), which focused primarily on children's cognitive development, consistently highlights the process of assimilation and accommodation as fundamental to learning. This theory represents a learning process through which learners acquire new knowledge by actively engaging in learning. Children interpret new experiences by preexisting schemas formed by their prior experiences. When this is not possible, they must adjust their thinking patterns, which, according to Piaget, range from perceptual dominance in preoperational thinkers to logical thinking in formal operational thinkers (Wadsworth, 2004).

Piaget believed that knowledge is constructed. He argued that new knowledge is understood and integrated when existing knowledge is adjusted to accommodate new information. Researchers such as Robert Sternberg (as cited in Kamii & Ewing, 1996) have supported this theory, suggesting that by providing learners with the right experiences, we can enhance their analytical, creative, and practical abilities, ultimately

increasing their intelligence. In language teaching, this implies that knowledge is not simply transmitted from teacher to learner; instead, it is constructed by challenging learners' abilities and drawing on their concrete experiences.

On the other hand, Lev Vygotsky's approach (1978) focuses on the social aspects of cognitive and empirical knowledge, emphasising the importance of real-life interactions in learning. Vygotsky's theory reinforces the idea that knowledge is produced and enriched through engagement with others, both in the classroom and in informal settings such as play (Irshad et al., 2021; Kalpana, 2014; Kanselaar, 2002; Wozniak, 1993). The idea of social learning is demonstrated in collaborative environments, where people create shared meanings and conclusions through interaction with peers (Brownstein, 2001; Gibbons, 2015). This process is particularly helpful in generating new text structures, which emerge from the social interactions between learners and teachers in the classroom (Giridharan, 2012). It is in contrast with traditional models where learning is seen as the passive transmission of information rather than an active construction.

Furthermore, Lev Vygotsky (1986) highlights that while a child's spontaneous discovery is crucial for cognitive development, its influence diminishes after a certain age. He introduced the concept of the Zone of Proximal Development (ZPD), which suggests that learning, development, and knowledge are fundamentally shaped by the social and cultural environments in which individuals grow (Valsiner & Veer, 1999). Each learner operates within a "zone" where tasks that require guidance today can be accomplished independently in the future. Thus, the more interactions learners have with teachers and peers, the more naturally they will complete tasks.

In the context of this paper, Piaget's individual cognitive constructivism and Vygotsky's social constructivism positively impact learning outcomes (Cooper, 2007; Eigbeonan, 2013). This is because both theories view learners as active participants in the learning process, where new information is integrated with prior experiential knowledge and the external input gained during lectures. Both theories consider learners' cognitive knowledge interaction, which integrates external sources and their own experiential support, crucial for making learning more efficient and productive.

Related Studies on the Positive Effect of Constructivism on Students' Writing Skills

Constructivism, with its emphasis on active learning and knowledge construction, has been shown to significantly impact learning outcomes by promoting deeper understanding, critical thinking, and retention. The positive impact of constructivism on the learning environment is related primarily to the enhancement of students' critical thinking abilities, which are essential in the process of writing (Beach, 2007; Ernst & Monroe, 2006; Rumpagaporn & Darmawan, 2007). Findings from

numerous studies have shown that students' critical thinking improves and benefits positively from learning settings rooted in constructivist principles.

Robert L. Williams et al. (2003) emphasised the importance of critical thinking in higher education, stressing the need for active learning strategies that encourage students to engage in critical thinking rather than absorbing the information passively. Teaching methods that foster interaction, debate, and problem solving are integral to developing these skills. Similarly, Peter A. Facione (2011) concurs with Williams et al.'s results, highlighting critical thinking as essential for academic success. However, the findings from these studies have been criticised for certain limitations, including small sample sizes, the lack of pretest data for comparison with posttest data, and the predominantly quantitative nature of the data (Kwan & Wong, 2015).

Numerous studies have demonstrated that constructivist-based environments can positively affect the development of writing skills (Akkus & Doymus, 2022; Arikan, 2006; Bissoonauth-Bedford & Stace, 2015; Fahady, 2019; Huang et al., 2014; Marsh, 1998; Seçer & Yücel-Toy, 2020; Zulela & Rachmadtullah, 2018). For instance, Shoaib Saeid Fahady (2019) reported that mind-mapping strategies enhance students' writing skills. Statistical analysis of the posttest scores revealed a significant difference between the control and experimental groups, with the experimental group achieving higher scores. Similar results on the positive impact of mind mapping on students' writing skills were reported in studies by M. S. Zulela and Reza Rachmadtullah (2018).

Additionally, research on the benefits of collaborative learning in foreign language education has indicated that students benefit significantly from group work. For instance, Anu Bissoonauth-Bedford and Ray Stace (2015) investigated the effectiveness of collaborative writing in French-language learning at the University of Wollongong. The study focused on improving intermediate-level writing skills by integrating e-learning tools with in-person interactions. This highlights the crucial role of group work and peer scaffolding, where students help each other overcome language learning challenges. This research offers valuable insights into how the combination of social constructivist methods and technology can effectively improve writing skills in foreign language learning. It serves as a key reference for those interested in collaborative and technology enhanced language education (Sullivan & Pratt, 1996; Storch, 2005).

Another study by Liza Derkhachadourian (2019) examined the effectiveness of the PowerQuest tool in enhancing undergraduates' writing ability. The results indicated that the use of cognitive and constructivist theories helped the experimental group perform better than the control group. Similarly, a study by Bissoonauth-Bedford and Stace (2015) found that 24 final-year university students in Australia reported high levels of critical reflection and improved individual language skills, especially in writing. These findings revealed that social constructivist strategies significantly enhanced students' language knowledge and writing skills. A similar positive effect of blended learning on the writing process was reported by Genevieve Suzann Lentz and John Wankah Foncha (2021).

Subadrah Madhawa Nair and Mogana Sanai (2018) reported on an experimental method called the Student Team Achievement Division (STAD) which was implemented at an international school in Selangor, Malaysia. Qualitative data from the study revealed that students benefited from group work, highlighting the effectiveness of constructivist-based programs in improving both writing and social skills. In another study, Adem Akkus and Kemal Doymus (2022) compared the impacts of two methods used on school students: Reading, Writing, and Presentation (RWP) and Jigsaw (JG). The results revealed that both the RWP and the JG methods were effective in developing cognitive and social skills, leading to improved academic performance.

On the basis of findings from various studies, we conclude that both individual cognitive and social constructivist environments significantly enhance and improve students' learning ability. Individual cognitive constructivism enables learners to develop understanding through personal experiences and reflections, fostering deeper comprehension. In addition, social constructivism emphasises collaboration and interaction with peers, promoting the exchange of ideas and diverse perspectives. Together, these approaches create a dynamic learning atmosphere that fosters critical thinking, creativity, and effective communication skills, ultimately resulting in more engaged and capable students.

Methodology and Hypothesis

A hypothesis focusing on the positive effect of constructivism on developing students' writing skills has been put under investigation. The main objectives of the study were to implement and evaluate this approach and the factors that underpin the interaction of creativity, aiming to increase the level of written production achieved by the participants in the study. In this context, the dynamics of constructivist thinking and writing have been closely analysed to generate concrete results and conclusions concerning the overall growth in creativity due to constructivism. To compare data from the first and second groups of essays produced by participants in the experimental and control groups, the research aimed to verify the following hypotheses:

- *There is a statistically significant difference between the mean scores of the experimental and control groups in the post administration of the writing skill test*, which would support the claim that the constructivist approach functions as an interaction between cognitive empiricism and new knowledge. As such, it has a positive impact on the writing production of the participants, both qualitatively and in terms of consistency. In other words, this hypothesis would support the claim that the constructivist approach helps learners improve their writing skills more than the traditional teaching approach does.
- *There was a statistically significant difference between the mean scores of the pretest and posttest in favour of the post-administration scores for both the experimental and con-*

trol groups. If this hypothesis is not true, we conclude that the difference between constructivist and traditional methods in terms of positive results in learners' writing skills is minimal.

Participants

The participants in this study were sixty second-year undergraduates who study at the Faculty of Education at 'Aleksandër Moisiu' University' in Durrës. The participants were selected from four classes in two academic years 2021-2023: two classes were exposed to traditional teaching, whereas the other two classes followed a constructivist-based programme. Students were attending the academic writing course. Table 1 provides a broader picture of the sample composition, where the two groups (control and experimental) were created so that the groups' average grades from previous year and participants' language proficiency assessed through a language proficiency test at the beginning of the semester were equal. Students were informed that their participation in the tests would be assessed for the purpose of this study. To avoid putting pressure on them while writing the essays, they were not told in advance who would be selected for essay assessment.

Table 1
Sample Distribution by Groups' Average Grade and Proficiency in the English Language

Sampling	Control Group	Experimental Group
English language proficiency performance expressed in individuals and per group	30 out of 60	30 out of 60
	4/30-poor	6/30-poor
	7/30-sufficient	8/30-sufficient
	13/30-good	10/30-good
	5/30-very good	4/30-very good
	1/30-excellent	2/30-excellent
Group's Average Grade	8.1 C+	7.8 C

Source. Own research.

Study Instruments and Data Gathering

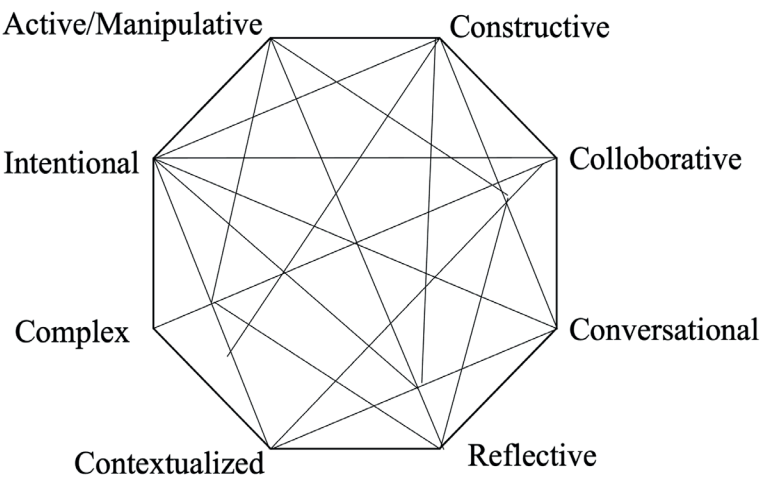
A quasi-experimental framework consisting of both a control group and an experimental group was employed to explore how constructivism influences the development of undergraduate students' writing skills. The effectiveness of a constructivist programme in improving writing skills was tested by providing the control group

with traditional instruction, where the teacher delivered the new knowledge, while the experimental group participated in a constructivist approach, where students were encouraged to actively construct their own understanding.

To encourage constructivist thinking during essay writing, various tools tailored to both individuals and groups have been employed. The experimental group participated in a constructivist learning environment characterised by features such as intentional, collaborative, and reflective thinking (Jonassen, 1999). The full set of characteristics identified in Jonassen (1999) is illustrated in Figure 1.

Figure 1

Eight characteristics of meaningful learning in Constructivist Learning Environments.



Note. Adapted from Jonassen (1999).

Throughout the semester, the lecturer implemented a constructivist (cognitive and social) approach to teaching writing skills by engaging the experimental group in authentic, functional, and pragmatic uses of language. As students worked on different writing activities, the lecturer provided clear instructions on what was expected of them and trained students on how to structure an argument, develop ideas coherently, answer questions, solve problems, and make conclusions. Brainstorming and problem-solving techniques were implemented to aid students in organising their ideas before starting to write. Initial activities typically included class discussions that drew on students' prior knowledge, followed by questions to evaluate their comprehension and attitudes toward new concepts. The purpose was to create rich, meaningful, and self-directed learning experiences that would foster deep understanding and critical thinking. Group writing activities and peer feedback were frequently used to allow students to engage with others' ideas, challenge assumptions and refine their own thinking. The materials

used in the classroom varied widely. Students were regularly encouraged to write down their thoughts and share them with their peers and the lecturer. Formative assessment methods, such as providing ongoing feedback and focusing on personal growth, which closely align with constructivist principles, were employed to engage students actively in reflective learning activities (Muho & Taraj, 2022).

The writing tasks were scheduled to be performed at the beginning and at the end of the semester, allowing lecturers enough time to ensure that both sources of information were fully addressed and that the collection of a substantial database produced by the two groups was completed. The composition skills and writing mechanics presented in Table 2 were monitored to determine whether they were present in the essays analysed, as these were seen as foundational elements toward stimulating writing skill development. Given that students were asked to write narrative essays within a 50-minute period, we expected their essays to provide enough consistency to allow for an efficient analysis of these criteria. The Writing Quality Scale (WQS) – HE version (Stuart & Barnett, 2024) was adapted to evaluate students' essays across the semester (Table 2). This scale provides an effective analytical framework for tracking longitudinal improvements in writing subskills within higher education, making it a valuable tool for formative assessment and progress monitoring. The adaptation in this study, focused specifically on students' use of newly learned vocabulary and structures, consistent with the constructivist approach.

Table 2

Composition Skills and Writing Mechanics in the Focus of the Analysis

Criteria	Description
Content and development	Development of overall text cohesion and the variety of connectives used.
Structure and organisation	Logical division of ideas at paragraph level, concluding paragraph consistency, and overall text cohesion.
Vocabulary	Use of newly learned words and expressions, their relevance to the topic and text style.
Sentence structure	Typology of sentence structure (choppy, medium, or long) and whether they conform to English grammar rules.
Punctuation	Correct use of punctuation, including capitalisation and apostrophes that aid overall text comprehensibility.
Spelling	Accuracy of spelling throughout the text, including correct use of standard orthography.

Source. Adapted from Stuart & Barnett, Writing Quality Scale, 2024.

According to WQS, each subskill was scored from 1 to 4, with the total writing production score ranging from 1 to 24. The essays scoring between 6 and 12 were considered high-quality writing (Table 3), those scoring between 13 and 16 were medium

progress, and those scoring between 17 and 24 were classified as having lower quality or insignificant cognitive constructivist input.

Table 3

Example of Scoring the Posttest Essay nr. 21 in the Experimental Group

Composition skills	Scores	Comments
Content	2	Ideas are well supported though one section lacks detail. Clear voice but slightly repetitive.
Structure	1	Excellent structure and good flow of ideas.
Vocabulary	1	Excellent vocabulary and varied word choice.
Sentence structure	3	Noticeable grammar issues in few sentences. A few disjointed sentences that disrupt the flow.
Punctuation	2	The punctuation is correctly used with few misuses of quotation marks and apostrophes.
Spelling	3	There are numerous spelling errors.
Final evaluation	12/24	Generally, good but with some areas for improvement

Source. Own research.

Findings and Discussion

In the teaching and learning process, students are expected to actively engage with the information they are taught, integrating it into their knowledge base as they complete tasks such as essay writing. When students fully embrace this interactive process, they embark on the path of productive reflection, which empowers them and facilitates the acquisition of new knowledge (Schunk, 2012).

The analytical focus of this study was on the quality of students' post-writing production, which is considered an indicator of effective interaction between empirical language data input and the knowledge acquired during the semester. Improvements in students essays over the semester were analysed by examining the writing competences in pre and post-tests.

Table 4 presents the descriptive statistical (means and standard deviations) for the six writing subskills across both the control and experimental groups at pretest and post-test. A general trend of improvement is observed in both groups, reflected in lower mean scores at post test. The experimental group exhibited larger reductions across all subskills, most notably in structure and organisation ($\overline{x}_{pre}$= 2.90; x_{post}=1.73) and punctuation ($\overline{x}_{pre}$ = 2.30, $\overline{x}_{post}$=1.53), which according to WQS (Stuart and Barnett, 2024) indicates stronger improvements. In contrast, the control group showed more modest decreases, which indicates less improvements in writing subskills.

Table 4

Mean and Standard Deviation for Each Writing Subskill by Group (Control vs. Experimental) and Test Time (Pretest and Posttest)

Criterion	Control group				Experimental group			
	Pretest		Posttest		Pretest		Posttest	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Content and development	2.83	0.83	2.63	0.71	2.50	0.97	1.97	0.76
Structure and organisation	2.60	1.00	2.47	0.86	2.90	0.96	1.73	0.58
Vocabulary	2.70	0.75	2.47	0.62	2.43	0.73	1.77	0.50
Sentence structure	2.93	0.78	2.73	0.64	2.80	0.71	1.97	0.55
Punctuation	2.47	0.68	2.23	0.50	2.30	0.75	1.53	0.63
Spelling	2.30	0.65	2.10	0.66	2.20	0.71	1.70	0.65

Source. Own research.

Data was first assessed for normality using Shapiro-Wilk test. IBM SPSS Statistics version 25.0 was used for analysis. The results from the test showed that at the conventional alpha level of 5%, three variables ($Control_{pre}$ W=0.94, p=0.09; $Control_{post}$ W=0.92, p=0.07; $Experimental_{post}$ W=0.93, p=0.06) were normally distributed, while one variable ($Experimental_{pre}$ W=0.86, p<0.01) was not. The results from the test are displayed in Table 5, along with skewness and kurtosis. These findings justified the use of both non-parametric and parametric tests for comparing the data within and between groups.

Table 5

Shapiro-Wilk Test Results on Normality Distribution of Data

Groups	Test	Statistics (W)	p value	Skewness	Kurtosis
Control	Pretest	0.94	0.09	-0.31	-0.81
	Posttest	0.92	0.07	-0.49	-0.69
Experimental	Pretest	0.86	0.001	-1.44	3.00
	Posttest	0.93	0.06	0.28	-0.67

Source. Own research.

Effect sizes were calculated to assess the magnitude of the observed differences, supplementing the results of statistical significance tests. For parametric tests, Cohen's d was reported, interpreted as 0.2 = small effect, 0.5 = medium effect, and 0.8 = large effect (Cohen, 1988). For non-parametric tests (Mann–Whitney U and Wilcoxon Signed-Rank), Rosenthal's r was calculated using the formula: $r = Z / \sqrt{(N)}$, and interpreted following Cohen's (1988) guidelines: 0.1 = small, 0.3 = medium, and 0.5 = large effect.

Mann-Whitney test results displayed in Table 6 compared the pre and post writing scores between students who received a constructivist approach (experimental

group) and students who received a traditional teaching approach (control group)**.** It is important to note that according to Nichola Stuart and Anna L. Barnett's WQS (2024), lower scores indicate higher writing quality, while higher scores indicate areas that need improvements.

Table 6

Mann–Whitney U Test Results and Median Scores by Group (Control vs. Experimental) at Pretest and Posttest.

Group	N (per group)	Median (Contr.)	Median (Exp.)	Z	U	p value	r (effect size)
Pretest	30/30	16	16	-0.64	407	0.52	0.08
Posttest	30/30	15	11	-5.94	51	0.001	0.77

Source. Own research.

Results from this test showed no statistically significant difference between the pre-test scores of the control group (Md_{pre}=16) and the experimental group (Md_{pre}=16). The results showed that although there is a difference between the pretests scores, the magnitude of the difference is not substantial (U = 407, z=-0.64, p=0.52, r=0.08 small effect). However, in the post-test the experimental group significantly outperformed the control group, with lower scores (Md_{post}=11 vs. 15) U=51, z=-5.943, p <.01, r=0.77 large effect). These findings suggest that students who received a constructivist teaching approach showed a significant improvement in their writing competence. Therefore. interaction between the two knowledge sources varies with teaching methodology. The first hypothesis was confirmed and validated.

Control Group Writing Performance

Although the Mann Whitney test identified significant differences between groups, within group analysis provided further clarification on the impact of constructivist approach. A paired t-test comparing overall pretest and post-test scores in the control group, revealed no statistically significant difference $t(29) = -1.51$, $p = 0.14$, with a small effect size (d =-0.28).

To analyse students' performance across six writing subskills, six paired t-test were conducted for the control group (Table 7). Although there were slight decreases in mean scores for all subskills, suggesting modest improvement in writing quality, none of the differences reached statistical significance ($p > 0.05$ for all subskills). More specifically, the greatest mean reduction was observed in vocabulary ($\bar{x}_{pre} = 2.70$, $x_{post} = 2.47$), with a t-value of 1.65 ($p = 0.11$), followed by punctuation ($x_{pre} = 2.47$, $\bar{x}_{post} = 2.23$), t = 1.75 ($p = 0.09$). Despite showing slightly larger numerical differences, these changes were not statistically significant. Improvements in sentence structure (t =1.53, p =0.14) and spelling (t =1.23, p = 0.23) were similarly non-significant. The smallest changes oc-

curred in structure and organisation ($t = 0.64$, $p = 0.53$) and content and development ($t = 1.06$, $p = 0.30$), indicating minimal progress in these areas.

Table 7
Control Group Writing Performance (Pretest vs Posttest)

Criterion	t.value	df	p value	Cohen's d
Content and development	1.06	29	0.30	0.19
Structure and organisation	0.64	29	0.53	0.12
Vocabulary	1.65	29	0.11	0.30
Sentence structure	1.53	29	0.14	0.28
Punctuation	1.75	29	0.09	0.32
Spelling	1.23	29	0.23	0.22

Source. Own research.

Overall, these results suggest that despite small improvements across all six writing subskills in the control group, none of them reached statistical significance. The traditional instructional approach did not lead to meaningful improvements in students' writing subskills over the semester, only minimal improvements in areas such as text production, vocabulary and technical aspects such as spelling and punctuation. Students' essays remained relatively simple and mechanical, showing limited development in cohesion, vocabulary, or organisation, aligning with findings from prior research on passive instructional models. Areas requiring general text organisation to enhance text consistency were either misused or lacking. Students' essays tended to be more mechanical, leading to simpler and less coherent text with weaker logical consistency.

The essays from this group consisted mainly of short paragraphs, with sentences typically composed of familiar words. From a theoretical perspective, it appears that these students view the teacher's input as too abstract or difficult to apply via a cognitive generativist writing approach. This leads to noticeable limitations in sentence construction throughout the essays. Additionally, when viewed through the lens of combining new and old information, the group's writing performance reflects a low level of linguistic capacity. The participants in this group require more time to process the complexity of new information, which prevents them from reaching higher proficiency in writing. They often treat new content as something to be passively received, showing difficulty in adapting to a constructivist approach to writing.

The indicators mentioned above revealed that the performance of the control group improved only slightly in terms of writing efficiency. Their post-test writing performance can be classified as medium quality, with modest progress. *Overall, the essays mean scores for this group ranged from 15.83 on the pretest to 14.63 on the post-test, which, according to Stuart and Barnett WQS, classifies the group's pre- and post-test writing performance of medium quality.*

Experimental Group Writing Performance

Given the non-normality in pretest data, a Wilcoxon Signed-Rank Test was conducted for the experimental group (pre vs post-tests). Results revealed a statistically significant decrease in post-test scores (z= -4.61, p <0.01), with a large effect size (r=0.84). Among the 30 participants, 28 showed lower scores in the post-test (improved writing quality), two showed higher scores (poor writing) and none remained the same. The results from this test suggest that the constructivist teaching approach for this group was associated with significant increase in writing quality.

To examine the changes across subskills, six Wilcoxon Signed Rank Tests were performed. Table 8 indicates substantial improvement across all writing subskills for the experimental group (p<0.01) with large effect size in every subskill. These results suggest that the constructivist intervention led to notable improvements in all students' writing subskills, especially in structure, sentence construction, and vocabulary. We attribute these improvements to the constructivist programme, which aligns with the students' individual and group mastery of English as a foreign language.

Table 8

Experimental Group Writing Performance (Posttest vs Pretest)

Criterion	N	Improved Post<Pre	Worsened Post>Pre	Ties	Z	p-value	Effect size (r)
Content and development	30	15	2	13	-3.11	.002	0.57
Structure and organisation	30	22	2	6	-4.03	.001	0.74
Vocabulary	30	16	0	14	-3.70	.001	0.68
Sentence structure	30	19	0	11	-3.98	.001	0.73
Punctuation	30	19	2	9	-3.62	.001	0.66
Spelling	30	15	2	13	-3.12	.002	0.57

Source. Own research.

Analysing essays from the experimental group, we conclude that the participants in this group were more agile and motivated learners, demonstrating the highest level of awareness in the writing approach. These students produced longer and more coherent texts with clearer logic and advanced grammar. Their essays were marked by consistent text coherence, correct grammar, proper punctuation throughout, and the effective use of new vocabulary.

On the basis of the grammatical and linguistic rules reflected in their essays, it is evident that the constructivist generation of new words and sentences was more flexible in this group. Their writing predominantly drew upon their theoretical empirical knowledge, which was enriched by newly acquired lexical and stylistic elements. This interaction during the writing process enhanced the articulation of ideas throughout their essays. The cognitive constructivist approach they employed led to more

efficient and accurate writing, characterised by higher language quality. This resulted from the interaction between new and existing knowledge, which was reinforced by their recent classroom learning. Many demonstrated flexibility in applying new vocabulary and theoretical constructs, evidencing a high level of cognitive engagement.

Furthermore, 22 of 30 students demonstrated the use of theoretical principles of essay writing, with a particular emphasis on the logical division of ideas, incorporating both descriptive and narrative content. Their essays were characterised by longer and better-organised sentences in most of the paragraphs, reaching a maximum degree of comprehensibility and advanced text structure and management. This group exhibited a stronger understanding of how to maintain clarity and coherence in their essays. Viewed through the lens of constructivist knowledge, the writings production by the experimental group showed a much higher level of language input, aligning with their language skills and capacity.

The overall text quality and compactness in this group can be indexed as a strong and excellent representation of the constructivist approach in the writing process. In this group, the constructivist approach demonstrated a higher level of interactive application, significantly improving the comprehensibility and textual accuracy of their essays. Theoretically, students in this group view the constructivist approach as an ideal tool to stimulate generative thinking, enabling them to articulate and express their ideas more efficiently and effectively. *Among this group, the number of writing subskills per essay that showed improvement ranged from four to six. At the group level, the mean scores shifted from 15.13 in the pretest production to 10.53 in the posttest production. According to Stuart and Barnett's WQS, this improvement elevated the group's performance from medium to high-quality writing.*

Conclusions

Constructivism, as both a theory and a learning method, consistently affirms that new knowledge, whether recently acquired or drawn from prior empirical experience, is best and most efficiently accumulated through reflection, action, and the construction of both types of knowledge. This blend of new and existing knowledge is the key factor that propels students to actively participate at the centre of the knowledge generation and acquisition process, a core concept of cognitive constructivism (Schunk, 2012). In this sense, constructivism acts as a catalyst, triggering essential constructivist principles such as acknowledgement, uniqueness, and complexity. These principles, in turn, encourage, utilise, and reward the complexity inherent in the learning process.

The statistical analysis demonstrated that the constructivist teaching approach produced large and consistent effects on students' writing competence. The experimental group showed improvements in all writing subskills that were significant both statistically ($p < 0.01$) and practically ($r = 0.84$). Students in the experimental group demonstrated a signifi-

cantly better ability to combine cognitive and constructive input, particularly in creating new structures. They modified their existing knowledge structures to accommodate newly acquired information, enhancing the overall functionality of their written products.

The findings from this study indicate that students' writing production improved through constructivist learning, which empowered them to control and monitor their own knowledge acquisition. In conclusion, integrating both cognitive and social constructivist strategies in the writing classroom enables students to have a deeper understanding of the writing process and develop stronger writing skills. As a result, students not only learn how to write more effectively but also develop the critical thinking and problem-solving skills necessary to excel in academic writing and beyond.

Limitation of the Study

Several important considerations must be taken into account. First, the sample size was modest (N = 60), and participants were drawn from a single academic institution, which may limit generalizability. Second, the study examines learning outcomes based on written production in a single semester. However, longitudinal research is needed to assess the impact of constructivist learning over time. In addition, results from this study do not guarantee that the current trend will continue or be applicable in all areas of learning. For a more objective evaluation of the importance of constructivism, other learning assessment strategies should be employed.

Finally, undergraduate students differ from graduates, who tend to adopt a more pragmatic approach when this method is applied in writing. While some undergraduate students in this study exhibited inconsistencies, particularly a lack of the necessary skills to integrate both knowledge sources effectively, this may not be the case for MA students of English as a foreign language.

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