IMPLEMENTING CONSTRUCTIVIST LEARNING THEORY TO ENHANCE VOCATIONAL SCHOOL STUDENTS' WRITING SKILLS

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This study investigates implementing constructivist learning theory in enhancing students' writing skills at vocational high schools (SMK). The research explores how constructivist principles such as active learning, scaffolding, social interaction, and real-world contextualization influence students' ability to organize ideas, develop content, and express thoughts in written English. Utilizing a qualitative approach through classroom observation and student interviews, the findings reveal increased student engagement, improved text coherence, and deeper learner autonomy. This paper contributes to a better understanding of the pedagogical implications of constructivist theory for vocational English writing instruction.

Keywords: EF Constructivist Learning Theory; English As A Foreign Language;
Vocational School; Writing Skills

1. INTRODUCTION

Writing is as important as other skills required for learning English, which is crucial in the context of English as a Foreign Language (EFL). Writing is not exclusively valuable for academic and career contexts; it is important in communication for students attending vocational high schools (Sekolah Menengah Kejuruan/SMK). Students are expected to be able to produce texts that are practical and relevant to fields such as software engineering, hospitality, or business administration. Possessing enabling skills allows participation in genuine communication tasks such as job application letters, reports, documentation of projects, and correspondence via email in professional settings (Fareed et al., 2016; Nguyen & Habók, 2021).

Some researchers claim that the writing proficiency of Indonesian learners of English as a Foreign Language (EFL), particularly those from vocational schools, is still substandard. Alwasilah's (2017) and Sulistiyo et al.'s (2020) studies highlighted that students often struggle to organize their ideas, apply appropriate grammar and vocabulary, and achieve coherence and cohesion in their writing. This problem is exacerbated in vocational schools because English composition instruction is often given less attention than reading and speaking. This results in a significant gap between the students' writing skills and the industry expectations they will face once they graduate (Marhaeni et al., 2021).

Students are no longer accepted as passive recipients of their language skills and language meaning development. Along with other learning theories, constructivist learning theory is the most relevant among other theories regarding the teaching of languages. Learning is viewed here as receiving instruction and actively constructing knowledge through exploration, reflection, and social interaction (Mishra, 2020; Fatimah & Suprijadi, 2021).

Teachers may apply constructivism in writing through brainstorming, collaborative writing, peer feedback, real-world writing, and providing appropriate scaffolding. These methods allow learners to actively participate in conversations on topics associated with their study and to work more autonomously (Widodo, 2016; Zhang, 2020). Prior studies have shown the benefits of contextual, interactive, and reflective writing activities as students report greater motivation to write and increased performance in writing (Hapsari & Surjono, 2020; Nguyen & Habók, 2021).

Regardless of the anticipated outcomes of constructivist learning theory, its implementation in Indonesia's vocational schools remains under-researched. Most studies focus on senior secondary schools or postsecondary education, as they tend to use

theoretical frameworks and aid students in industrial contexts. Furthermore, there are some classroom-based explorations of collaborative and contextualized writing instruction, but little rigorous quantitative research systematically evaluates the impact of constructivist instruction on writing skills in SMK (Putra et al., 2022; Pratiwi, 2020).

Constructivist learning theory, rooted in the works of philosophers and psychologists such as Jean Piaget and Lev Vygotsky, emphasizes that learners construct their understanding and knowledge of the world through experiences and reflecting on those experiences. Unlike traditional educational approaches that often depict learners as passive recipients of information, constructivism contends that meaningful learning occurs when students engage in active, experiential learning processes. This approach fosters critical thinking, problem-solving, and the ability to adapt knowledge to new situations, aligning with contemporary educational requirements (Darmawan & Ramli, 2025).

At the root of constructivism is the notion that knowledge is socially constructed through interactions with others. As seen in the work of Siregar et al., the application of Vygotsky's concepts of social constructivism highlights the significance of collaborative learning environments where students learn through dialogue and interaction with more knowledgeable peers or educators (Siregar et al., 2024). Furthermore, studies suggest that fostering these interactions can significantly enhance learners' cognitive development and autonomy, as learners not only acquire knowledge but also reflect upon and articulate their understanding within a social context (Ghimire & Luitel, 2024).

Importantly, constructivist strategies such as project- and inquiry-based learning are effective in various educational settings. These pedagogical models engage students in authentic tasks that require critical thinking and creativity, essential skills in the modern learning environment (Siregar et al., 2024). For instance, implementing project-based learning in teaching science allows students to actively participate in scientific inquiry, thus promoting more profound understanding and knowledge retention (Siregar et al., 2024). Similarly, Angraini et al. illustrate how constructivist approaches can enhance computational thinking in mathematics education, demonstrating its versatility across disciplines (Angraini et al., 2024; Angraini et al., 2024).

Additionally, insufficient educational techniques have a key influence on improving writing skills.   Without sufficient scaffolding and specific teaching, children fail to establish successful writing methods autonomously (Limbong et al., 2023).   Evidence reveals that instructors' interpersonal and social competencies considerably influence students' writing development, as helpful and encouraging teachers can assist in reducing some of the problems faced by low proficiency students (Limbong et al., 2023).   Furthermore, curricular focus on integrating reading and writing activities has been demonstrated to boost writing skills through a more holistic instructional method (Halili & Diva, 2023).

 External factors, such as socioeconomic status, also affect learners' writing proficiency.   Research reveals that lower socioeconomic position coincides with reduced access to educational resources and support, which can seriously affect students' writing talents (Dong, 2024).   The integration of technology, such as automated writing evaluations and peer feedback systems, has shown promise in improving writing skills among low-proficiency groups, indicating that innovative intervention strategies could prove effective in this area (Rofiah et al., 2023; Aljohani, 2022).

Constructivist learning theory, building on Vygotsky's sociocultural perspectives, stresses the necessity of prior knowledge activation, scaffolding, social interaction, and the Zone of Proximal Development (ZPD). These components are vital in teaching methods that increase learning and cognitive growth, notably in writing. As with other components of constructivism, the activation of prior information plays a key role, as it is a starting place for the new knowledge to be added. This approach supports learners in reconnecting earlier experiences and relevant knowledge with developing concepts, increasing understanding. Sulindra et al. discuss the relevance of previous knowledge activation and how it supports learners in the assimilation of new information through the aid of prior knowledge, therefore, allowing them to better interact with the subject being taught (Sulindra et al., 2024). This activation is especially effective in writing teaching, where students can use their experiences

to strengthen their writing and reasoning skills.

Scaffolding, another order of business from the lectures of Vygotsky, is known to aid pupils greatly with self-guided learning by permitting assistance while obtaining independence in the learning activity. In other words, it enables pupils to capture the subtleties involved in the complex writing process through incremental learning (Luo et al., 2023). Effective scaffolding promotes the completion of a given writing activity and develops independent learning through gradual withdrawal of aid when proficiency is reached.

Luo et al. explain this in terms of models that go beyond basic instruction and assist learners to develop literacy by offering systematic aids because they wish to incorporate Vygotsky's concepts on scaffolding as a way of growing the self-efficacy and self-skill of learners in writing (Luo et al., 2023). The boundary between self-regulated learning and assisted learning within Vygotsky's paradigm preserves a guiding concept of ZPD—The Zone of Proximal Development (ZPD). Fostered by constructive feedback on writing tasks, the potential for absorbing information and strategies produces a developmental zone outlined by ZPD. The objective behind ZPD is to adapt instructional tactics so that students are challenged just beyond their capabilities, while the necessary scaffolding is alongside, as explained by Nunes. Such feedback does enable growth within the parameters of ZPD (Nunes et al., 2024). Supplementary or opposing peers' and teachers' dialogues can be looked at from the scaffold angle, making the journey through ZPD easier (Sulindra et al., 2024).

Social interaction is the key way learning takes place within the paradigm of constructivism. Vygotsky stressed that social interaction, particularly language, is vital for learners as it supports them in forming and cognitively organizing their thoughts and expression. Constructive collaborative writing encourages collaboration by enabling learners to get peer comments, share strategic approaches, and create knowledge. Jiang and Kalyuga's research supports this; they claim that collaboration increases participating students' writing skills through discussions and encouraging each other (Jiang & Kalyuga, 2022).

The activation of prior knowledge, social interaction, scaffolding, and the ZPD are interrelated components of the constructivist learning theory that govern engagement and achievement in writing instruction. Through the intelligent application of these elements, teachers can construct appropriate learning environments that respond to students such that, as a result, their growth is stimulated and they nurture independent critical thinkers and writers.

Drawing on Vygotsky's sociocultural views, constructivist learning theory explains the importance of prior knowledge activation, scaffolding, social interaction, and the Zone of Proximal Development (ZPD). These components are essential in teaching processes that enhance learning and cognitive development, particularly in writing. As with other aspects of constructivism, the activation of prior knowledge is critical as it serves as a starting point for the new knowledge to be added. This process assists learners in reconnecting prior experiences and relevant knowledge with emerging concepts, which strengthens understanding. Sulindra et al. explain the significance of prior knowledge activation and how it assists learners in the assimilation of new information through the aid of prior knowledge, therefore allowing them to better engage with the material being taught (Sulindra et al., 2024). This activation is especially useful in writing instruction, where students can use their experiences to enhance their writing and argumentation skills.

Another order of business from the lectures of Vygotsky is noted to aid students tremendously with self-guided learning by permitting a level of assistance while achieving independence in the learning task. In other words, it is the process of aiding students to capture the subtleties involved in the complex writing process through stepwise learning (Luo et al., 2023). Effective scaffolding supports the completion of a specific writing task and fosters independent learning through gradual withdrawal of assistance as competency is achieved.

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The activation of prior knowledge, social interaction, scaffolding, and the ZPD are interrelated features of the constructivist learning theory that guide engagement and achievement in writing instruction. Through the judicious application of these features, teachers can design appropriate learning environments that respond to students so that, as a result, their development is stimulated and nurtures independent critical thinkers and writers.

The use of constructivist learning methodologies in EFL teaching in vocational contexts is particularly significant. The applied technique in vocational teaching and training is active problem-solving, which is not simply confined to classrooms but expands to real-life circumstances. Changing from a textbook- and lecture-based model to a more student-focused learning strategy is often needed to boost students' results and involvement in EFL classes. Fulfilling the aims of the constructivism theory in EFL classrooms within occupational contexts is optimal since learners are actively changing information into knowledge. (Du, 2023) Constructivist educational theory should be implemented in higher vocational colleges, emphasizing teaching through student engagement and peer collaboration and building a culture of teamwork among students. This technique enables learners to practically examine the content, contributing to the total language abilities and soft skills required to achieve in designated industries (Du, 2023).

In addition, Khan et al. (2023) emphasize merging intercultural communicative competence (ICC) with constructivist pedagogy towards building realistic learning experiences in EFL classrooms. Exploring cultural factors about language allows students to be more competitive in the global job market since they are equipped with foreign language abilities and intercultural knowledge crucial in many professions (Khan et al., 2023). The importance of constructivism in EFL contexts is further highlighted due to technological changes and the advent of blended learning environments. (Jiang & Liang, 2023). Such learning environments can boost learners' participation with the subject, even with acknowledged issues in engagement and retention. Implementing technology within a constructivist framework allows learners to proceed through materials at their own pace, access multiple available resources, and collaborate remotely with peers from diverse backgrounds, increasing their language learning (Jiang & Liang, 2023).

Moreover, constructivism is crucial in cultivating learner autonomy and critical thinking abilities in vocational education. Yen and Thao (2024) demonstrate that EFL teachers are transitioning to a constructivist competency-based assessment approach, promoting self-directed learning and metacognitive activities at the reflection level. Through inquiry and collaboration, students learn to manipulate language, so they learn to think divergently and analyze industry-relevant challenges within their training environments (Yen & Thao, 2024). The call for flexibility within the constructivist approach model underlines educators' need to shift as adaptors and facilitators. Rayes and Albelaihi (2023) mentioned that observational learning is also an important part of constructivist approaches to EFL education, demonstrating that learners thrive in collaborative learning contexts. The active participation of teachers in the learning process modifies student interactions and provides a more action-

oriented, responsive educational environment (Rayes & Albelaihi, 2023).

Adopting constructivist learning theory to boost vocational school students' writing skills has attracted attention in educational research. This approach emphasizes active learning, where students create their understanding of writing through collaborative activities, peer feedback, and the integration of existing information. Several studies indicate how this idea can be effectively implemented to improve writing skills across various vocational situations. This study illustrates how students generated knowledge by merging their current experiences with new content, dramatically improving their writing abilities. Collaborative work in such circumstances increases participation and helps students critically analyze and enhance their writing quality.

Naima et al. evaluated the ability of vocational students in hospitality to create paragraphs containing English terms related to food and beverage services. This research indicated that through constructivist approaches, students effectively integrated industry-relevant language into their writing (Naima et al., 2024). This study demonstrates the usefulness of contextualized learning, where students engage with specific language and writing requirements about their field, resulting in better writing ability. In the context of teacher-written feedback, Deng and Chinokul noticed that EFL vocational students preferred getting structured feedback, showing a preference for constructive comments that accord with the ideas of constructivist learning (Deng & Chinokul, 2023). This implies that when intelligently provided, comments can guide students' knowledge of writing standards and improve their performance. The alignment of feedback systems with students' preferences is vital in sustaining their motivation and increasing their writing skills.

Pramilaga et al. highlighted how visuals may drive students' motivation and interest, improving their writing skills (Pramilaga et al., 2023). Employing visual aids in teaching writing corresponds with constructivist ideals by stimulating students' imagination and helping them to convey their thoughts more thoroughly. This technology-enhanced approach allows students to activate past knowledge and visualize topics, boosting their writing experiences. Sidupa's narrative research into the experiences of Indonesian vocational students during the post-pandemic period yielded insights about resilience in learning situations. The study underlined the relevance of narrative approaches in teaching writing by allowing students to reflect on their personal experiences and obstacles, resulting in more expressive and reflective writing works (Sidupa, 2023). This strategy encourages learners to engage emotionally with their writing, boosting their skills and motivation.

A meta-analysis conducted by Syahid et al. on constructivist learning models emphasized that these methods considerably improve student learning outcomes, particularly writing abilities, by stressing student engagement and hands-on activities (Syahid et al., 2023). The data reinforces the necessity for instructors to adopt such techniques to build a constructive learning environment that enables students to take control of their writing processes. The introduction of Constructivist Learning Theory in vocational contexts successfully boosts students' writing skills through collaborative learning, contextual application, constructive feedback, and technological integration. Multiple studies validate these tactics, providing a complete approach to writing teaching that suits the special linguistic needs of vocational students, encouraging their engagement, and improving their writing outputs.

One key problem in using constructivist principles is the reliance on teacher performance. Research by Prasetyani and Gunawan analyzes how teacher performance influences students' expressive writing in a vocational context. Their findings demonstrate that teacher engagement significantly improves students' writing ability, stressing the necessity for professional development to equip teachers in the constructivist pedagogical method (Prasetyani & Gunawan, 2024). Effective professors who offer constructive criticism and establish a collaborative environment can help students improve their writing skills more fully.

Salsabila et al. note that applying contextual learning methodologies, notably through on-the-job training programs, can give authentic writing experiences for vocational students (Salsabila et al., 2024). These programs create issues in connecting education with practical

industrial needs. Students participating in industry-related writing activities are more likely to integrate important language and context into their work, benefiting from constructivist techniques that emphasize real-world linkages (Salsabila et al., 2024).

Research by Naima et al. demonstrates that students' ability to employ industry-specific vocabulary in writing significantly correlates with their confidence levels (Naima et al., 2024). However, a lack of confidence in writing sometimes prohibits vocational students from participating in writing assignments. The move to a constructivist method entails strengthening students' autonomy, fostering peer collaboration, and creating a safe emotional space for expressing their ideas through writing.

The use of blended learning approaches, such as the use of visual aids, helps boost students' writing skills efficiently. Pramilaga et al.'s studies underline the impact of visual stimuli in enhancing writing motivation among vocational students (Pramilaga et al., 2023). However, the reliance on technology must be accompanied by adequate training for students and instructors to overcome barriers related to access, technical ability, and familiarity with these tools within constructivist frameworks.

Vocational classrooms are generally heterogeneous, comprising students with varied abilities and learning styles. Research indicates that personalized writing training approaches, such as peer feedback, can satisfy these various demands. Ingdriawati's study stresses the benefits of peer feedback in stimulating the writing process for vocational students, helping them to learn from one another's skills and faults (Ingdriawati, 2023). However, ensuring that all students interact meaningfully in this feedback loop can be tough and requires careful guidance. Various impediments to properly adopting constructivist theories also persist. Sidupa's narrative inquiry shows students' obstacles in retaining motivation and concentrating during their writing tasks (Sidupa, 2023). Constructivist learning demands an environment where students feel emotionally linked to their learning. However, many vocational students can be disengaged owing to external pressures or opinions of vocational education as inferior. Addressing these hurdles entails promoting resilience and self-efficacy, which are crucial for successful constructivist engagement.

While integrating constructivist learning theory in vocational education involves hurdles such as teacher preparedness, student motivation, and the necessity for contextual learning, it also offers considerable opportunity for boosting writing skills. Through promising instructional approaches, technology integration, and supportive peer dynamics, vocational students can overcome barriers and improve their writing talents. Continued research and adaptation of tactics will be crucial in reaching the full potential of constructivist methodologies in vocational situations.

The lack of empirical data presents a fascinating opportunity for study, particularly with the increasing expectations placed on vocational graduates in the 21st century. English writing skills are no longer essential merely for academic achievement but also for employment readiness and professional interaction (Apsari, 2020; Hidayati, 2018). If constructivist methods are efficient in developing such skills, they could enhance the work of English teachers and curriculum planners in vocational schools.

To fill this gap in the research, this study aims to analyze the application of constructivist learning theory in increasing students' writing skills in an SMK setting. More specifically, the study tries to determine whether or not the application of constructivist principles in a writing class results in a statistically significant improvement in students' writing compared to the traditional, teacher-centered approach. The study utilizes a quasi-experimental approach with a control and experimental group, pre- and post-evaluation tests, and additional data collected through observations and from students' class-written exercises. The central research questions guiding this study are : (1) How might the writing skills of vocational high school students improve with constructivist-based instruction relative to conventional instruction?; and (2) What strategies in a constructivist environment can be identified that aid in developing students' writing skills?

As highlighted previously, a significant gap in research on constructivist approaches to vocational-EFL writing instruction invites pedagogical practice vs. theory in teacher training programs. I believe these findings will also inform educators who wish to advance the

teaching of writing by fostering student engagement, autonomy, critical thinking, and higher-order thinking skills, which may inspire curriculum change at Indonesia's vocational schools.

The learner is placed at the center of the teaching process in this research model to actively facilitate students in developing the required writing competencies as learners within professional contexts. With the evolving debates around the best approaches to teaching writing in EFL and vocational education settings, this study seeks to add to the discourse by rigorously investigating the differences between constructivist and conventional methods.

To address the problems of using Constructivist Learning Theory to strengthen vocational school students' writing skills, a comprehensive plan is necessary to concentrate on key techniques, resource allocation, and stakeholder involvement. This plan considers instructional approaches, technology integration, feedback mechanisms, and support systems to promote student engagement and improve writing outputs. There are several ways to be the solution: 1) Professional development for educators. One of the first steps is to provide extensive training for instructors in applying constructivist approaches. This includes training on enabling collaborative learning activities, incorporating feedback in writing teaching, and integrating technology into the classroom. As indicated by Kizkapan, increased training can boost teachers' self-efficacy in delivering constructivist-based instruction efficiently (Şenler, 2022).

Regular professional development workshops should incorporate practical writing tasks, critical thinking integration, and digital technologies to ensure instructors are sufficiently prepared (Segovia, 2024). 2) contextual and authentic writing assignments. To bridge the gap between theory and practice, assignments that represent real-world vocational responsibilities should be prioritized. Aligning writing projects with the various circumstances vocational students will encounter in their professions boosts relevance and improves engagement. Segovia underlines the relevance of contextualized writing skills in law enforcement reporting, which can be applied to similar vocational contexts for optimal student outcomes (Segovia, 2024).

This technique will push students to apply their writing talents to genuine scenarios they may encounter in their jobs. 3) Integration of technology. Incorporating technology is vital for increasing writing teaching through constructivist methods. Tools such as Grammarly and AI-based writing aids can give essential support for students in enhancing their writing skills (Suryanto et al., 2024; Wu, 2024). Laurillard's approach indicates that technology should aid student-centered learning environments, facilitating feedback and reflection processes (Mallahi, 2022).

Therefore, professional development should also focus on educating educators to utilize these tools optimally and incorporate them into classes meaningfully. 4) structured feedback mechanisms. Providing organized feedback is crucial in the writing process. Educators must adopt and enhance feedback systems that resonate with students' learning preferences. Targeting peer review as a formative assessment strategy can promote engagement and comprehension through collaborative critique (Listiana et al., 2023). Studies indicate that timely and constructive feedback considerably boosts writing skills and fosters student engagement (Ramadhani, 2024).

It is necessary to develop frameworks surrounding feedback types, ensuring they adapt to diverse writing talents and that students successfully learn how to offer and receive criticism. 5) Time management and support structures. Allocating appropriate time for writing practice is crucial. Research demonstrates that expanding time limitations for writing projects encourages pupils to generate higher-quality work (Ramadhani, 2024). Educators should develop curricula that involve enough writing time while fostering a supportive environment where learners feel comfortable addressing problems in their writing abilities. This could include peer support initiatives, writing seminars, and mentorship programs, leading to better confidence and writing quality. 6) emphasizing reflective practices. Encouraging reflective behaviors through notebooks or portfolios might help students internalize their learning experiences. This method coincides with the findings of Ahmed, which demonstrate that reflective writing increases critical thinking and self-awareness among students (Ahmed, 2024).

Regular reflections should be introduced into the curriculum to prompt students to analyze their writing processes and foster continual development. 7) Active student involvement. Encouraging active student participation in creating learning experiences builds ownership of the writing process. Students should be enabled to create writing goals, choose themes of interest, and participate in collaborative writing projects that enhance peer interaction and knowledge development (Li, 2023). This involvement develops writing abilities and fosters critical thinking, cooperation, and peer-to-peer learning opportunities.

Implementing Constructivist Learning Theory to enhance vocational school students' writing skills requires a multifaceted approach, encompassing teacher professional development, authentic writing tasks, effective technology integration, structured feedback mechanisms, time management strategies, reflective practices, and active student involvement. By addressing these areas, educators may create a supportive and engaging learning environment that greatly enhances writing abilities and prepares students for successful careers in their chosen industries.

2. RESEARCH METHOD

This methodology utilizes a quasi-experimental approach with a quantitative focus, typical of classroom action research and comparative studies in language education (Creswell, 2012; Gay, Mills, & Airasian, 2011). Choices of instruments and procedures were made considering the context of vocational schools and the basic principles of constructivist language teaching (Widodo, 2016; Vygotsky, 1978).

Research Design

As for this study, a quantitative approach with a quasi-experimental design was used. The subjects of this study were two classes of 11th-grade students from a vocational high school. The experimental group was taught writing using constructivist teaching strategies, while the control group was taught with conventional methods. The purpose of this design was to evaluate the effectiveness of constructivist approaches to teaching on students' writing skills.

Research Participants

The participants of this research were 60 11th-grade students of software engineering from a vocational high school (SMK) located in Indonesia. They were split into two sections of 30 students. The sections were chosen purposively in consultation with the English teacher because of their shared academic characteristics.

Research Instruments

In this study, data were collected from multiple sources/tests, observations, documents, and interviews to establish credibility and ensure the trustworthiness of the findings (Patton, 2002). The following were the research tools used in this study:
1. Writing Tests (Pre-test and Post-test)
   The students' writing skills were evaluated before the treatment and following it. The assessment criteria consisted of five elements: content, organization, vocabulary, language, and mechanics. Scoring was conducted using an analytic rubric with a scale of 1-5 for each aspect.
2. Classroom Observation
   Constructivist learning activities were implemented in the experimental group, and these were recorded. Indicators such as active student participation, group work, scaffolding, and other contextual writing task elements were noted in the observation sheet.
3. Student Writing Samples
   To assess the acquisition of writing skills, students' writings were collected at intervals throughout the teaching activity.
4. Semi-Structured Interviews
   Eight students from the experimental group were interviewed to gain insights into

their experiences with constructivist-based writing instruction. The data were subjected to thematic analysis.

Research Procedure

The study spanned four weeks, consisting of two sessions per week, each lasting 90 minutes. In the experimental group, writing instruction was provided using a constructivist approach, which incorporated brainstorming sessions, collaborative writing exercises, and peer reviews. The control group was taught using traditional lectures and individual exercises. The same instructor taught both groups to eliminate instructional differences.

Data Analysis

Statistical analysis was done following an inferential quantitative approach as outlined by Creswell (2012), and qualitative data were thematically analyzed following Braun and Clarke's (2006) interview and writing data analysis procedures for identifying patterns and themes.

Quantifiable data was analyzed descriptively in terms of the mean and standard deviation and through t-tests (paired sample t-test and independent sample t-test) using SPSS version 25 at a significance level of 0.05. In contrast, qualitative data obtained from observations, student writings, and interviews were analyzed thematically alongside the quantitative data to strengthen and enhance the findings.

3. FINDINGS AND DISCUSSION

Student Engagement and Participation

Table 1 presents a comparative summary of student engagement indicators between the experimental and control groups. Observation data showed that students in the experimental group, taught using constructivist strategies, demonstrated significantly more active involvement in collaborative writing tasks, asked more questions, and showed higher levels of motivation.

Table 1. Indicators of Student Engagement and Participation

Indicator	Experimental Group (n=30)	Control Group (n=30)
Actively involved in group writing	28	10
Volunteered answers or ideas	25	8
Asked questions during activities	22	6
Showed excitement in tasks	24	9
Completed tasks collaboratively	27	12
Demonstrated autonomy in revisions	21	5

One observed student, for instance, often led peer group discussions and volunteered to write on the board, indicating increased confidence. Another commented in a follow-up interview, "Writing with my group helped me think more clearly. I felt comfortable asking questions, and we solved problems together." These findings reflect Vygotsky's (1978) theory of social constructivism, where interaction and collaboration serve as mechanisms for cognitive growth. In contrast, students in the control group often relied passively on the teacher's instruction and demonstrated lower levels of participation, as evidenced by fewer questions and minimal peer collaboration.

Improvement in Writing Aspects

Quantitative data from the pre-test and post-test writing assessments indicated substantial improvement in the experimental group across all assessed writing components. As shown in Table 2, the most prominent gains were observed in organization and coherence, followed by vocabulary enrichment.

Table 2. Writing Performance Improvements by Aspect

Aspect	Mean Pre-test	Mean Post-test	Mean Gain
Content	12.3	16.2	+3.9
Organization	11.7	15.8	+4.1
Vocabulary	10.5	14.3	+3.8
Language Use	11.0	14.1	+3.1
Mechanics	9.8	12.9	+3.1

In their post-test writing samples, students were able to organize paragraphs more logically using topic sentences, transitional devices, and supporting details. For example, one student wrote, "To create the software, we first made a flowchart. Then, we used HTML and CSS to design the layout..." This progression contrasts sharply with pre-test samples, where ideas were often fragmented and lacked clear sequencing. These improvements align with Widodo's (2016) findings, which argue that constructivist writing tasks—especially when contextualized and collaborative—enhance learners' ability to develop coherence and structure.

Students' Perceptions of Constructivist Activities

Student interviews yielded three major themes: (1) increased motivation through group work, (2) greater confidence in writing, and (3) relevance of tasks to real-life contexts. Students overwhelmingly appreciated peer interaction, stating that it helped reduce anxiety and improved their understanding of the writing process. One student explained, "I learned new words and ideas from my friends. I wasn't afraid of making mistakes because we worked as a team."

Another commented on the value of vocational relevance: "Writing about software projects or business letters made me feel that English is useful for my future." These findings confirm those of Wang (2022), who highlighted the importance of relevance and collaboration in boosting EFL learners' engagement and ownership over learning.

How Findings Support or Contrast with Previous Studies

The study's findings reinforce existing research suggesting that constructivist instruction improves both engagement and writing competence in EFL learners. Fareed et al. (2016) emphasized that active participation and social interaction are key to writing fluency and clarity—observations strongly echoed in this study.

Unlike some earlier studies (e.g., Kirschner et al., 2006), which argued that minimal guidance in constructivist settings might overwhelm learners, this study applied scaffolded constructivist strategies, offering structured support initially and gradually releasing responsibility. This supports the position of researchers like Ardiansyah & Haryanto (2021), who advocate for guided constructivism as a practical approach in contexts with varied learner proficiency.

Challenges and Teacher Reflection During Implementation

Despite the positive outcomes, several challenges emerged during the implementation. The teacher reported that managing group dynamics was demanding, especially in large classes with uneven participation. Some students tended to dominate discussions, while others remained passive. Furthermore, designing meaningful tasks relevant to students' vocational majors required extra preparation time and careful adaptation of curriculum materials. The teacher reflected, "This method encouraged students to be more active, but I had to invest more time in planning and monitoring. I also needed to adjust my role from instructor to facilitator, which was challenging at first." These challenges are consistent with observations from Fatimah & Pratama (2021), who emphasized the need for continuous teacher training and administrative support when implementing student-centered approaches in vocational schools.

How Can Vocational High School Students' Writing Skills Improve Through Constructivist-Based Learning Compared to Conventional Instruction?

The results of the pre-test and post-test indicate that students taught using a constructivist-based learning approach showed greater improvement in writing skills compared to those who received conventional instruction. The improvements covered aspects such as text organization, idea coherence, vocabulary usage, content development, and language mechanics.

Quantitatively, the experimental group experienced an average increase of 3.9 to 4.1 points across various aspects, while the control group showed smaller gains. An independent sample t-test on the post-test scores revealed a statistically significant difference ($p < 0.05$), indicating that the constructivist approach had a positive impact on students' writing achievement.

This improvement can be attributed to the pedagogical strengths of the constructivist approach, such as active student engagement in meaning-making, collaborative and contextual writing tasks, and peer feedback that supports gradual improvement. These findings align with those of Widodo (2016) and Fareed et al. (2016), who found that collaborative and task-based writing environments enhance students' fluency and text structure. The results also support Vygotsky's Zone of Proximal Development (ZPD) theory, which posits that students can achieve better learning outcomes through social interaction. In contrast, students in the control group were more passive, heavily reliant on teacher instruction, and had limited opportunities to engage in meaningful writing experiences. Their improvement was more mechanical and lacked depth.

Constructivist learning stresses active involvement and student-centered instruction, enabling learners to develop knowledge via experiences rather than passively accepting information. (Zhou et al., 2024) This active engagement in learning contexts—where students engage with material, collaborate, and apply their knowledge—significantly boosts informational retention and practical writing skills (Zhou et al., 2024). This contrasts with conventional approaches, including rote memorization and minimal interaction, generating reduced engagement and writing efficacy (Syahid et al., 2023). Constructivist approaches emphasize linking learning to students' real-world contexts, particularly crucial in vocational education. (Hidayati et al., 2024) It has been shown that contextualized learning media can improve vocational students' critical thinking and creativity, resulting in superior writing outputs (Hidayati et al., 2024). This approach enables students to use applicable vocabulary and writing approaches within their respective sectors, allowing them to fully understand the purpose and function of writing tasks.

One of the important parts of constructivist learning is developing collaboration among students. Project-based learning, as examined by Roemintoyo and Budiarto (2023), enables students to work together toward common goals, encouraging deeper learning and developing writing abilities through peer criticism and shared knowledge (Roemintoyo & Budiarto, 2023). Unlike conventional techniques, where writing is typically an isolated chore, constructivism supports a community of learners where students can discuss ideas, criticize each other's work, and build on each other's creativity. Constructivist learning theory matches well to develop higher-order thinking skills, a key necessity in vocational education. Studies by Syahid et al. (2023) demonstrate that constructivist models increase writing outputs and boost students' critical and analytical thinking abilities (Syahid et al., 2023). These skills are crucial for producing logical and persuasive writing, helping students respond successfully to their vocational sectors' demands.

Constructivist tactics can lead to improved motivation among students, as emphasized by Eliza et al. (2024), who showed that supporting active inquiry and discovery in learning environments promotes student involvement and investment in personal learning processes (Eliza et al., 2024). Conventional instruction, with its typically inflexible frameworks, may fail to spark the same level of enthusiasm, leaving pupils less driven to improve their writing skills. Constructivist learning emphasizes formative assessment and feedback, vital in improving writing proficiency. Research by Ghimire & Luitel (2024) reveals that effective feedback mechanisms, including peer review and reflective practices, are integral in

constructivist environments (Ghimire & Luitel, 2024). This ongoing feedback cycle helps students alter their writing styles and methods, developing self-regulation and personal improvement in their writing talents.

Constructivism embraces numerous learning modes, allowing for unique and diverse learning routes. Zhou et al. (2024) recognized the importance of personalized learning approaches, and a constructivist environment accommodates students' different needs, enhancing their writing in areas conventional education typically misses (Zhou et al., 2024). This adaptability helps to create a more inclusive learning setting where all students can thrive regardless of their beginning skill level. Using constructivist learning theory in vocational high school settings can dramatically increase students' writing skills compared to standard instructional techniques. The advantages include facilitating active learning, contextual relevance, cooperation, higher-order thinking, greater motivation, continual feedback, and accommodating varied learning styles. Research consistently supports these statements, suggesting that constructivist techniques lead to greater writing proficiency and prepare students more successfully for their future employment.

Constructivist learning theory offers substantial advantages for vocational education, particularly in strengthening students' writing skills. This strategy can lead to more successful outcomes than standard teaching methods by stressing active involvement, collaboration, and contextual learning. The following points describe the success of constructivist learning in vocational education, notably with a focus on writing skills.

Constructivist methods promote active learning, allowing students to engage directly with the material. Naima et al. conducted a study on students in the hotel accommodation program, demonstrating that constructivist methods helped students to effectively integrate specific English terminology into their writing (Naima et al., 2024). This involvement style contrasts significantly with conventional instruction, typically resulting in passive learning and minimal student interaction. Contextual learning is a cornerstone of vocational education, bridging classroom information to real-world applications. As observed by Salsabila et al., on-the-job training programs effectively contextualize learning, enabling students to use writing skills pertinent to their respective domains (Salsabila et al., 2024). Such practical experiences create a meaningful context for pupils, making writing tasks more relevant and stimulating. Collaborative learning activities are important to constructivist approaches. Research suggests that when students work together on writing activities, they can share ideas, provide criticism, and build critical thinking abilities (Almansour & Kurt, 2022). For example, the findings from Almansour and Kurt demonstrate that collaborative online environments can dramatically enhance student involvement and critical thinking in writing (Almansour & Kurt, 2022). This contrasts with typical education techniques, which may prioritize individual assignments and limit peer contact.

Constructivist learning emphasizes the relevance of feedback in the learning process. Research by Herlinawati et al. supports the assumption that structured feedback is crucial to the constructivist approach (Herlinawati et al., 2022). Unlike traditional approaches that commonly involve summative exams, constructivist practices provide continuing formative feedback, allowing students to perfect their writing over time and acquire self-regulation abilities. Constructivist techniques are beneficial in building higher-order thinking abilities necessary for vocational competencies. As underlined by Jalinus et al., implementing problem-solving strategies in writing projects improves writing skills and boosts students' critical thinking abilities, crucial for success in vocational contexts (Jalinus et al., 2023). This focus on critical thinking is sometimes lacking in conventional writing teaching, which may rely mainly on memorization and formulaic writing styles.

Motivation plays a significant part in learning, especially in vocational education, where practical application is paramount. The findings from Mudzakir et al. demonstrate that incorporating engaging and relevant content in writing tasks greatly enhances student motivation (Mudzakir et al., 2023). Constructivist learning allows students to connect writing assignments directly with their interests and professional objectives, developing a sense of ownership in their work.

A constructivist approach empowers students by promoting autonomy in learning. Research by Yuliyanto et al. reveals that constructivist methods can boost students' self-efficacy in writing as they regard themselves as active participants in their learning process (Yuliyanto et al., 2024). Conventional instruction often diminishes this sense of agency, where pupils feel confined by inflexible frameworks and teacher-centered techniques. The effectiveness of Constructivist Learning Theory in vocational education, particularly for enhancing writing skills, can be attributed to its emphasis on active engagement, contextual learning, collaboration, continuous feedback, higher-order thinking, increased motivation, and the development of self-efficacy. These features collectively contribute to a more comprehensive educational experience, educating students with the writing abilities necessary for their fields and promoting critical qualities required in the workforce. As the landscape of vocational education evolves, integrating constructivist approaches can lead to better-prepared, competent, and confident graduates.

What Strategies Can Be Identified in a Constructivist Environment That Support the Development of Students' Writing Skills?

Classroom observations and student interviews revealed several key strategies in constructivist learning that contributed to the development of writing skills, including

1. Collaborative Learning (Peer Interaction):
   Students worked in groups to brainstorm, draft, and revise their writing. Peer discussions encouraged knowledge sharing and language support.
2. Teacher Scaffolding:
   Teachers provided models, guiding questions, and structured feedback at the beginning of the process, then gradually shifted more responsibility to the students. This built student independence and confidence.
3. Contextual Writing Tasks:
   Writing tasks related to students' areas of expertise (e.g., job application letters or technical reports) increased motivation and learning relevance.
4. Reflective and Process-Based Writing:
   Students produced multiple drafts and engaged in reflection and self-assessment. This process supported continuous learning.
5. Use of Visual Aids and Writing Planners:
   Tools such as mind maps, charts, and outlines helped students organize their ideas before writing.

These strategies are consistent with the theoretical foundations of constructivism (Piaget, 1954; Vygotsky, 1978) and reinforce the findings of Ardiansyah & Haryanto (2021), who emphasized the importance of collaboration and contextualization in successful writing instruction. Additionally, student responses indicated that this method not only improved their writing outcomes but also enhanced motivation, reduced anxiety, and fostered greater learning autonomy.

In a constructivist setting, several tactics are employed to enhance the development of students' writing skills. These tactics harness active engagement, collaboration, and context-driven learning principles required for generating knowledge. The following sections highlight primary tactics that can boost writing skills among vocational high school students through a constructivist approach. Collaborative writing is a cornerstone of constructivist learning, stressing peer interaction and feedback. Research by Almansour and Kurt demonstrates the usefulness of collaborative online writing activities, where students share ideas and provide constructive comments, leading to enhanced writing outcomes (Almansour & Kurt, 2022). This method provides a supportive learning atmosphere that encourages students to engage critically with each other's work.

Inquiry-based learning involves pupils exploring writing through questions and problem-solving. Rohmi and Wahyuni found that allowing students to discover writing concepts via inquiry boosts their critical thinking and analytical abilities, which are necessary for excellent writing (Rohmi & Wahyuni, 2024). Students engage more fully with the writing process by creating questions and pursuing solutions. When students participate in peer-led writing

groups, writing circles allow for open exchanges about each other's work and collective goal planning. This technique facilitates communication and collaboration while building critical thinking abilities that are important for good writing (Tukan, 2024). Students can exchange ideas, receive feedback, and learn from varied writing styles, adding to their overall development as writers.

Instructional scaffolding plays a critical function in guiding students through the writing process. Dewi et al. underline the value of structured feedback in a virtual classroom, where continuing assessment helps lead student writing progress (Dewi et al., 2023). A scaffolded method guarantees that students receive adequate guidance, gradually transitioning them toward more independence in their writing activities. Including technology, such as online collaboration platforms and writing tools, can enrich writing activities in a constructivist framework. Madani et al. advocate for employing digital technologies to enable collaborative writing and feedback processes, enabling students to improve their writing skills in real-time, independent of physical location. This stimulates participation and develops students' digital literacy competencies (Nur et al., 2024).

Incorporating reflective methods allows students to critically analyze their writing processes and outcomes. Masruroh et al. discovered that keeping reflective diaries enhances metacognition, enabling students to analyze their progress and areas for growth in their writing skills (Macías & Dack, 2023). This self-assessment technique encourages learners to take ownership of their writing growth. Project-based learning (PBL) effectively encourages students to engage in real-world writing projects. Effective implementation of project-based assignments can boost motivation and skill learning as students apply their writing knowledge to meaningful projects (Mantra et al., 2023). PBL not only boosts the relevancy of writing assignments but also develops teamwork, creativity, and critical thinking, which are necessary for vocational education.

Teaching metacognitive methods, such as planning, monitoring, and analyzing their writing processes, helps students become more effective writers. Hwang's research reveals that self-regulated learning strategies contribute significantly to academic writing performance, highlighting the relevance of student self-efficacy in accomplishing writing goals (Hwang, 2025). By gaining metacognitive awareness, students can better comprehend their writing processes and adjust their talents accordingly. Applying constructivist-based methodologies in vocational education considerably boosts students' writing skills by increasing cooperation, inquiry, reflective practices, and technology integration. Research emphasizes the usefulness of these tactics in providing an engaging and supportive learning environment where students gain critical writing abilities. By focusing on constructivist methodologies, vocational educators can successfully educate students for the writing demands of their future occupations.

Effective implementation of constructivist learning methodologies can considerably boost students' writing skills, particularly in a vocational educational setting.

4. CONCLUSION AND SUGGESTIONS

This study demonstrates that the implementation of constructivist learning theory can significantly enhance the writing skills of vocational high school students. Through collaborative writing tasks, real-world contextualization, and scaffolded learning experiences, students in the experimental group exhibited marked improvements in organization, coherence, and vocabulary use. They also displayed higher levels of classroom engagement, autonomy, and motivation compared to their peers in the control group. Students' positive perceptions of constructivist activities affirm the importance of designing learner-centered writing instruction that is relevant to their vocational interests. Nevertheless, successful implementation requires thoughtful instructional design, ongoing teacher reflection, and institutional support to address practical classroom challenges.

These findings suggest that constructivist approaches can be a valuable strategy in English language teaching for vocational students. Future research is recommended to explore long-term impacts, include diverse vocational majors, and incorporate digital tools to support collaborative writing.

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