INVESTIGATING THE IMPACT OF WEB-BASED LANGUAGE LEARNING (WBLL) THROUGH WRITE & IMPROVE ON WRITING SKILLS IN SECONDARY SCHOOL

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Abstract

This study examines the impact of Web-Based Language Learning (WBLL) using the program Write & Improve on secondary school students' writing skills at SM St. Michael, Penampang, using the Social Cognitive Theory (SCT). The study sought to investigate students' perspectives and impact in writing through guided practice and feedback. The researcher used a two-cycle action research design that included both writing activities and open-ended surveys to collect information about students' writing performance and perceptions. Initial studies revealed that students struggled with the tool's UI and feedback mechanisms, restricting their development throughout the first cycle. However, significant increases were seen in the second cycle, with students obtaining higher CEFR bands and showing a greater grasp of feedback. Surveys revealed high satisfaction and perceived the effectiveness of Write & Improve, despite some technical issues and occasional inaccuracies in feedback. The study emphasizes the significance of teacher participation, as SCT and Vygotsky's Zone of Proximal Development (ZPD) indicate that directed learning and feedback can improve student outcomes. Researchers should conduct longitudinal investigations and perform different demographic testing. For educators, the findings emphasize optimal practices for incorporating WBLL technologies into instruction. This study adds to the growing body of knowledge about digital learning aids as well as providing ideas for better writing teaching through technology.

Keyword(s): *Web-Based Language Learning, Writing Skills, Write & Improve, Secondary School.*

INTRODUCTION

Over the last few years, there has been a significant change in education as tech-based tools such as web platforms have become an integral part of learning and teaching. Malaysia's thriving economy has readily welcomed technological advancements to improve their educational sector. One significant area of investigation is the influence of Web-Based Language Learning (WBLL) on the development of fundamental language skills among secondary school students, with a particular emphasis on writing abilities. To match with Malaysia's aim of achieving a technologically savvy workforce, recent alterations in education focus on implementing

technology-led teaching methodologies that can enhance learning outcomes (Ministry of Education Malaysia, 2017).

The study aims to explore the use of Write & Improve with Cambridge, which offers hundreds of tasks at all levels and get automatic feedback on where the writing might need improvement. The website allows students to make changes according to feedback generated to improve their writing. Despite of all the educational websites that offers benefits for learners in recent times, there is a significant gap in understanding the influence of Write & Improve on students' writing skill in English. According to Podburtnaja (2021), there have been few studies on the usage of Write & Improve as a supplementary resource for studying English, hence there is a research void. Furthermore, a study conducted by Karpova (2020) mentioned that most studies regarding the utilization of the platform – Write & Improve only being introduced without further analyzation. Although Huijser and Wali (2018) provided insights on the students' usage of Write & Improve in their study, they refrained from conducting any further examination.

Therefore, this present paper aims to investigate the impact of learning writing using Web-Based Language Learning (WBLL) through Write & Improve. To fulfill these aims, research questions need to be addressed:

1. How does Web-Based Language Learning help to improve students' writing?
2. What is the perception of Web-Based Language Learning among students?

LITERATURE REVIEW

Social Cognitive Theory by Bandura (1986)

Social cognitive theory is a generally used and scientifically proven approach for comprehending, forecasting, and figuring out how to modify human behavior. People's daily lives in contemporary society are largely shaped by the symbolic environment, according to Bandura (1986). Assimilation through technological means plays a major role in the social construction of reality and the formation of public awareness. Education has seen a paradigm shift often, with the emphasis shifting from teaching to learning. Bandura's theory of self-efficacy and self-regulation, while emphasizing the role of the social environment in the learning process, can be considered a paradigm shift within the individualistic approach. It is believed that the social environment shapes each unique human being. The collection of behavioral and environmental factors that a student may encounter can be referred to as the learning environment. Applications of information and communication technologies (ICT) might include educational resources that are available through various media and distribution channels, such as electronic self-study tools. The cognitive theory of knowledge would inspire the creation of ICT teaching techniques – web pedagogy objectives, and ways to alter a person's mental models.

CIPP Evaluation Model by Stufflebeam & Shinkfield (1985)

This study adopted the Context, Input, Process, Product CIPP Evaluation Model developed by Stufflebeam and Shinkfield in 1985. The model has been used in short and long-term studies in the United States and across the world, and its tenet emphasizes that the most essential purpose is to improve rather than to prove (Stufflebeam, 2003 as cited in Oflaz et al., 2022). The evaluation is conducted in accordance with the four components of the CIPP framework. In the Context phase of the assessment, the course instructor considers and chooses what needs to be

done. It explains why the chosen program is or will be executed. Goals, priorities, and strategies are developed in response to requirements and issues.

The key principles of this model align with the letters in CIPP - Context, Input, Process, and Product evaluation. The evaluator holds a crucial role by utilizing all four forms of evaluation to fulfill various important functions. Context evaluations help to identify the needs, challenges and opportunities present in a specific environment. They assist users of evaluation to define their goals as well as reference assessed necessities for targeted beneficiaries when appraising different programs such as school projects, instruction courses, counseling services or teacher assessment systems among others. Input evaluations are utilized to evaluate different approaches' work plans, budgets and strategies in order to assist users of the evaluation with creating better improvement efforts.

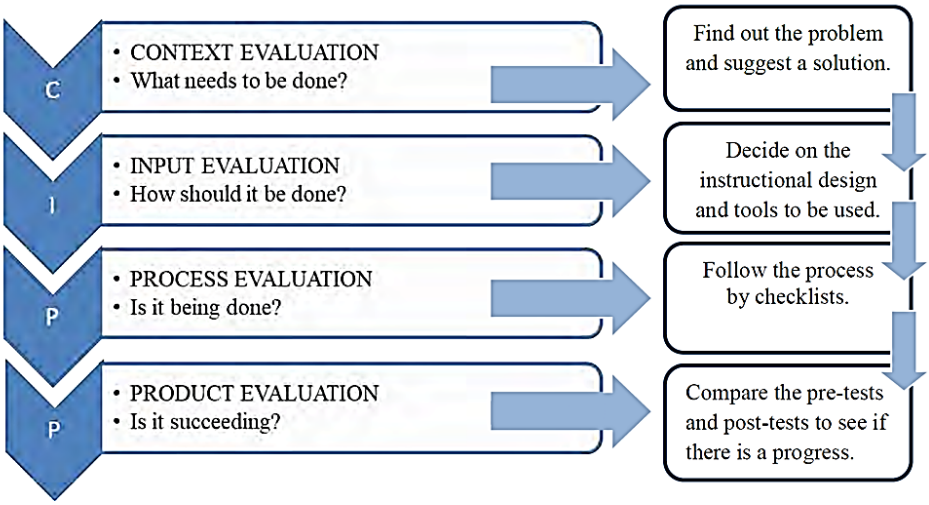

Figure 1: Adapted version of core concepts of the CIPP Model (adapted from Stufflebeam & Daniel L., 2003).

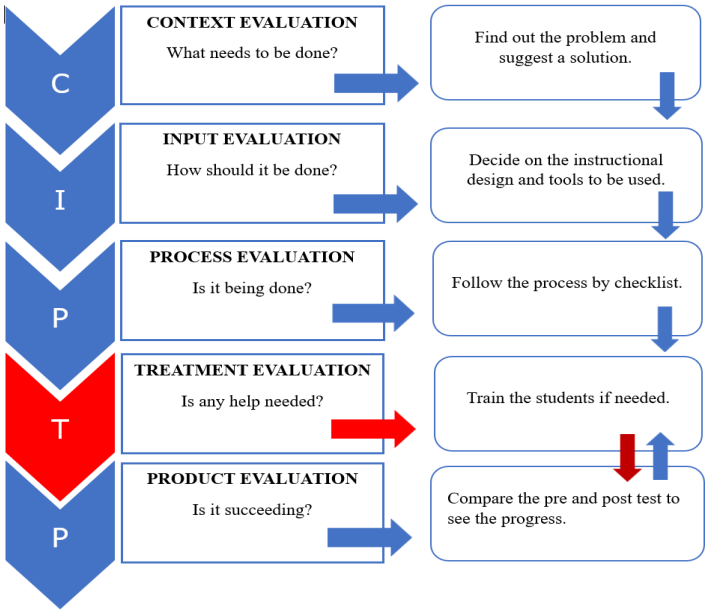

Figure 2: Revised version of core concepts of the CIPP Model

Web-Based Language Learning (WBLL)

Web-based language learning (WBLL) resources have long been popular among English language educators because they are extensive, widely available, user-friendly, and, most significantly, free access (Muftah, 2023). Several websites provide engaging games and linguistic activities to assist learners learn English efficiently. Specifically, WBLL can provide proficiency and high-quality outcomes in individual or group English learning. According to Lin., et.al. (2017), WBLL can improve language acquisition by encouraging students to participate and develop their own expertise. Poe and Elliot (2019) conducted a systematic evaluation of seventy-three papers that examined test fairness. The study identified five notable trends, including the use of internet resources in writing assessments to eliminate bias and promote fairness and validity. According to the perspective, including internet resources into testing produces neutral findings while also giving a more contextually accurate technique of evaluating individuals' genuine writing ability.

METHODS AND SAMPLING

This research design employed in this study is a qualitative method approach. The study focused on action research in an online environment except for the diagnostic writing test. The pilot test was utilized to run an error analysis on students' writing and to leverage it to Write & Improve to measure the impact of using online educational tools. Consequently, the participants were given a questionnaire to measure their perceptions of the examinee's opinions toward the implementation of Write & Improve in terms of satisfaction, efficiency, impact on writing skill, and motivation and it will be coded using content analysis.

The current study was conducted in SM St. Michael Secondary School in Penampang. The population of interest comprises only one class and only 16 students enrolled. The study included 37% or 6 female students and 62.5% or 10 male students. There was no criterion sampling involved if the students had access to devices such as laptops or smartphones and connection to the internet to access Write & Improve online. The proficiency of the respondents ranged from intermediate to high. Most of the respondents' first language is English, followed by Malay, Mandarin and Kadazan Dusun.

Furthermore, none of the students had exposure through web-based language learning, especially Write & Improve for educational aid in learning writing. The validity of the survey had been acknowledged by a lecturer from the Faculty of Psychology and Education at Universiti Malaysia Sabah. The reliability of this study relies on checking for the consistency of the themes and patterns that appear from the open-ended responses. Lastly, triangulation was done to compare and contrast the data from these different sources to validate the findings.

FINDINGS AND DISCUSSION

Feasibility of Web-Based Language Learning in improving students' writing

To answer the first research question, the following information is presented. The chart below shows 8 types of errors in students' writing for diagnostic test: incorrect verb tense (IVT), preposition, pronoun case, conjunction, spelling, run-on sentence, subject- verb agreement (SVA), and sentence fragmentation.

In this study, the principles of self-regulation and observational learning outlined in SCT are clearly evident in how students interacted with the feedback provided by Write & Improve. Throughout the study, students progressed from initially struggling with the interface and feedback coding to using the tool more proficiently and independently. This aligns with self-regulation as defined by SCT, where students gradually learned to monitor and adjust their writing based on feedback, leading to noticeable improvements by the second cycle.

Huijser and Wali (2018) observed that automated feedback in WBLL tools helps learners independently identify and address errors, reinforcing SCT's self-regulation aspect. This was evident in the second cycle of the study in which students required fewer checks to achieve higher CEFR bands, suggesting they had internalized the feedback and developed strategies for self-correction. Observational learning is another key element of SCT that plays a role here. Write & Improve allowed students to observe model answers and recognize correct usage, aligning with Bandura's view that observing accurate language patterns aids learners in emulating them within their own work. This function of WBLL tools encourages students to replicate appropriate language structures, ultimately enhancing their writing skills.

However, teacher guidance remains essential. Bandura's Social Cognitive Theory (SCT) and Vygotsky's concept of the Zone of Proximal Development (ZPD) both suggest that while independent learning is beneficial, guidance from knowledgeable others—such as teachers—enhances student outcomes by bridging the gap between current capabilities and potential achievements. While Write & Improve facilitated self-directed learning, the absence of real-time teacher feedback likely limited some students' ability to fully interpret or apply the automated feedback, particularly in the first cycle when students were still acclimating to the platform.

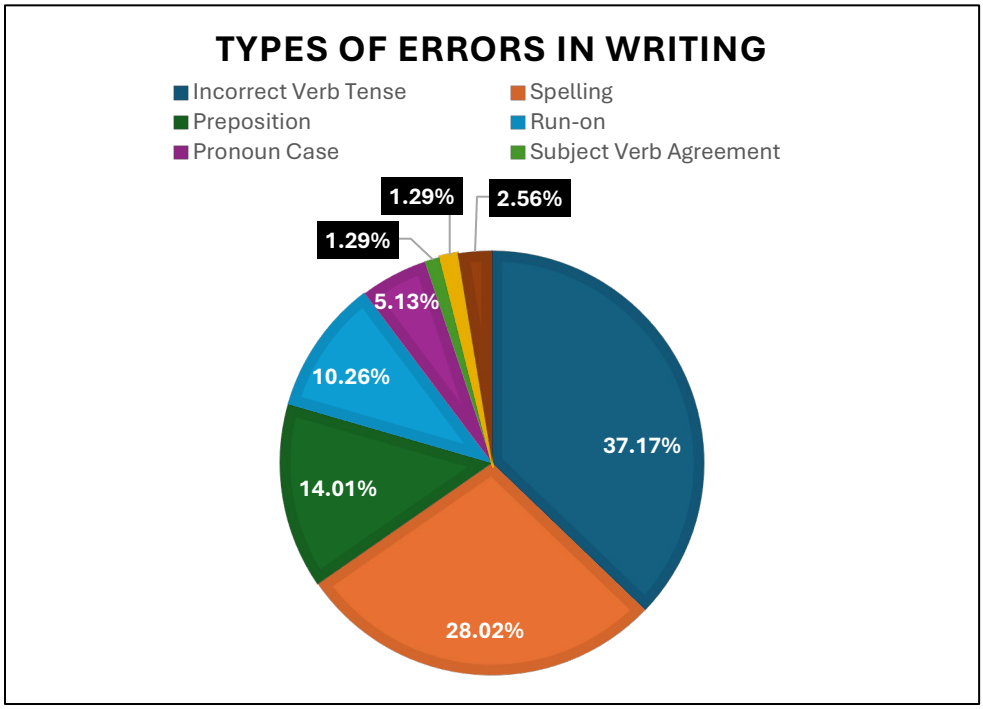

Figure 3: Types of Writing Errors in Pilot Test

It is clear that the students were struggling with verb tense as it recorded the highest percentage among all at 37.17% (29), followed by spelling at 28.2% (22), and preposition at 14.1% (11). The aforementioned three types of errors seem to be the main complications in their writing. Furthermore, the rest of the errors such as run-on sentences, pronoun cases, subject-verb agreement, conjunction, and sentence fragmentation are minor errors in their writing. For instance, run-on sentences only recorded 10.26% or 8, followed by pronoun case at 5.13% (4). Meanwhile, subject-verb agreement and conjunction share the same percentage at 1.29% (1) and sentence fragmentation at 2.56% or 2. Overall, the total errors detected in the students' pilot writing test are 78 errors.

Participants	CEFR + Number of Checking		
	Task 1	Task 2	Task 3
001	B1	B1	B1 (5)
002	A2	B1	B1 (5)
003	B1	C1	B1 (2)
004	A2	B1 (4)	A2 (4)
005	B1	C1 (6)	B1 (4)
006	B1	C1 (2)	A2
007	A2	B1 (1)	A2
008	B1	B2 (2)	B1
009	A2	B2 (1)	A2 (1)
010	B1	B2 (7)	B1 (9)
011	A2	B1	B1 (3)
012	B1	B1	B2 (3)
013	B1	B2	A2 (7)
014	A2	B1	B1 (6)
015	A2	C1	A2
016	A2	B1 (4)	B1 (7)

Table 1: Initial CEFR Band in Cycle 1

Participants	CEFR + Number of checking	
	Task 4	Task 5
001	B2 (2)	C1 (4)
002	B2 (2)	C2 (5)
003	C1	C2
004	A2	A2 (3)
005	C2	C2
006	C2	C2
007	B1	B2
008	C1	C1
009	C1	B2
010	C1 (3)	C2
011	C1	C2
012	C1	C1
013	C2 (2)	C2 (2)

014	B2 (3)	B2 (3)
015	B2	C2
016	B2 (3)	C1 (2)

Table 2: CEFR Band in Cycle 2

According to the data, most participants showed fluctuating progress from task 1 to task 3 in terms of their results according to CEFR. Notably, the pattern of students' grade in CEFR are mostly A2 to B1. Cycle 1 was conducted in 3 weeks, and cycle 2 was conducted in two weeks. The participants will receive one task per week. Green indicates improvement in students' CEFR bands based on the Write & Improve tool, while yellow represents that students have maintained their current band.

Based on my observation during Cycle 1 of the study, only four participants improved their CEFR grade from Task 1 to Task 3, with the highest grade achieved being B2. Additionally, two (2) students managed to maintain their grades throughout the cycle. This limited improvement can be attributed to the students still acclimating to the coding of the feedback, the interface of Write & Improve, and the overall functionality of the tool. The initial phase involved students familiarizing themselves with these new elements, which may have impacted their ability to fully leverage the feedback for substantial improvement in their writing tasks.

In contrast, students demonstrated significant improvement in their CEFR grades during Cycle 2 of the study. Notably, eight (8) students successfully achieved the highest band, C2, by the last task. Additionally, eight (8) students improved their grades from Task 5 to Task 6, while six (6) students managed to maintain their bands until the last task. Overall, 14 students made progress during this cycle, reflecting a marked advancement in their writing skills. Throughout Cycle 2, students were less checking their essays to achieve higher bands wherein they showed a keen understanding of the feedback provided by Write & Improve, which played a crucial role in their development. The feedback helped students identify and correct their mistakes, leading to better writing performance. This increased familiarity with feedback coding and the tool's interface enabled students to make substantial progress and achieve higher proficiency levels in their writing.

Overall, it demonstrated a significant improvement from cycle 1 to cycle 2. As previously stated, six students were able to develop and maintain their band across the three tasks assigned, resulting in a reported 51.5% over 16 pupils. As a result, 14 pupils improved and maintained their band, including the highest band according to the CEFR, C2. As a result, the percentage for cycle 2 increased to 81.5%, representing a 30% improvement.

Students' Perceptions of WBLL

A survey was conducted after the completion of both cycles on 29th June 2024. The questionnaire was designed to assess participants' perceptions of Write & Improve, focusing on their satisfaction, efficiency, motivation, impact on their writing skills, and suggestions for improvement. The survey included 10 open-ended questions, each targeting specific aspects of the students' experiences with the tool.

Aspect	**Question**	**Sample Answer (s)**	**Percentage**
Satisfaction	Q1: How satisfied are you with using Write &	*-Im really satisfied with the Write & Improve website as I believe we could gain more knowledge from*	Satisfied: 87.5% (14)

	Improve for learning writing?	*it! Such as learning new phrases, vocabulary etc.* *-Neutral*	Neutral: 12.5% (2)
Efficiency	Q2: How easy is it to navigate and use Write & Improve?	*-Write & Improve is generally easy to navigate and user-friendly! It provides a platform where users can submit their essays and receive feedback on their writing skills. The website is straightforward, making it accessible for users of all levels! The feedback is typically detailed, offering specific suggestions for improvement, which can be very useful for enhancing essay writing skills.*	Very easy: 100% (16)
Impact on writing skill	Q5: Do you feel that your writing skills have improved since using Write & Improve?	*-Yes, my writing skills have improved since using Write & Improve.* *-Not that much*	Yes: 93.8% (15) No: 6.2% (1)
Motivation	Q3: How engaging do you find the activities on Write & Improve?	*-They're really fun to complete, receiving a high rating and it's achievements are often enough to keep me going.* *-Somewhat engaging* *-Neutral* *-Average.*	Positive: 56.3% (9) Negative: 43.7% (7)

The CIPP Evaluation Model (Stufflebeam, 1985) provides a valuable framework for understanding the phases of learning that students experience when using WBLL tools like Write & Improve. In this study, the Context and Input phases help explain students' initial struggles in Cycle 1 as they familiarize themselves with the tool's interface and feedback mechanisms. The CIPP model suggests that assessing learners' initial needs (Context) and equipping them with supportive resources (Input) are crucial for effective learning. These findings align with Oflaz et al. (2022), who emphasize that a supportive initial context greatly impacts WBLL success, particularly as students become familiar with technology.

The Process and Product phases illustrate how iterative practice and feedback lead to growth. By Cycle 2, students demonstrated significant progress as they became more comfortable with Write & Improve and applied feedback more effectively. Muftah (2023) supports these findings, noting that WBLL tools enable self-paced practice with immediate feedback, which enhances language proficiency. This study observed similar outcomes; several students achieved higher CEFR bands by the end of Cycle 2, indicating the value of engaging with WBLL over time.

This study aligns with prior research on WBLL's effectiveness in enhancing language skills. Lin et al. (2017) demonstrated that real-time feedback in web-based tools supports self-directed

learning and skill-building. Write & Improve's immediate feedback feature was highly valued by students because it provided specific guidance for improving grammar, vocabulary, and sentence structure. Furthermore, the motivation to receive instant feedback encourages independent practice, reinforcing SCT's focus on self-regulation and observational learning (Lin et al., 2017)

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While students generally responded positively, some technical limitations were noted, including occasional inaccuracies and delays in feedback. Podburtnaja (2021) observed similar issues with Write & Improve, stating that these challenges could impact user engagement and disrupt self-directed learning. Refining the tool's accuracy and responsiveness would enhance its effectiveness in supporting SCT-based learning principles. These findings suggest that combining WBLL tools like Write & Improve with traditional instruction can maximize effectiveness. SCT underscores the importance of guidance, and research by Karpova (2020) supports the idea that teacher-led sessions can help students interpret automated feedback and provide additional context. This aligns with Vygotsky's Zone of Proximal Development (ZPD), where the teacher support bridges gaps in students' understanding. Integrating WBLL tools with guided instruction not only aids comprehension but also sustains student motivation, as teacher-led activities make learning more engaging. The Input and Process stages in CIPP emphasize that structured feedback and teacher involvement are essential to creating a robust learning environment.

To sum up, applying the CIPP model and prior research helps clarify the benefits and limitations of WBLL tools. Though effective, Write & Improve could be optimized with teacher support and technical enhancements to maximize learning outcomes and student engagement across diverse settings.

Implication of the Study

This study offers valuable insights for researchers delving into the integration of technology in language learning, with a particular focus on web-based tools like Write & Improve. By demonstrating this tool's effectiveness in enhancing writing skills, the research supports further exploration of Social Cognitive Theory (SCT) within digital learning environments. Future studies could delve deeper into specific SCT aspects, such as observational learning and self-regulation, within the realm of web-based language learning (WBLL). Additionally, the study highlights the importance of incorporating user feedback to improve digital learning tools, setting the stage for targeted research aimed at optimizing user experiences and educational outcomes.

For student-teachers, the study underscores the potential of integrating digital tools like Write & Improve into their instructional practices. Therefore, by applying SCT principles such as self-regulation and observational learning can be seamlessly facilitated through WBLL platforms. By using these tools, student-teachers can guide learners towards greater autonomy, allowing them to view model answers, receive immediate feedback, and self-regulate their learning processes. The findings encourage student-teachers to embrace technology as a supplement to traditional teaching methods, enhancing their pedagogical strategies and potentially boosting student engagement and achievement

Teachers can derive certain practical implications from this study. The positive impact of Write & Improve on students' writing skills suggests that incorporating such tools can lead to

notable improvements in language proficiency. Furthermore, teachers can motivate students to observe high-quality writing, emulate it, and engage in self-regulated learning through iterative practice and feedback by leveraging SCT principles. The study also emphasizes the need for teachers to be mindful of the limitations and areas for improvement in these tools, such as providing clear feedback and addressing technical issues. Understanding and tackling these challenges can enable teachers to better integrate technology into their curriculum, fostering a more effective and engaging learning environment.

Recommendations for Future Research

This perspective is particularly relevant when considering the effectiveness of Web-Based Language Learning (WBLL) tools like Write & Improve. To optimize such tools for a diverse learner base, it is crucial to evaluate their performance across various demographics. This assessment can help identify how diverse cultural and linguistic backgrounds affect learning outcomes, enabling developers to modify the tool accordingly. When WBLL tools are evaluated with a range of demographic groups, the insights gained can drive inclusiveness in educational technology design. For instance, learners from distinct cultures may have varying expectations about feedback, which can be integrated into the tool to cater to a wider audience. Additionally, language learning strategies that are effective in one context might need adaptation for another, which this testing phase can illuminate.

Social Cognitive Theory (SCT) emphasizes the significant role that knowledgeable individuals such as teachers play in enhancing learning through guidance. Exploring how teacher involvement impacts student writing outcomes when using tools like Write & Improve offers valuable insights into the effectiveness of combining technology with direct instruction. When students use Write & Improve autonomously, the tool can provide instant feedback, helping them identify and correct errors. However, the absence of direct teacher involvement may limit the depth of understanding and the ability to apply feedback beyond immediate corrections. In contrast, when teachers actively engage with students while using Write & Improve, they can offer personalized guidance, clarification, and additional context, allowing students to grasp complex writing concepts more thoroughly. Hence, by comparing these approaches, researchers can identify practices that maximize the benefits of both technology and direct teacher support.

CONCLUSION

In summation, this study delved into the effects of Web-Based Language Learning (WBLL) using the Write & Improve tool on the writing abilities of secondary school students at SM St. Michael, Penampang, within the framework of Social Cognitive Theory (SCT). The research aimed to uncover both the perceptions and advancements in students' writing through structured practice and feedback. Initial challenges with the tool's interface and feedback in the first cycle were noted; however, notable improvements were seen in the second cycle, with students achieving higher CEFR bands and better assimilating the feedback, indicating that increased familiarity with the tool enhances its efficacy. The study underscores the critical role of teacher involvement in conjunction with WBLL tools. As posited by SCT and Vygotsky's Zone of Proximal Development (ZPD), teacher guidance can substantially amplify student outcomes. Surveys indicated robust levels of student satisfaction and perceived effectiveness of Write & Improve, even though some technical challenges and occasional feedback inaccuracies were reported.

The findings imply that WBLL tools like Write & Improve can significantly bolster writing skills when complemented with adequate teacher support. For educators, integrating such digital tools into their pedagogical practices can provide valuable feedback and track student progress, thereby refining writing instruction. Yet, the study acknowledges its limitations, including a modest sample size and brief research duration. Future investigations should examine the prolonged impacts of Write & Improve, its efficacy across varied educational contexts, and the influence of student characteristics on its effectiveness. Larger-scale and longitudinal studies could yield more detailed insights and further validate these conclusions. Addressing these limitations will enhance the refinement and effectiveness of WBLL tools across diverse learning environments.

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