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Pre-Service Teachers' Writing Accuracy and Fluency: The Role of Weekly Reading

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Abstract. The benefits of Extensive Reading (ER) have been extensively explored in the field of English as a Foreign Language (EFL), particularly in how this approach enhances writing skills. In Ecuador, writing represents one of the biggest challenges students face when acquiring language proficiency. Therefore, this study investigates the effects of weekly story reading (WSR) over an eight-week period on improving written accuracy and fluency among twenty-two EFL pre-service teachers at the Faculty of Education, Quevedo State Technical University, Ecuador. This action research employed a pre/post-test design to collect data before and after the pedagogical intervention. Written book reports were used as the pre- and post-test instruments to identify accuracy issues and measure words-per-minute (WPM) rates. The participants' tokens of accuracy problems and WPM were quantitatively analyzed through descriptive and inferential statistics. The results showed, among the eight types of writing accuracy analyzed, the three most common errors made by students were punctuation, spelling, and syntax. Notably, they increased as more words were produced in writing. The findings indicate that weekly story reading assignments significantly improved writing fluency, with a mean difference of ($M=5.24$), and moderately reduced written accuracy problems. Extensive reading might magnify writing skills development among pre-service teachers in Ecuador or other contexts.

Keywords: Extensive Reading; Writing; Accuracy; fluency; Pre-service teachers

1. Introduction

The English reading and writing integration approach is increasingly emphasized in English Language Teaching (ELT), as it ensures better and more significant learning outcomes, particularly in writing. This productive skill has long been a weak point in English language education and remains a challenge for EFL students (Hanh & Tinh, 2022). EFL pre-service teachers are familiar with this difficulty as they strive to achieve proficiency. Based on this need, this action research seeks to enhance writing performance through weekly story reading (WSR) assignments to support the development of EFL pre-service teachers', who already receive explicit instruction in various areas.

Understanding the inherent interconnectedness between reading and writing can significantly improve language teaching practices by integrating instruction and sharing cognitive strategies (Zhang, 2018). This research approach is essential for several reasons. First, many English teachers find it challenging to write in English, particularly for academic purposes (Orosz, 2019). Reading habits may lead to better language proficiency. Second, it empowers future English teachers with a comprehensive toolkit for addressing the language tasks their future learners will face. Third, a survey by Ortega et al. (2019), indicated that Ecuadorians' primary motivations for learning a target language include studying foreign cultures, their educational systems, technology, and expressing the arts. Extensive reading positively influences language learning, allowing students to experience a sense of achievement (Ateek, 2021). Finally, this proposed framework calls for the implementation of extensive reading when designing programs for bachelor's degree programs in English Language Education in Ecuador and other similar challenging EFL contexts.

This study differs from previous research by focusing on the preparedness of future English teachers and the specific approach used to address writing challenges among them. Previous studies have implemented different interventions to improve university students' EFL writing competence by using different pedagogical teaching strategies and different research approaches, using feedback-based interventions to improve accuracy and be independent learners (Hanh & Tinh, 2022), cooperative learning strategies such as working in pairs or groups to facilitate writing fluency, and the use of technology through computer-based writing or flipped classroom approaches (Zhang et al., 2023). Furthermore, extensive reading has been used to improve writing accuracy and fluency, though with different participants (Alqadi & Alqadi, 2013; Moon & Kang, 2023; Nguyễn & Baker, 2023).

1.1. Research Aim and Questions

This study investigates the effects of WSR assignments on written fluency and accuracy problems among pre-service English teachers. To accomplish this,

undergraduate students participated in an eight-week extensive reading program (ERP) paired with book reports.

Thus, this study aimed to answer the following research questions: (1) What kinds of writing accuracy problems can be identified among third-semester pre-service English teachers? (2) To what extent do weekly story reading assignments (extensive reading) reduce writing accuracy problems? (3) Is the written fluency of pre-service teachers improved after participating in weekly story reading assignments?

To guide the research, the following hypotheses were proposed:

H0: Weekly story reading assignments (extensive reading) do not influence the improvement of written accuracy and fluency of pre-service teachers by the end of the intervention.

H1: Weekly story reading assignments (extensive reading) influence the improvement of written accuracy and fluency of pre-service teachers by the end of the intervention.

2. Literature Review

2.1 Reading and Writing Connection in EFL Educational Settings

Reading is critical in writing instruction (Krashen, 1984). Research on the strong relationship between reading and writing skills has gained extensive prominence. Exposing students to reading or observing others engage in the act of reading can enhance writing performance, particularly in terms of writing quality and spelling (Graham et al., 2018). Alhujaylan (2020) supports an integrated reading-writing approach, arguing that segregation in teaching reading and writing can hinder a better performance in both skills. Krashen's Input Hypothesis (1984) and Vygotsky's Sociocultural Theory (1978) offer vital frameworks for understanding the integration of reading and writing in language learning. Krashen's theory emphasizes the importance of comprehensible input, suggesting that language acquisition is most effective when learners encounter language somewhat above their current proficiency level, thereby encouraging the integration of more complex reading and writing tasks. Conversely, Vygotsky's approach underscores the role of social interaction and cultural context, proposing that collaborative tasks and scaffolded support enhance the learning of reading and writing. Together, these theories provide a comprehensive understanding of how both input and interaction play critical roles in developing literacy skills in a second-language context.

Schoonen (2018) demonstrated that reading and writing are built upon the same foundational skills and concluded that both interact symbiotically, with neither skill outweighing the other in importance. Both rely heavily on the same language resources, allowing students to improve both reading and writing abilities by expanding these resources. Engaging in ER, combined with strategy training, is a cognitive process approach to writing that can significantly enhance students' metacognitive awareness, thereby improving their writing skills (Yerukneh et al., 2023). Domain-general cognitions functions (e.g., executive function) are foundational to both reading and writing. These cognitive processes include

working memory, attention management, and the ability to block distractions, enabling students to process and use information productively while maintaining focus (Kim & Zagata, 2024). For example, early learners' cognitive factors may influence writing spelling, punctuation, and word use, while adult students have cognitive factors affecting text quality, such as text structure and complex linguistic level (Martin et al., 2021). Thus, it is undeniable that cognitive abilities play an essential role in writing (Andriani et al., 2022). Additionally, comprehension (meaning), vocabulary expansion, and grammatical awareness can occur when learners read the work of others (Habibi et al., 2015). Notwithstanding, regardless of the advocacy for using reading to enhance writing skills, many educators prefer using other interventions to improve EFL writing competence (Zhang et al., 2023).

2.2 Accuracy Problems in Writing

Grammatical issues in writing significantly challenge learners. A study conducted with Thai EFL university students analyzed grammatical errors in essays and found that most errors were related to nouns, verbs, word class, articles, incorrect use of singular and plural nouns, subject-verb disagreement, and article 'the' deletion (Fitrawati & Safitri, 2021). Preposition errors also constitute a significant issue (Kampookaew, 2020). Additionally, frequent errors in spelling and punctuation are prevalent in writing (Atasoy & Temizkan, 2016). Derakhshan and Karimian (2020) also found that participants perceive grammar, punctuation, and spelling as significant challenges. Punctuation marks are crucial for ensuring clarity in written language (Eunson, 2016). English spelling poses difficulties for writers, including native speakers, due to inconsistencies in pronunciation (Eunson, 2016). Nation and Macalister (2021) suggest that spelling should be addressed separately from general writing feedback. They propose that improvements in spelling can be achieved through various language-learning approaches, including meaning-focused input and output, language-focused learning, and fluency development (Nation, 2009).

Spelling and punctuation are fundamental writing skills, and the prevalence of errors in these areas highlights a significant challenge for students in grasping the basic principles of writing (Atasoy & Temizkan, 2016). Nation (2009) emphasizes that addressing spelling across different aspects of language learning can lead to noticeable improvement. Educators should incorporate grammar, punctuation, and spelling within relevant contexts and fuse them with other language abilities. Initially, teachers should demonstrate proficient punctuation usage in their communication, followed by explicit teaching to reinforce students' prior exposure to these elements (Derakhshan & Karimian, 2020).

Moreover, working with students on syntax is essential since it also represents one of the most challenging areas when writing compositions (Plakans et al., 2019). According to Hong et al. (2021), subject-verb agreement mistakes present a typical pattern of misselection errors, where students choose the incorrect form of the verb to match the subject or noun. Investigations suggest that students' writing difficulties stem from their linguistic proficiency, as with grammar (Bulqiyah et al., 2021).

2.3 Writing Skills Development Through Extensive Reading

Graham (2020) states that not enough attention has been given to how reading and writing might support each other when the knowledge and cognitive systems that make one possibly make the other possible, too. Students with stronger reading skills perform better on both reading and writing tasks (Grabe & Zhang, 2013). Hence, reading can be a source of learning and enjoyment. Extensive reading can foster conditions for meaning-focused input when the material involves only a limited number of unfamiliar vocabulary and grammar elements (Nation, 2009). Research indicates that students who participate in extensive reading in a second language experience an enhancement of their vocabulary and overall language proficiency, including grammar and writing skills (Day, 2018; Ateek, 2021).

Among the skills improved through extensive reading is writing fluency. Andriani et al. (2022) stated that through extensive reading tasks, students can acquire a significant amount of vocabulary, followed by timed writing activities (Nguyen, 2015). Despite a wide variety of definitions and much debate over its conception (Abdel Latif, 2012), this skill is essential for students to develop an improved writing process, allowing them to express themselves more naturally and clearly. As stated by Thaine (2021), producing effective writing requires coherence and organization, which can be just as important as grammatical accuracy. Moreover, the writing process is strongly connected with reading and spelling abilities. Learners with better reading and spelling abilities outperform others in writing speed. However, there is a need to distinguish between voluntary and compulsory reading. Voluntary reading is strongly associated with proficiency development (Tsang & Fung, 2023). Lastly, some Ecuadorian teachers and authorities perceive challenges in implementing, such as the low proficiency level of learners, the limited time devoted to teaching English, the lack of libraries, the lack of materials, and the absence of teacher training (Jaramillo-Ponton et al., 2019).

2.4 Related Studies on the Relationship Between Reading and Writing Skills in ELT

Several studies have explored the integration of reading and writing studies have skills across different educational contexts. Alqadi and Alqadi (2013) examined paragraph-writing grammatical accuracy in EFL freshmen through extensive reading. Their experimental study revealed that extensive reading improved written performance, particularly grammatical accuracy. Habibi et al. (2015) also showed that writing skills in terms of accuracy significantly upgraded by integrating reading into writing tasks. Similarly, Moon and Kang (2023) investigated whether English learners' writing instruction should be guided by the well-established reading-writing relationship or by the receptive and productive nature of literacy skills. Their findings demonstrated that vocabulary knowledge aids in developing writing through reading and that reading significantly impacts writing. Meanwhile, Fitriansya and Miftah (2020) examined the connection between extensive reading and writing at a university in Indonesia. Their results indicated a moderate correlation between extensive reading and writing fluency. Furthermore, reading and writing connections have

been investigated with young learners, and the findings displayed positive gains in L2 writing achievement (Nguyễn & Baker, 2023).

3. Methodology

3.1 Research Design

The study employed action research to enhance students' educational outcomes (Efron & Ravid, 2019). Action research involves systematic observations and data gathering that enable the researcher to reflect, make decisions, and develop better classroom strategies (Gedzune, 2014). This study primarily used practical action research to address writing skills issues among EFL pre-service teachers (Mertler, 2021). To answer the research questions, action research was conducted with a pre-posttest research design using a quantitative approach. A pre-test/post-test design provides valuable information about the effectiveness of the intervention process (Mertens, 2015).

3.2 Participants

This investigation was conducted in a public university in Ecuador. The participants were selected through purposeful sampling, considering that one of the researchers was their teacher and previous observations and language evaluations made this group eligible for the intervention (Cohen et al., 2018). A group of 26 students was invited to participate, but only 22 (N = 22) chose to do so. Participants were third semester students enrolled in English III as part of their teacher training program. All pre-service teachers were native Spanish speakers aged 18-30 years. The study was conducted over approximately three months.

3.3 Research Instruments

3.1.1 Book reports

Book reports were used to collect data before and after the study. These reports included a handout that included the title, author, type of book, number of pages/ words (optional), and summary (Appendix 1). The researchers developed this reporting instrument, which had been previously used with a similar class. It was also reviewed by a professional holding a Master's degree in TEFL, with over two years of experience teaching English Composition.

3.3.2. Written Expression-Curriculum-Based Measurement - Error Tracking Checklist (WE-CBM-ETC)

The checklist used to track accuracy features was an adapted version of the Written Expression-Curriculum-Based Measurement - Error Tracking Checklist (WE-CBM-ETC). It focused on errors such as capitalization, illegibility, incomplete sentences, punctuation, run-on sentences, semantics, spelling, and syntax (Powell-Smith & Shinn, 2004; Mercer et al., 2021; Beltran, 2018). The checklist was adapted after some observations with another class. It was noticed that other errors than noun/verb disagreement and adjective/adverb were recurrent in the syntax category. Consequently, the researcher added the category "other syntax errors" (Appendix 2). The checklist was then piloted with another group of students with similar characteristics and the same level receiving English Composition I. Feedback from the teacher confirmed that the adapted checklist adequately addressed syntax problems.

3.3.3. Stories

The stories used before, during, and after the intervention were sourced from a free reading app installed on students' smartphones. Mobile learning is a concept that has been proven to be engaging (Camilleri & Camilleri, 2020). The book excerpts were organized into categories, but they also display a distribution in terms of levels of English proficiency. Students could access these e-books offline, ensuring that the reading material was always available. There was no strict selection criterion for stories, except that participants, who were basic users of English, were required to read stories at the A2 or lower level. Afterward, the freedom for learners to choose what they wanted to read was applied, emphasizing reading for pleasure and individually and silently (done at home) (Prowse, 2002).

3.4 Data Gathering Procedure

Data collection took place over ten weeks. The procedure is illustrated in Figure 1. For the preliminary analysis (pre-test), participants were instructed to choose a story at or below an A2 level and read it at home. In class, they were given ten minutes to write a summary of the story. The intervention lasted eight weeks, from December to February of 2023. Each week, students were tasked with reading one story at home. The process involved (1) reading a story at home, (2) summarize the story to a partner in class, and (3) writing a summary of their own story within ten minutes on their book reports. The same pre- and post-test book reports were used to write summaries during the intervention. Consequently, the post-test procedure was administered after the eighth session. Participants were requested to read a final story, and then, in the class session, they wrote a summary of the story within the same time as in the pre-test. Data collection took place in face-to-face sessions at the university, each lasting approximately 30 minutes. During both pre-and post-test procedures, participants were not required to provide oral narrations.

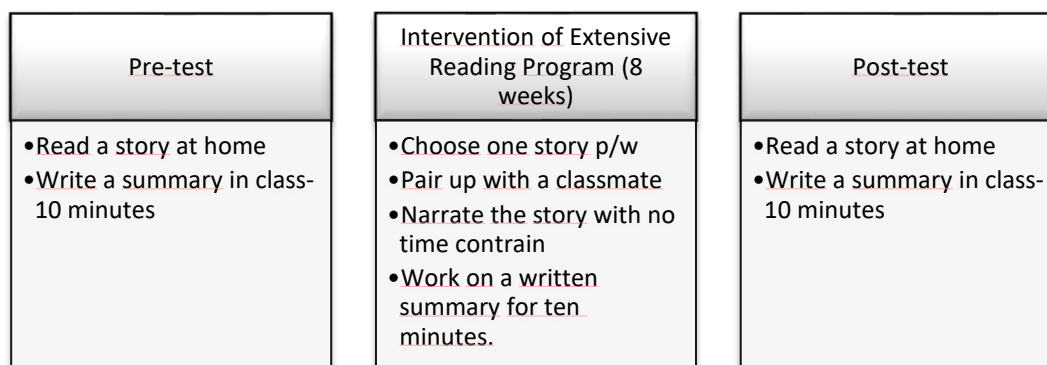


Figure 1: Research procedures
Source: Authors

3.5 Data Analysis

Two researchers, professionals in the field of EFL, analyzed the book reports from the pre-and post-tests. The criteria for the raters were: (1) holding a master's degree in TEFL, and (2) having experience teaching subjects such as English Composition or subjects at the university level. The analysis was conducted

separately by each researcher and subsequently compared to reach a consensus. Each accuracy issue was assigned a specific color, which evaluators used to underline or circle errors related to capitalization, illegibility, incomplete sentences, punctuation, run-on sentences, semantics, spelling, and syntax (Beltran, 2018). The following process was used to obtain the data for analysis. First, to enhance the trustworthiness of the data, the evaluators independently read and analyzed the writing problems in the reports, marking them with the assigned colors. Afterward, all the numerical data were entered into an Excel sheet to facilitate later analysis and agreement on each book report. Second, a face-to-face meeting was held to compare the data; when a value differed, further analysis was conducted to better understand the nature of the issue. Spelling and Syntax presented the most problems and disagreements. However, thorough re-examination ensured accurate information. Finally, the last discussion involved an exhaustive review of common writing problems and the creation of an official set of errors. All mistakes were counted by frequency percentage and interpreted using the Seven Likert Scale of Quality (see Table 1).

Table 1: Quality Interpretation of Error Frequency Percentage

Error Frequency Percentage (%)	Interpretation
0	Exceptional
1-10	Excellent
11-25	Very Good
26-40	Good
41-55	Fair
56-80	Poor
81-100	Very Poor

Subsequently, all data obtained from the pre-test and post-test regarding WPM were subjected to descriptive and inferential statistical analysis employing SPSS 27.0. Descriptive statistical analysis was used to check the correlation between written accuracy errors and WPM, while inferential statistical analysis was conducted to calculate writing fluency by comparing the results obtained in the pre-and post-test. A paired sample t-test provided insights for this study.

3.6 Ethical considerations

At the start of the semester, the intention to conduct the study was communicated to the students through informed consent, ensuring that participation was voluntary. Throughout the research process, a steadfast commitment to ethical principles was maintained, particularly in safeguarding the confidentiality of the participants. All participants were informed of their rights, including the right to withdraw at any stage. The researchers ensured that participants understood their freedom to withdraw without any negative consequences.

4. Results

The participants' book reports from the pre- and post-tests were analyzed to examine the types of writing accuracy problems they encountered. Table 2 presents writing accuracy problems identified in the pre-test and post-test.

Table 2: The Frequency and Interpretation of Accuracy of Writing Errors

Type of error	Pre-test Frequency	Percentage (%)	Interpretation	Post-Test Frequency	Percentage (%)	Interpretation
Capitalization	4	4	Excellent	11	5	Excellent
Illegible words	2	2	Excellent	3	1	Excellent
Incomplete sentences	5	6	Excellent	9	4	Excellent
Punctuation	36	40	Good	72	34	Good
Run-on sentence	3	3	Excellent	3	1	Excellent
Semantics	6	7	Excellent	20	10	Excellent
Spelling	18	20	Very Good	33	16	Very Good
Syntax	16	18	Very Good	58	28	Good
Total	90	100		209	100	

Table 2 illustrates significant accuracy-related issues, particularly in punctuation and spelling. The data explicitly displays 36 (40%) punctuation errors on the pre-test and 72 (34%) occurrences on the post-test. The percentages show a reduction of 6% in the set issue. The most common punctuation errors involved compound sentences, where commas should be placed before coordinated conjunctions like "and" or "but." For instance, S4 wrote, "She was looking for a job and she found a little..." while S18 included, "The gods decided to put him in a prison but he escaped and returned tu rule." Similarly, spelling errors were recorded 18 times (20%) in the pre-test and increased to 33 (16%) in the post-test. However, the percentage shows a reduction of 4%. Examples of spelling errors included "kingdom," "tu," "then", (instead of "them") and "moster." The data underscores a marked enhancement in punctuation and spelling following the intervention. Furthermore, the post-test reveals that syntax is another significant issue in writing 58 (28%) times. S2 put in writing, "Pashe is a poor guy, he work for ..." S6 included, "The mother say my girl is sleeping but she don't know what your son was died."

In addition, Table 2 shows semantic problems occurring 6 times (7%) times in the pre-test and 20 (10%) in the post-test. Regarding sentence structure, 5 incomplete sentences or fragments (6%) were indentified in the pre-test, and 9 (4%) in the post-test. This suggests a reduction in the use of fragmented sentences. Additionally, three run-on sentences were found both before and after the intervention, indicating no change in this area. A small percentage of errors also related to sentence structure. Moreover, 4 errors (4%) related to capitalization were found in the pre-test, compared to 11 errors (5%) in the post-test. The analysis also reported two illegible words in the first report and 3 in the post-test report. This can be the result of calligraphy intelligibility.

To thoroughly examine whether participants' writing fluency improved during the reading assignments, the pre- and post-test book reports were analyzed using WPM as a fluency measurement or the rate/time approach (Wolfe-Quintero et al., 1998). Thus, writers must achieve the maximum writing output within the

allocated time. The total number of words was counted for each report, and fluency was calculated accordingly.

A normality test was conducted to ensure the data followed a normal distribution before choosing a parametric or non-parametric test. The data revealed a normal distribution, as the significance value (sig.) of 0.001 was bigger than 0.05. Therefore, parametric tests were deemed appropriate for comparing pre- and post-test results. A paired sample t-test was conducted to measure improvements in writing fluency among pre-service teachers following the weekly readings, the results are displayed in Table 3.

Table 3: Pair Sample Statistics of WPM obtained in Pre and Post-tests

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Words per minute-Pre-test	5.43	22	1.73	.37
	Words per minute-post-Test	10.67	22	4.55	.97

Table 3 shows that extensive reading significantly impacted the participants' writing fluency ($M=5.43$, $SD=1.73$ and $M=10.67$, $SD=4.55$). The mean scores of the 22 participants increased by 5.24. To provide more precise information on the differences in the results, Table 4 offers further details.

Table 4: Paired T-test results of writing fluency pre- and post-tests

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Words per minute-Pre-test								
	- Words per minute-post-Test	-5.25	4.93	1.05	-7.43	-3.06	-4.99	21	.001

As shown in Table 4, the differences in scores between the pre-test and post-test indicated an improvement in WPM, with $t(21) = -4.99$; $p=.00$. The effect size for the difference between the tests was calculated using Cohen's d , yielding a value of 1.06, which represents a significant effect size according to Cohen (1992).

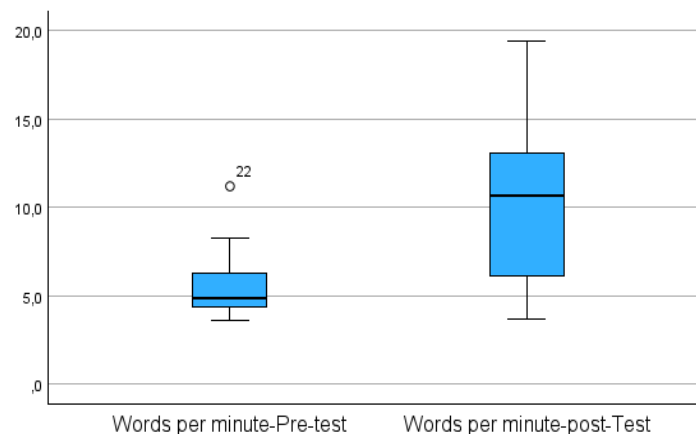


Figure 2: Comparison between pretest and posttest

The box plot graph in Figure 2 shows an overall impression of how the pre-service English teachers significantly improved their WPM after implementing the eight-week reading assignments. All the participants' WPM considerably increased by the end of the program.

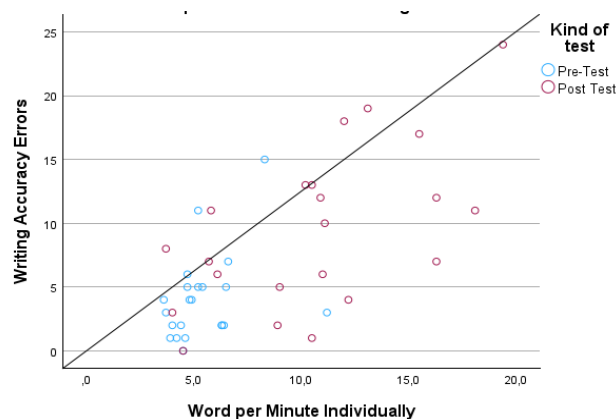


Figure 3: Correlation between WPM and the errors in written accuracy

Additionally, Figure 3 shows the correlation between WPM and the errors in written accuracy made by the individuals in their writing. The graph suggests a positive correlation: as WPM increases, the number of written accuracy errors also increases, indicating that participants were focusing on writing as much as possible while maintaining accuracy.

The present study employed Pearson's correlation coefficient to explore how the number of writing accuracy errors was related to the WPM, as in the pre-and post-tests. Writing accuracy errors were positively related to WPM in the pre-test ($r=.33$) and the post-test ($r=.59$, $p < .001$). The magnitude of the association is approximately from moderate ($.3 < |r| < .5$) to strong ($.5 < |r| < .9$) (Cohen, 1992).

5. Discussion

This study investigates the effects of extensive reading on written fluency and accuracy problems among pre-service English teachers. The research framework incorporates reading outside the classroom to enhance writing fluency and accuracy. The results reject the first null hypothesis and confirm that weekly reading assignments (extensive reading) positively impact the improvement of written accuracy and fluency of pre-service teachers. The answers to the research questions will be thoroughly discussed.

1. *What writing accuracy problems can be identified among third-semester pre-service English teachers?*

Based on the research results, punctuation and spelling are two major accuracy problems. These results can be compared to the findings by Atasoy and Temizkan (2016), who reported that the most frequent errors detected in student texts were in spelling (41.6%) and punctuation (25.5%), concluding that students' writing skills exhibit significant deficiencies in these areas of accuracy. Furthermore, syntax is another significant issue in writing, with most problems occurring in subject-verb disagreement. Similarly, Kampookaew (2020) found that subject-verb agreement was one of the most common errors encountered in participants' writings. This suggests that syntactic errors may result from limited exposure to writing practice, therefore, the fewer opportunities students have for writing, the more often they make syntactic errors (Talosa & Maguddayao, 2018). However, this study diverges from Pham and Pham (2024), who found that run-on sentence problems outweighed subject-verb disagreement issues in argumentative essays. Although conducted with lower secondary students, Hong et al. (2021) study exhibits similarities to the present research, as it involved participants with A1 to B1 English proficiency levels, according to the CEFR. Their implications suggested that most mistakes students made were due to negative transfer from their native language and literal translation. Like the studies above, Taye and Mengesha (2024) carefully analyzed essays to analyze prevalent errors; however, their findings unveil spelling at the top of the challenges, while punctuation is a minor problem in writing with 10.66%.

Other researchers, such as Hasan and Marzuki (2017), suggest that serious accuracy problems arise from insufficient writing practice. In other words, the less frequently students practice writing, the more problems they encounter in writing (Bulqiyah et al., 2021). In a study in Ecuador by Tamayo and Cajas (2020), teachers manifested that some written problems can be associated with limited time and large classes, which impedes them from providing proper student feedback. Furthermore, insufficient exposure to the target language hinders students' language acquisition (Soto et al., 2020). However, applying effective strategies can reduce the number of errors in written discourse.

2. *To what extent do weekly story reading assignments (extensive reading) reduce written accuracy problems?*

According to Brown (2014), proficiency in English writing involves learners' grammatical competence, vocabulary mastery, and effective paragraph

organization. These skills enable students to produce well-structured texts. Conversely, deficiencies in grammar or vocabulary can prevent learners from writing coherent and well-structured paragraphs. The prevalence of accuracy errors in this study suggests that many student teachers in the Ecuadorian context require more practice to improve their writing skills. While some studies emphasize text analysis (Rustipa, 2017) or foundations of linguistic knowledge as a primary aspect of writing (Bulqiyah et al., 2021), this research proposes extensive reading as a supportive approach to be reconsidered by learners and teachers in EFL contexts.

The findings of Alqadi and Alqadi (2013) support the current study, as they demonstrated that exposure to extensive reading positively impacted written performance of grammatical accuracy. Similarly, Yerukneh et al. (2023) found improvements in the writing performance of university students by analyzing the mean difference between the groups using extensive reading strategy training. The scholars also noted the cognitive abilities involved in writing through ER. These abilities are triggering prior knowledge, boosting word power, collecting information, organizing thoughts, and sentence construction. These results are pretty inconsistent with those of Habibi et al. (2015), who reported that although subject-verb agreement remained difficult after the intervention, long nonsensical sentences were replaced with meaningful ones.

3. *Has the pre-service teachers' writing fluency improved after participating in weekly reading assignments?*

The findings of this study support Nation's (2014) assertion that a well-balanced program, when carefully implemented, provides opportunities for fluency development. Evidence suggests that strong reading skills enhance learners' ability to understand lexical, semantic, and orthographic meanings, enabling them to write more quickly (Andriani et al., 2022). The findings of this study are somewhat different from those of Fitriansyah and Miftah (2020), who showed a moderate positive correlation between extensive reading and writing fluency among university students. The contribution of 16.64% to students' writing fluency concludes that the more students read, the better their writing fluency is.

According to Day (2018), an extensive reading program allows learners to expand their vocabulary and general language proficiency, including writing, due to the positive relationship between reading and vocabulary (Ateek, 2021). The noticeable increase in fluency might be the result of the nature of the participants who are pre-service teachers. Additionally, the positive correlation between WPM and written accuracy errors may suggest that tokens of errors are associated with writing fluency due to the focus on quantity rather than accuracy (Nguyen, 2015). Participants focused on providing as much information as possible about writing accurately.

6. Conclusions and Implications

This action research implemented weekly story reading (an extensive reading program) for pre-service English teachers to improve writing fluency and

accuracy. The results indicate the potential benefits of integrating extensive reading into writing skills development. Firstly, the findings reveal that among the eight types of writing accuracy errors analyzed, three are the most common: punctuation, spelling, and syntax. Mainly, they were found to increase as more words were produced in writing. However, the data suggested a percentage reduction of illegible words, incomplete sentences, punctuation, run-on sentences, and spelling. Another significant finding of paramount importance was the verified increase in writing fluency ($M=5.25$). Extensive reading exposes students to a wide range of vocabulary and structures. Conclusively, the interventions helped pre-service teachers become more fluent English writers while refining and improving accuracy.

The relationship between reading assignments and writing fluency appears to be impactful, based on the analysis of the intervention's effectiveness. The strong correlations between these two activities indicate that regular reading assignments can significantly enhance writing fluency. This suggests that reading not only exposes learners to varied vocabulary and syntactic structures but also reinforces language patterns and ideas they can apply in their writing. The effectiveness of this intervention implies that integrating reading into language learning curricula can be a strategy to improve writing skills, as it helps learners internalize the elements of effective writing through exposure and practice. Such a correlation underscores the importance of comprehensive language instruction combining reading and writing components to maximize learning outcomes.

Based on the study's findings, EFL teaching programs in Ecuador might be suggested to test pre-service teachers' writing skills to include educational interventions. These interventions may be extensive reading programs to assist the writing development of future English teachers who must demonstrate a B2 level of proficiency in English before being in service. This study contributes to understanding the interplay between reading and writing fluency. It also encourages ongoing dialogue among educators about effective methods to enhance accuracy in writing. Implementing these insights into curricular design and teacher education programs could foster more skillful and confident English teachers, ultimately leading to higher student achievement in writing. Additionally, the persistent problem with syntax indicated a need for specific instruction in that area.

7. Limitations of the study

Despite the positive results and implications of this study, several limitations must be considered. The time employed for this study was too short to fully reveal the effects of ER, which is a crucial drawback of our findings. Implementing a reading program encompassing a semester (approximately four months) can provide different insights into various outcomes related to fluency and accuracy issues. Another limitation is the small sample size of participants, which may not have adequately represented the full spectrum of accuracy writing errors that could occur at a tertiary level of education with EFL pre-service teachers and the gains in writing skills. Lastly, assessing writing fluency through WPM may involve some subjectivity. This study focused on quantity over quality.

8. Recommendation and future research

Based on the study's limitations, several recommendations are made for future research. In the current study, outcomes were examined after eight weeks. Thus, the researchers advise follow-up studies to examine the effects of the ER over a more extended period. Furthermore, it is recommended to include a larger population with varied English proficiency levels to enhance the generalizability of the findings. Also, researchers recommend including clear criteria for what constitutes a "word" to provide consistent measurements of writing fluency. Furthermore, incorporating a qualitative approach could offer a deeper analysis of students' writing quality and their perceptions of reading for pleasure, complementing the primarily quantitative nature of the current study. Researchers also advise investigating the impact of extensive reading on other areas, such as speaking performance skills or vocabulary acquisition.

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Appendix 2

WE-CBM Error Tracking Checklist	
Type of Error	Number of errors
Capitalization-Beginning of sentence not capitalized	
Capitalization - Proper noun not capitalized	
Capitalization - Of a word that should be capitalized	
Illegible words	
Incomplete sentences	
Punctuation - Missing or incorrect at the end of sentence.	
Punctuation - Omission of comma in a list	
Punctuation - Inappropriate punctuation mark in middle of sentence	
Run-on sentence	
Semantics - Word in sequence semantically incorrect (e.g., "I went too the library)	
Spelling (e.g., plase instead of place)	
Spelling - Contraction (e.g., "don't" instead of "don´t")	
Spelling - Incorrect for context of what's written	
Syntax - Noun/Verb disagreement (e.g., "I never seen...")	
Syntax - Adjective/Adverb incorrect (e.g., "She ran quick")	
Other syntax errors	