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Adopting Word Processor Tools to Overcome Post-Graduate Students' Challenges in Academic Writing

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Abstract

The advent of word-processing software has proven instrumental in addressing academic writing challenges for postgraduate students. Unlike previous research that primarily focused on identifying students' linguistic difficulties in academic writing, this study aimed to explore how word processor features could be harnessed to assist postgraduate students grappling with academic writing issues. Employing a qualitative survey with descriptive analysis, the study involved the analysis of students' article writing and engaged ten second-semester postgraduate students enrolled in an Academic writing course at Jakarta University from January to June 2023. The findings revealed that, within the classroom setting, word classes posed the most significant challenge for students, followed by word errors, grammar, and word format. It was observed that utilizing a word processor could be particularly beneficial in overcoming challenges related to word formatting, followed by addressing spelling errors, grammar issues, and word classes. Despite the widespread use of word processing tools, the study emphasized the importance of not entirely relying on these tools and recommended that students continue to engage in reading while writing academically. Additionally, to enhance teaching practices, educators were advised to carefully select relevant example compositions, incorporate reading activities, and provide benchmarks to optimize students' utilization of word processors.

Keywords: word-processing software; academic writing; word processor features; postgraduate students; word class

Introduction

In the realm of academia, the integration of Information and Communication Technology (ICT) has sparked enthusiasm among individuals seeking to enhance their expertise and knowledge (Gultom, 2015). Particularly, the fervour for word-processing technology among students has revolutionized the way they input, manage, style, write, and share academic documents (Hu & Lafayette, 2017). Acknowledging this, Computer Assisting Language Learning (CALL)

introduced word processors as a pivotal tool, incorporating innovative text editing functions and error-checking tools.

Several studies have delved into the effects of word processing on students' writing quality and revision strategies, highlighting its significance in higher education (Choi, 2016; Sulistyaningrum & Avianka, 2021; Yilmaz & Erkol, 2015). However, despite the identified challenges in academic writing, ranging from grammatical issues to psychological barriers (Rahmatunisa, 2014), there remains a scarcity of information on suitable word processor programs to aid postgraduate students.

Recent times have witnessed an increased expectation for students to leverage ICT tools for academic writing, with word processing showing a beneficial impact on drafting quantity (Van Der Steen et al., 2017). Widely used applications like Microsoft Word play a pivotal role in creating diverse documents, offering features such as digital watermarking, formatting, footnotes, and embedded links (Stojanov et al., 2014; Tang & Chaw, 2015). Studies, such as Kurniawan et al's., (2021) as well as Zaini & Mazdayasna's (2015) investigation of Microsoft Word's role in teaching academic writing, showcase the efficiency of computer-based programs in enhancing writing skills among university students.

The introduction of free web-based word processors like Google Docs has further revolutionized collaborative writing, demonstrating enhanced interactions, automatic classroom management, and evolving classroom involvement (Jeong, 2016). Comparative studies, such as Prvinchandar & Ayub's study (2013) about the evaluation of StyleWriter versus Microsoft Word, underscore the potential of specialized software in improving writing skills. Considering the digital age's emphasis on computer-assisted language acquisition, this study aims to explore the utility of Microsoft Word in improving the grammar and spelling abilities of both teachers and pupils in an Iranian context (Salehi & Amiri, 2019). Despite the progress made, challenges persist, as evidenced by students struggling with linguistic structures, word punctuation, and grammatical problems (Karyuatry, 2018).

This research seeks to bridge the existing gap by examining postgraduate students' experiences with text summarization and paraphrasing using word processing programs. The goal is to uncover how these tools assist postgraduate students grappling with academic writing challenges. By addressing this gap, the study aims to contribute valuable insights that can benefit both current researchers

and educators seeking effective interventions to enhance academic writing skills. Hence, based on the study's backdrop, the following research question is posed:

How do word processor tools overcome postgraduate students' challenges in academic writing activities?

Research Methodology

This study employs a qualitative descriptive method to explore the impact of word processor tools on overcoming academic writing challenges among postgraduate students. The qualitative descriptive approach involves gathering procedures for analyzing language data relevant to individual observers' opinions and experiences (Levitt et al., 2018). This method aims to generate descriptive information about participants' perspectives through content analysis of textual materials, personal interviews, and open-ended online surveys (Mohajan, 2018; Zohrabi, 2013). The following table. 1 illustrates the research questions, instruments, data, and data sources.

Table1. Research Question, Instrument, Data, and Data Sources Summary

Research Questions (RQ)	Instruments	Data	Data Source
How do word processor tools overcome post-graduate students' challenges in academic writing activities?	Analyzing students' articles Questionnaire PART A and PART B	10 Students writing difficulties and students' answers to the questionnaires.	Students' article writing and ten students of postgraduate students

a) Participants

The research involved ten postgraduate students specializing in English Language Education at a university in Jakarta. The participants, comprising nine females and one male, ranged in age from 18 to 35 years, with teaching experience ranging from 10 to fifteen years. The study was conducted during the second semester of the Academic Writing Subject in the academic year 2022/2023 from January to June 2023, utilizing Zoom Meetings, face-to-face sessions, and Google Classroom.

b) Data Collection

Data collection involved a combination of content assessment of textual materials, personal interviews, and open-ended online surveys. The

researcher requested students to write articles, post them on Google Classroom, and subsequently downloaded and analyzed the articles. Additionally, a questionnaire, based on prior studies (Byrne, 1993; Rahmatunisa, 2014), was created and distributed using Google Forms. due to various changes, the researcher updated the design of the questionnaire items (PART B) from previous relevant studies by Yilmaz & Erkol (2015).

Table 2. Research Instrument Organization

Focuses	Categories	Indicators	Items
The employment of word processor tools to overcome post-graduate students' difficulties in academic writing	Grammatical Structure	▪ Correct grammar ▪ Appropriate tests	15,16
	Word classes	▪ Appropriate conjunction ▪ Suitable vocabulary choice ▪ Finding synonym ▪ Proper part of speech ▪ The use of appropriate articles	17,18, 19, 20,21
	Word errors	▪ Suitable diction choices ▪ Correct spelling ▪ Placing comma ▪ Proper capitalization	22,23, 24,25
	Word formatting	▪ Placing font, font size, font colour ▪ Placing bold, italic, and underline ▪ Proper table, illustration, symbol, & comment.	26,27, 28

c) Data Analysis

The analysis included evaluating students' writing articles for grammatical faults based on predefined criteria. The questionnaire, divided into PART A (Byrne, 1993; Rahmatunisa, 2014) and B (Yilmaz & Erkol, 2015), underwent Likert Scale analysis. The Likert Scale findings were calculated using Google Form, applying the percentage formula (P=F/N x 100 %), where P = percentage, F = frequency, and N = the number of cases. Results were transformed into descriptive categories for ease of interpretation (Table 3).

Table 3. Descriptive Interpretation

PART A (Difficulty)	PART B (Quality)
75 ≤ x ≤100 =Very difficult	75 ≤ x ≤100 =Very Good
50 ≤ x ≤ 75 = Difficult	0 ≤ x ≤ 75 = Good
25 ≤ x ≤ 50 = Less Difficult	25 ≤ x ≤ 50 = Fair
0 ≤ x ≤ 25 = Not difficult	0 ≤ x ≤ 25 = Poor

d) Data Validation

The data analysis process included techniques such as data transcription, data reduction, data display, and conclusion/verification. Documents,

including interview results and questionnaires, were utilized to validate and support the findings. The study aimed to ensure the reliability and credibility of the collected data.

Findings and Discussion

Findings

After conceiving and descriptively analyzing the data, the researcher found linguistic challenges with academic writing such as word format, word mistakes, syntax, and word classes. To gain a better understanding, the researcher examined student articles in each area with varying degrees of difficulty. Furthermore, table 3 provides a descriptive review of students' academic writing challenges. It would classify learners' academic writing problems, percentages, and predicate:

Table 3. The summary of students' difficulties from students' articles

Student's Difficulties in Academic Writing	Categories	Percentages	Predicate
	Word classes	73,65 %	Difficult
	Word errors	63 %	Difficult
	Grammatical structure	62,75 %	Difficult
	Word formatting	30,80 %	Less Difficult

Table 3 outlines a comprehensive analysis of the challenges encountered by postgraduate students in academic writing, with a specific emphasis on word class problems, word errors, spelling issues, grammar complexities, and word formatting.

a) Word Class Problems

The predominant challenge, identified by 73.65% of participants, pertains to word class problems, categorizing it as "Difficult." This aligns with existing research (Noori, 2020; Rahmatunisa, 2014; Sulistyaningrum & Avianka, 2021), highlighting the struggle students face in selecting appropriate word classes and utilizing effective discourse markers, impacting the overall quality of their academic writing.

b) Word Errors

Accounting for 63% of identified problems, word errors also fall within the "Difficult" category. This underscores the inherent difficulty students experience in choosing precise words during academic paragraph composition. The prevalence of word errors resonates with earlier studies

(Nabeel Subhi & Subakir Mohd Yasin, 2015; Rahmatunisa, 2014) emphasizing challenges in spelling and the imperative need for precise language usage.

c) Grammar Issues

With 62.75% of identified challenges, grammar issues are deemed "Difficult." This high percentage underscores the considerable challenge postgraduate students face in mastering grammar for academic writing. Fareed et al.'s 2016) findings support this, highlighting grammar challenges alongside broader issues such as writing anxiety and a dearth of ideas.

d) Word Formatting

Word formatting is identified as "Less Difficult," constituting 30% of the challenges. This implies that while students encounter challenges, they find it relatively easier to manage academic English writing structures like font, font size, and formatting elements. Challenges in this area align with difficulties discussed by Azizaturrohmi (2019) and Rahmatunisa (2014), particularly in terms of syntax and semantics in editing.

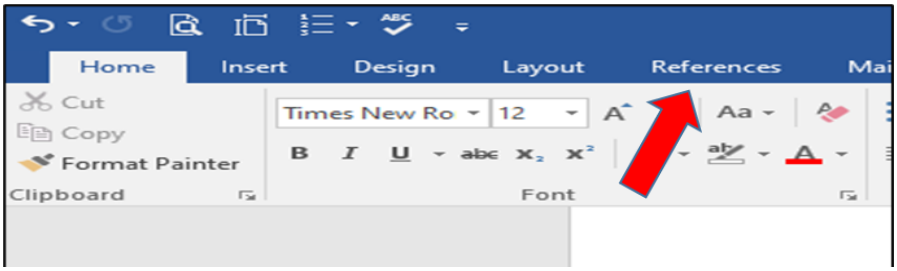
In addition to the content analysis, an online questionnaire was employed to explore the role of word processors in addressing academic writing challenges. Table 4 provides a descriptive analysis of the questionnaire findings, shedding light on the efficacy of word processors in assisting postgraduate students.

Table 4. Descriptive analysis of Word Processor Employment to Overcome Students' Academic Writing Difficulties

Variable	Categories	Percentage	Predicate
Employing Word Processor to Overcome Students' Academic Writing Difficulties	Word formatting	78,83%	Very Good
	Word errors	51,98 %	Good
	Grammatical structure	44 %	Fair
	Word classes	39,60 %	Fair
Total Percentage		53,60 %	Good

Table 4. demonstrates that 78.83% of word processors are utilized to assist students with word formatting difficulties. The figure is in the 75x100% area. It is the component of the predicate "Very Good." This exploration is portrayed in Picture 1.

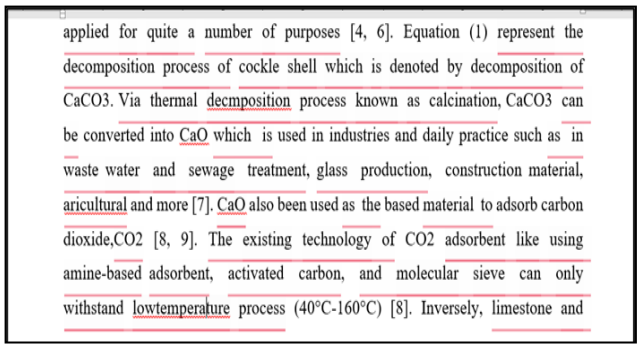
Picture 1. Illustration of using Word format tools in a word processor



In Picture 1, a word processor's role in alleviating academic writing challenges, particularly in text creation and formatting, is demonstrated. Yilmaz & Erkol (2015) affirmed the efficiency of word processors, particularly in sentence formation, validating the positive impact of these tools. Notably, 51.98% of students employ a word processor to tackle word mistakes, indicating a "Good" proficiency level.

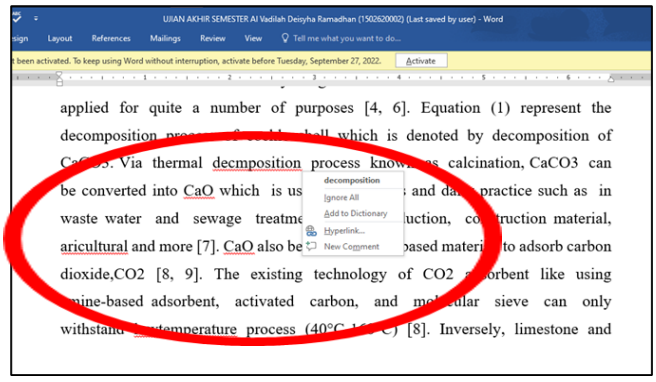
Picture 2 depicts the capability of word processors to identify spelling errors within students' articles. This functionality further emphasizes the tool's effectiveness in enhancing writing quality and accuracy.

Picture 2. Spelling errors in students' articles



applied for quite a number of purposes [4, 6]. Equation (1) represent the decomposition process of cockle shell which is denoted by decomposition of CaCO3. Via thermal decmposition process known as calcination, CaCO3 can be converted into CaO which is used in industries and daily practice such as in waste water and sewage treatment, glass production, construction material, aricultural and more [7]. CaO also been used as the based material to adsorb carbon dioxide,CO2 [8, 9]. The existing technology of CO2 adsorbent like using amine-based adsorbent, activated carbon, and molecular sieve can only withstand lowtemperature process (40°C-160°C) [8]. Inversely, limestone and

Picture 3. Spelling error problems overcome using Word Processor



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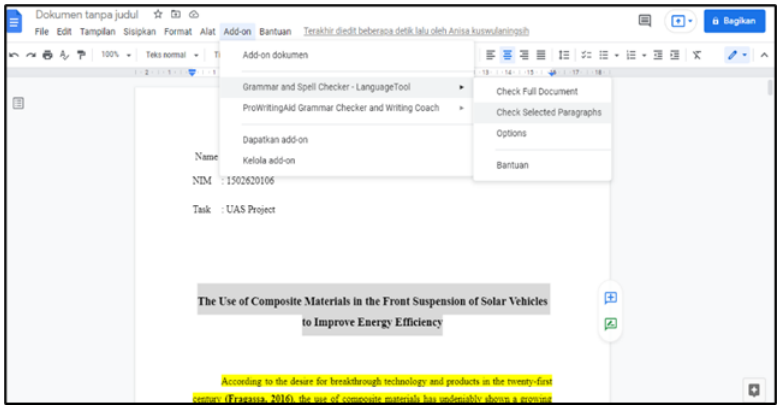
As seen in Picture 3, it also implies that a word processor helps students solve academic writing challenges by correcting spelling errors, removing and inserting commas, and adjusting the required key phrases. According to Salehi and Amiri

(2019) and Yilmaz and Erkol (2015), adopting a word processor appeared to enhance word recognition skills in their writing. In other words, the effectiveness of their writing has significantly improved.

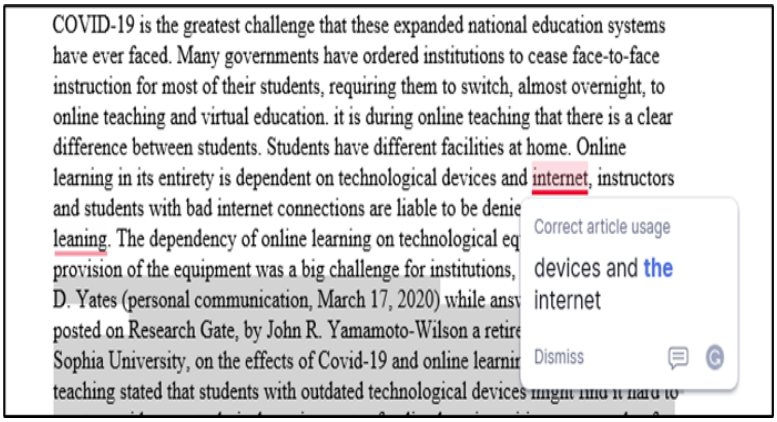
However, approximately 44% of students utilize word processors to overcome grammatical challenges, indicating a "Fair" proficiency level. As depicted in Picture 4, word processors assist students in navigating and addressing grammatical complexities, although there is room for optimization.

Picture 4. Word Processor tools on Google Docs to check grammar



It demonstrates that utilizing a word processor was insufficient for addressing students' grammar writing challenges. Yilmaz and Erkol (2015) confirm the findings that a word processor's additional feature serves as a "spelling and grammar checker," although only a few participants acknowledged that they do not use a "spelling and grammar checker." The percentage of students that utilize word processors to overcome challenges in utilizing suitable word classes is 39,60%, which matches the 25% x 50% range. It indicates that the aspect can be found in the predicate "Fair".

Picture 5. Word Processor overcomes students' writing difficulties in Using Article (Word Classes)



Within Picture 5, students grapple with the nuanced usage of articles, relying on the word processor's highlighting feature for guidance. While the tool provides corrective suggestions, it falls short of fully addressing challenges related to word classes and appropriate language use. For example, students could insert the article "the" before the word "internet," and replace the term devices with a synonym word, such as "gadgets," generating the phrase "gadgets and the internet." This is supported by Andina et al. (2019) who noted that students tend to overlook errors when depending on word processors, underscoring the need for meticulous consideration. This is also strengthened by Inayah and Sulistyaningrum's (2021) findings that advocated for the utility of online paraphrasing tools in addressing grammatical, structural, lexical, and paraphrasing hurdles.

Upon scrutinizing the survey results, postgraduate students provided a favourable rating of "Good" (53.60%) for their utilization of word processors. This percentage falls within the 50% to 75% range, indicating a positive assessment of the effectiveness of word processors. The findings highlight the instrumental role of word processors in addressing various academic writing challenges, including formatting, correcting words, grammar checking, and managing word classes. This positive evaluation underscores the significance of these tools in enhancing the overall writing process for postgraduate students.

Additionally, a more in-depth analysis of the survey outcomes reveals that word classes pose the most significant challenge in academic writing, with a prevalence of 73.65%. Consistent with prior research, poor word usage emerges as a primary linguistic issue in academic writing Noori (2020). Rahmatunisa (2014) and Sulistyaningrum & Avianka, (2021) echo the struggle students face in handling word classes and discourse markers. Despite these challenges, the study affirms that word processors excel in aiding word formatting tasks, scoring 78.83%. Yilmaz and Erkol (2015) align with these findings, highlighting the efficacy of word processors, particularly in shaping word structure.

While acknowledging the benefits of word processors, it is crucial to recognize their limitations. These tools can identify and address certain challenges, yet they are not infallible. Reading comprehension and responsible usage under the guidance of teachers play pivotal roles in maximizing their effectiveness. Students, through self-directed learning, discover the tool's potential for academic writing support. The

study concludes that although word processors offer valuable assistance, experience is key for academic writers to gauge their true utility.

Finally, the most important findings of the previous study have had significant consequences. According to the findings, students considered academic writing to be a tough task. As a result, because English academic writing is difficult to understand, particularly for non-native students, complicated thinking was required. The interpretation of academic challenges by students in their work reflects the reality of the difficulties those who practice and assume from their lectures and higher education institutions face. Furthermore, using a word processor was a necessary tool for students to overcome academic writing problems.

Discussion

The study delved into the utilization of word processor features to assist postgraduate students in overcoming challenges in academic writing. The analysis underscored the most demanding aspects of academic writing, with word classes (73.65%), word errors (63%), grammar (62.75%), and word format (30.80%) emerging as primary areas of concern. Interestingly, this differed from student document analysis, where word errors took precedence (48.39%), followed by issues with word classes (39.28%), grammar (8.36%), and word formatting (3.97%). Notably, Noori (2020a) emphasized the linguistic challenge of word choice, highlighting its pivotal role in effective writing.

The study highlighted the positive impact of word processors in addressing academic writing obstacles. Specifically, word processors played a significant role in aiding word formatting (78.83%). With that, students frequently utilized the Home and Insert options during article composition. This aligned with Yilmaz & Erkol's (2015) assertion regarding the instrumental role of word formatting tools in enhancing text structure.

Students exhibited a favourable trend in using word processors, particularly in addressing spelling errors, with 51.98% achieving a rating denoted as "Good." This

positive impact extended to improvements in spelling skills, as indicated by Salehi and Amiri (2019) and Yilmaz and Erkol (2015), affirming the enhanced quality of students' writing. However, when tackling grammatical problems, the percentage dropped to 44%, denoted by the term "Fair," highlighting the limitation of word processors in fully rectifying grammatical issues in academic writing.

Furthermore, the study revealed that 39.60% of students used word processors to address challenges related to selecting suitable word classes, falling under the predicate "Fair." This suggests that word processors offer some assistance. For example, they were insufficient in addressing the intricacies of choosing appropriate word classes which was relatable with Sulistyaningrum & Avianka's (2021) findings on the preference for alternative assisting devices.

In the comprehensive evaluation, the adaptation of word processors to address academic writing challenges was deemed "Good" by the ten postgraduate students, with a total percentage of 53.60%. This highlighted the effectiveness of word processors in assisting students, particularly in tasks related to formatting, error correction, grammar checking, and the management of word classes (Salehi & Amiri, 2019; Yilmaz & Erkol, 2015). The positive assessment reflected the instrumental role these tools played in enhancing various facets of academic writing, contributing to improved overall writing quality and efficiency for the students. The findings suggested a positive trend in embracing technology for academic support in the realm of writing.

However, the study acknowledges certain limitations. The word processor, while capable of detecting and correcting, is not universally adept at handling all challenges in academic writing. Reading remains essential for understanding the indications provided by these tools, and the role of the teacher is crucial in ensuring responsible use. Nevertheless, students' proactive engagement in self-study to

harness the full potential of word processors emphasizes the need for experiential learning and individual judgment in leveraging these tools effectively within the realm of academic writing.

Conclusion and Suggestion

In the pursuit of uncovering effective strategies for postgraduate students grappling with academic writing challenges, this research delved into the role of word processor tools. The investigation revealed that ten postgraduate students enrolled in the Magister of English Language program at a Jakarta-based university encountered notable difficulties in various aspects of word classes, including the use of suitable conjunctions, terminology, thesaurus utilization, articles, and part of speech. The findings underscored the positive impact of employing a word processor in mitigating academic writing challenges, encompassing issues related to word formatting, errors, grammar, and word classes.

Notably, the majority of students actively turned to word processors, predominantly relying on Microsoft Word features, to aid them in their writing endeavours. However, it was discerned that while these tools offered valuable support, they were not exhaustive solutions, and students needed to actively contribute to their learning processes to surmount linguistic barriers. Teachers, as integral facilitators, were encouraged to pre-select example compositions, providing students with relevant benchmarks and authentic information for effective writing activities. The incorporation of reading activities further enriched the learning process, acknowledging that no single technique could guarantee a 100% success rate in overcoming academic writing challenges.

The study's culmination offered practical recommendations for educators, emphasizing the pivotal role of lecturers in assisting students with academic writing. Focused attention on English academic writing practice was advocated, recognizing language use as a predominant challenge for students. To address issues such as word formatting, errors, word class, and grammar, lecturers were urged to enhance their teaching practices, meticulously selecting example works as valuable references. The inclusion of articles during discussions in word classes was deemed beneficial, encouraging students to recognize and analyze terminologies and retain key language components. While the word processor emerged as an

essential tool, its limitations in replacing students' grammatical processes were acknowledged. The call for further exploration of diverse research tools aimed at gaining a comprehensive understanding of word processors in assisting students concluded the research, emphasizing the need for a holistic approach to effectively navigate academic writing challenges.

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