



## Investigating errors made by English as a foreign language students during online collaborative writing

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### Abstract

This study focused on investigating common writing errors made by a group of Thai students who participated in online collaborative writing using Google Docs, and understanding their satisfaction and attitudes on this writing approach. The participants consisted 32 Thai first-year English major students who were purposively selected from their Writing I course. The researcher collected and analyzed eight argumentative pieces of writing, identifying a total of 484 errors. The most frequently occurring error areas were incomplete sentences (15.75%), spelling mistakes (13.50%), and word choice issues (12.25%), with grammatical errors being the most prevalent (72%). Following grammatical errors were lexical (12%) and mechanical errors (4%). To gauge students' satisfactions and attitudes, a questionnaire and semi-structured interviews were employed. The findings revealed that the students were highly satisfied with online collaborative writing with an average satisfaction score of 3.50. Overall, the students exhibited a positive attitude towards online collaborative writing, finding it useful due to its flexibility in terms of allowing them to work from anywhere at any time and for its ability to boost their motivation. The study's findings provide valuable insights for English teaching professionals in Thailand to consider when instructing students in writing.

**Keywords:** Argumentative writing, EFL students, English as a foreign language, Google docs, Online collaborative writing, Writing errors.

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### Contribution of this paper to the literature

Previous studies in Thailand have focused on writing errors in classroom, very few have focused on errors that occur during online collaborative writing outside of class.

## 1. Introduction

For English language learners, mastering writing skills is a significant challenge and an essential part of foreign language learning. Regardless of their length of study, most English as a Foreign Language (EFL) students tend to make writing errors (Wee, Sim, & Jusoff, 2010). Evaluating these errors can be a useful way to enhance student's writing abilities and measure their language learning progress (Waelateh, Boonsuk, Ambele, & Jeharsae, 2019). Writing has always been demanding and intricate for EFL learners, involving various steps like brainstorming, drafting, revising, and editing. Several studies (Phoocharoensil et al., 2016; Roongsitthichai, Sriboonruang, & Prasongsook, 2019; Sermsook, Liamnimit, & Pochakorn, 2017) highlight that writing is the most challenging skill for EFL learners due to their limited language proficiency and awareness of language structure and content required for composing (Weigle, 2002). However, recognizing their writing errors is crucial for learners to improve their writing and produce better English compositions.

In modern times, educational tools promoting learner-centered methods in collaborative learning settings encompass online collaborative writing (OCW) platforms, such as Google Docs. According to Oxnevad (2013), utilizing these platforms allows students to receive prompt feedback. Additionally, Google Docs enable students to work on their tasks from any computer connected to the internet, both at school and at home, as the documents are stored online. Furthermore, the real-time collaboration feature of Google Docs facilitates virtual mini-conferences between students and teachers from various locations to discuss their work collectively.

Therefore, this research focuses on the shift from individual writing to group knowledge and from in-class writing to using internet resources for writing outside of class. Despite these changes, the study's main goal is to investigate students' online collaborative writing errors in English argumentative writing using Google Docs. Additionally, it aims to understand the students' satisfaction and attitude towards online collaborative writing (OCW). The study seeks to answer three main research questions: 1) What are the types of errors made by a group of Thai students in their English argumentative writing in online collaborative writing using Google Docs, 2) What is the students' satisfaction towards online collaborative writing? and 3) What is the students' attitude towards online collaborative writing?

## 2. Objectives of the Study

The main purpose of conducting research studies is to investigate the errors made by learners, which can provide valuable insights into how they are progressively grasping the target language. As proposed by Corder (1967), this research aims to achieve the following specific objectives:

1. To investigate the errors frequently made by students in online collaborative writing while utilizing Google Docs.
2. To measure the students' satisfaction with online collaborative writing.
3. To explore the students' attitude towards online collaborative writing.

## 3. Literature Review

### 3.1 Errors in the Foreign Language Learning

Errors are an unavoidable part of the language learning process, as noted by James (1998). Teachers have traditionally sought to prevent errors as they were viewed as undesirable. In Thailand, research on English writing errors made by university students over the past decade was conducted. This study, carried out by Hinnon (2014), investigated the English writing errors of Thai university students. The research focused on three main types of errors: grammar, vocabulary, and writing organization. Waelateh et al. (2019) further examined this study, involving fifteen undergraduate students from a university in Southern Thailand. They collected and evaluated three paragraphs from each student's 45 essays written during one semester. The researchers analyzed the essay constructions and compared the errors, considering categories such as morphology, lexicon, syntax, and discourse. The results indicated that the most frequent errors were related to syntax, vocabulary, morphology, and discourse. These investigations confirmed that Thai students commonly made grammatical errors in their writing.

### 3.2. Previous Studies of Writing Errors

As previously mentioned, errors play a vital role in improving writing and pose challenges for English as a Foreign Language (EFL) students when writing in English. Several studies have investigated the types and characteristics of errors in student writing. Wu and Garza (2014) examined sixth-grade students' emails written in English and found that grammar errors were the most frequent, including subject-verb agreement, sentence fragments, and singular and plural verb usage. Each student made grammatical, lexical, and semantic errors. The average number of errors varied across different writing tasks. These findings align with conclusions from other studies (Alcoy & Biel 2018; Bennui, 2019; Kongkaew, 2018; Moqimipour & Shahrokhi, 2015) regarding grammatical errors in English writing.

### 3.3. Error Analysis in English Writing in the Thai Context

Over the past decade, researchers in Thailand have conducted several studies focusing on the English writing errors made by university students. These studies have primarily examined grammar, lexical, and writing organization errors as the most common types of mistakes in Thai university students' English writing. One recent study by Waelateh et al. (2019) involved fifteen college students from Southern Thailand, where the researchers collected and analyzed three essays from each student, totaling 45 essays of various genres written in English. The results of this study also emphasized the prevalence of syntactic, lexical, morphological, and discourse errors among the students.

The repeated emphasis on grammatical errors in these studies could be attributed to the influence of the student's native language (L1) on their English writing, leading to interference or overgeneralization of L1 grammar rules in the L2 environment. Furthermore, students might not be well-versed in the latest rhetorical devices in English writing.

Overall, error analysis research is valuable for both teachers and students as it helps identify areas that require improvement in English teaching and learning strategies. Teachers can use these findings to design more effective instructional approaches for future English language learning (Suwantarathip & Wichadee, 2014).

### *3.4. Learners' Perspectives on Computer-Mediated Collaborative Writing (CMCW)*

The attitudes of learners are a crucial aspect of research in collaborative writing because their attitudes play a key role in the success of such endeavors. Previous studies have primarily gathered learners' attitudes through questionnaires or brief interviews, and the overall findings have been positive. According to Elola and Oskoz (2010) and Strobl (2015), participants engaged in both individual and collaborative writing in pairs, and they reported favorable satisfaction of computer-mediated collaborative writing (CMCW). The findings are consistent with Ansarimoghaddam and Tan (2013) research. They investigated the impact of face-to-face (f2f) interactions and computer-mediated collaborative writing (CMCW) on individual writing outcomes among thirty Malaysian English as a Second Language (ESL) participants. These participants worked in groups of three for three weeks to collaboratively write an argumentative essay, both in face-to-face settings and on a Wiki platform. During semi-structured interviews, the participants expressed favorable attitudes and satisfaction towards computer-mediated collaboration due to its advantages such as flexibility of time and location, convenience, and the ability to review past discussions.

In a separate study conducted by Suwantarathip and Wichadee (2014), 40 university students participated in tasks where they wrote paragraphs collaboratively using Google Docs. The researchers gathered feedback from the learners through questionnaires and interviews after the tasks, and the results were positive. The learners highly praised Google Docs as a user-friendly and accessible collaborative tool that boosted their motivation and encouraged active engagement with their peers. The researchers also highlighted that the various features and ease of use of Google Docs allowed learners to take responsibility for their contributions and facilitated effective interaction and collaboration among peers. In summary, all of the previous studies consistently demonstrated that learners who collaborated using computer-mediated modes achieved superior written outcomes and received favorable responses from their experiences.

## **4. Methodology**

### *4.1. Participants*

Thirty-two first-year English major students enrolled in the Writing I course at Lampang Rajabhat University participated in argumentative writing instruction. The students were purposively sampled and included 19 females and 13 males, all aged between 18 and 22 years. Throughout the instruction, the students engaged in OCW activities. They were divided into eight groups, each comprising four students. To promote collaborative learning, the students were allowed to independently choose their partners, aligning with the collaborative nature of the OCW approach (Mulligan & Garofalo, 2011).

Although the students had no prior experience with Collaborative Writing (CW), they had participated in other forms of collaborative learning, including individual and group discussions. It's worth noting that the students had been learning English from the primary school level through to university.

### *4.2. Instruments*

In this study, the research instruments utilized were argumentative paragraphs created by eight groups of students using Google Docs. The participants were given three topic choices, which were selected by two English teachers to ensure their appropriateness for the student's age, background knowledge, and educational level.

#### *4.2.1. Writing Tasks*

Regarding the writing tasks, each group was assigned to write an argumentative paragraph of at least 200 words. All students had access to Google Docs in their respective locations, where they went through all the steps of Online Collaborative Writing (OCW) using Google Docs and Google Classroom. The writing process involved the following steps: the first step involved the teacher providing an overview of Collaborative Writing (CW) in an online classroom setting (20 minutes). During the second step, students studied a model argumentative paragraph provided by the teacher, focusing on its grammatical structure (30 minutes). In the third step, each group worked together to outline, list, freewriting, brainstorm ideas, and organize information collaboratively (30 minutes). During the fourth step, students wrote the collaborative introduction, body, and conclusion as a rough draft or first draft (40 minutes). In the fifth step, the first draft was collaboratively revised with attention to vocabulary, content, and organization, making necessary additions, deletions, or changes (40 minutes). In the next step, the group engaged in a discussion and decided which changes from the revision stage to accept or decline, resulting in the second draft (30 minutes). The seventh step, the second draft underwent final proofreading and collaborative correction of conventions such as spelling, grammar, punctuation, and mechanics to produce the final draft (30 minutes). In the last step, the students collaborated to format the completed paper and submitted only one final paper to the teacher. Although they completed several writing drafts during these activities, only one final piece of writing was included in the study for each group. The process of online collaborative writing is shown in Figure 1.



Figure 1. The process of online collaborative writing.

Note: White and Arndt (1991).

#### 4.2.2. Questionnaire

The survey was conducted to measure the level of satisfaction among students with OCW. To achieve this, a Likert scale questionnaire was used, which was adapted and translated into Thai by the researcher. The questionnaire was reviewed and validated by three experts in English writing teaching at the university level, each having over ten years of experience. Among them, one was a native English speaker. The scale utilized four values, namely: least (1), less (2), fair (3), and much (4).

#### 4.2.3. Semi-Structured Interview

Semi-structured interviews were utilized to gather qualitative data from a sample of six randomly chosen students. These interviews were conducted in Thai, recorded, and later translated into English. The single question posed to the participants was: "What is your attitude towards online collaborative writing using Google Docs?"

### 5. Data Collection

The researcher and two English Department experts (including a Thai individual with a Master's degree in English and a native English-speaking teacher) investigated data from argumentative paragraphs. The initial phase involved error detection, where they independently identified and categorized errors in the argumentative writing paragraphs. Subsequently, they compared their findings to ensure accuracy (James, 1998).

### 6. Data Analysis

The study's goals led to a three-stage data analysis process. In the first stage, all the data was assessed and sorted into various error types to investigate their frequency and percentage. These errors were categorized based on three language levels: grammatical, lexical, and mechanical faults. In the second stage, the data was gathered from the questionnaire designed to measure the students' satisfaction with online collaborative writing. The last step involved collecting data through semi-structured interviews from six randomly selected students who participated in the interview sessions. Subsequently, the interviews were interpreted and analyzed to determine participants' attitude towards OCW.

### 7. Findings

Results of the analysis revealed that twenty-two out of 25 types of errors were found in online collaborative argumentative writing paragraphs composed by this group of Thai EFL students, namely: incomplete sentences, misspellings, wrong choice of words, the use of conjunctions, parallel structures, capitalization, the use of

determiners, run-on sentences, the use of verb forms, punctuation, and the use of pronouns. The error types were illustrated as follow in Table 1:

**Table 1.** Errors frequently found in online collaborative writing.

Types of errors	Frequency
1. Incomplete sentences	63
2. Misspellings	54
3. Wrong choice of words	49
4. Errors in the use of conjunction	47
5. Parallel structures	41
6. Capitalizations	32
7. Errors in the use of determiners	29
8. Run-on sentences	27
9. Errors in the use of determiners	24
10. Punctuations	20
11. Errors in the use of pronouns	18
12. Errors in the use of agreements	16
13. Errors in the use of tenses	14
14. Errors in the use of nouns	11
15. Errors in the use of subjects and objects	8
16. Errors in the use of adverbs	7
17. Errors in the use of possessives	6
18. Word orders	5
19. Errors in the use of adjectives	4
20. Errors in the use of infinitives and gerunds	4
21. Errors in the use of prepositions	3
22. Repetition of words	2
23. Space errors	0
24. Overgeneralization	0
25. Miscellaneous unclassifiable errors	0
Total	484

Table 1 shows that among the errors made by the students, incomplete sentences (15.75%), misspelled words (13.50%), and wrong word choices (12.25%) were the most frequent.

### 7.1. Incomplete Sentences

The analysis of online writing revealed that the most problematic issue was incomplete sentences. For instance, one example showed: "She stressed." The correct sentence should be "She is stressed." This illustrates the omission of the verb "is." Another instance involved the sentence: "Today, technology plays an important role in our lives." It could be rephrased as: "Today, technology has an important role in our lives." In this case, the writer omitted the verb "has."

### 7.2. Misspelling

The spelling errors were identified in different categories. First of all, the errors were caused by the students adding or omitting spaces in a single word or compound words. The following are the exemplified sentences:

Somefriend <Some friends> do not like English.  
She is in my heart forever. <forever>  
Everybody <Everybody> has several ideas.

The second common occurrence was phonetic spelling, where the writer writes the phonetic letter sounds that they hear, but the word is not correctly spelled. The following are some exemplified sentences:

He huges <hugs> her.  
He felt relive <relieved> at that time.  
It was her dication <decision>.  
They asked for advice <advice> from their parents.

### 7.3. Wrong Choice of Words

Numerous sentences in the texts contained inappropriate vocabulary, which led to a deviation from their intended meaning. For instance, the sentence "he has a sense of humour" should have used "a good sense of humor," as the latter accurately conveys the trait of being able to say or do humorous things to make people laugh. Another example is the use of "lovely" when the writer meant to say "nice." "Lovely" refers to the beauty inside and outside of a person, but "nice" better expresses the intended meaning of being kind and pleasant.

Upon analyzing the errors, they were categorized into three linguistic levels of the English language: grammar (72%), lexis (12%), and writing mechanics (4%). Grammar proved to be the most challenging linguistic level, with the highest frequency of errors.

Regarding the satisfaction, Table 2 illustrated the students' satisfaction towards online collaborative writing as follow:

**Table 2.** The students' satisfaction with online collaborative writing using google docs.

Students' satisfaction with OCW using google docs	Mean
1. I am satisfied with the ease of online collaborative writing in creating and editing documents from anywhere.	3.49
2. I am satisfied with the ease of access in all devices	3.51
3. I am satisfied with tracking the changes in real-time	3.40
4. I am satisfied with its auto saving and automatically stored in google drive.	3.51
5. I am satisfied with google docs' feature which can be shared with anyone.	3.61
Total	3.50

Based on Table 2, the students displayed a high level of satisfaction (average = 3.50) with the utilization of Google Docs for OCW activities. This suggests their contentment with this particular task. The aspect that received the highest average score (3.61) was item 5, indicating strong agreement with the statement "I am satisfied with Google Docs' feature which can be shared with anyone." This highlights their strong satisfaction with the capability of sharing documents using Google Docs. The next highest averages were associated with items 2 (average = 3.51, satisfaction with ease of access across devices) and 4 (average = 3.51, satisfaction with auto-saving and automatic storage in Google Drive). The third highest average (3.49) was linked to item 1, expressing contentment with the ease of collaborative writing and document editing from any location. Conversely, the lowest average (3.40) pertained to item 3, indicating satisfaction with real-time change tracking.

In addition, in order to gather more comprehensive information from OCW using Google Docs, a random selection was made involving six students who participated in semi-structured interviews. These interview sessions involved students answering questions in Thai, which were later translated into English. The students were identified with the labels: Student 1 (S1), Student 2 (S2), Student 3 (S3), Student 4 (S4), Student 5 (S5), and Student 6 (S6). Below are excerpts from these interviews.

S1: The student reported that "I found that this writing activity was useful." It can assume that the writing task proved to be beneficial, with Google Docs offering features such as real-time collaboration, version history, change tracking, auto-saving, accessibility from anywhere, offline mode, export options, and file storage. Most notably, it facilitated organization and quick access to the latest content version.

S2: The activity was valuable. "I aimed to enhance my paper using useful applications, which taught me a lot, though it was time-consuming." However, the absence of face-to-face interactions among group members eliminated any hesitancy in sharing ideas openly.

S3: The student found the activity beneficial. It resembled a writing exam and I felt apprehensive about online paper submission, as it required both writing skills and familiarity with Google Docs. Learning to use Google Docs for online writing became crucial.

S4: Writing online was productive, aiding in organization and immediate access to updated content. Yet, I encountered difficulties with Google Docs due to its novelty. Despite this, it was advantageous as it allowed me to work from home instead of attending classes.

S5: The time-saving aspect of the activity was advantageous, enabling paper composition from various locations. Collaborative tools were employed to review and edit writing, leading to error corrections.

S6: This activity was commendable. Leveraging Google Docs, I could write, edit, and collaborate effortlessly from anywhere. Simultaneous group work expedited assignment completion. Moreover, I utilized revision history to compare different document versions.

Regarding the qualitative findings, the majority of students expressed a positive attitude towards the writing activity of OCW. They found it beneficial and were inclined to rely on themselves, utilizing grammar-check applications or programs for assistance. Student 6 mentioned, "I was satisfied with this writing activity." It saved time to complete the "writing piece. The student expressed satisfaction with the activity, mentioning time-saving benefits of completing the writing piece. Similarly, Student 5 stated, "I found this activity very useful." I can use an application or program to recheck or revise the writing. "It helped me correct some errors." The student found the activity highly useful, utilizing applications or programs to review and correct errors in their writing. Additionally, when it came to attending the classroom, Student 4 reported, "For me, it was good because I could stay at my place without attending the classroom." "It was good." The student appreciated the flexibility of being able to stay in their own space instead of physically attending the classroom, and overall, they viewed this aspect of OCW positively.

Based on the results of the student survey, it was evident that students found OCW's use of Google Docs to be highly beneficial and convenient for various reasons. One of the key advantages was the ability to access and revisit past discussions easily.

## 8. Conclusion and Discussion

Earlier findings indicated that Thai EFL students made various types of errors in OCW. These errors fell into three major categories: incomplete sentences, misspellings, and incorrect word choices. The errors were further classified into grammatical, lexical, and mechanical errors.

The grammatical errors suggested that the students struggled with English grammar, possibly due to limited opportunities to practice English writing, which can be challenging for Thai EFL students because of the numerous grammar rules they need to learn.

The second most common type of error was lexical, indicating that the students lacked sufficient vocabulary to express their ideas accurately. As a result, they often used general words when they encountered unfamiliar terms.

The final type of error was mechanical, which encompassed spelling and punctuation errors. The student's struggles with punctuation might be attributed to the fact that the Thai language does not use punctuation as extensively as English.

These findings were consistent with previous research by Hinnon (2014) and Waelateh et al. (2019), who also identified grammar and lexical factors as the primary sources of errors in student writing.

Regarding the students' attitudes toward OCW activities using Google Docs, they generally found it beneficial and convenient. They appreciated the ability to review prior discussions and considered Google Docs an accessible and user-friendly tool that motivated them to interact with peers and share ideas. The positive satisfaction aligns with a similar study by Suwantarathip and Wichadee (2014) on university students' collaboration in writing using Google Docs. However, it's worth noting that the present study's findings might not apply to other contexts, as it involved a limited sample of only 32 university students in a specific region of Thailand.

## 9. Recommendations

Understanding different types of errors is crucial for educators and curriculum developers as it enables them to create effective remedial materials that enhance the quality of education. By conducting error analysis on students' English writing, teachers can gain insights into the reasons behind these errors and design targeted lessons to improve their writing skills. It is also important to consider the English curriculum's plan, design, and implementation, incorporating appropriate teaching methods and materials, such as Online Language Learning Platforms (OLCW), to address specific error patterns and enhance Thai university students' writing abilities. Leveraging technology in the learning process can be advantageous, as satisfied students who enjoy learning through technology can be assigned collaborative writing tasks outside the classroom, saving time for teachers and promoting better writing outcomes.

## 10. Future Research

Future research can be undertaken to examine the impact of Online Collaborative Writing (OCW) on students' writing motivation, comparing the outcomes between traditional face-to-face methods and the utilization of Google Docs. Additionally, exploring the development of student's critical thinking skills through the implementation of various educational technologies alongside Google Docs would be valuable. Emphasizing the integration of technology in language classrooms could offer students significant benefits through blended learning approaches.

## References

- Alcoy, J., & Biel, L. (2018). Error analysis in written narratives by Thai university students of elementary Spanish as a foreign language. *Ogigia, Electronic Journal of Hispanic Studies*, 24, 19-42. <https://doi.org/10.24197/ogigia.24.2018.19-42>
- Ansarimoghaddam, S., & Tan, B. H. (2013). Co-constructing an Essay: Collaborative writing in class and on Wiki. *3L: Southeast Asian Journal of English Language Studies*, 19(1), 35-50.
- Bennui, P. (2019). Lexical borrowing in English language tourism magazines in southern Thailand: Linguistic features of Thai English words and users' perspectives. *Humanities, Arts and Social Sciences Office*, 3(19), 452-502.
- Corder, S. P. (1967). The significance of learners' errors. *International Review of Applied Linguistics in Language Teaching*, 5(4), 161-170.
- Elola, I., & Oskoz, A. (2010). Collaborative writing: Fostering foreign language and writing conventions development. *Language Learning & Technology*, 14(30), 51-71.
- Hinnon, A. (2014). Common errors in English writing and suggested solutions of Thai university students. *Journal of Humanities and Social Sciences of Khon Kaen University*, 31(2), 166-180.
- James, C. (1998). *Errors in language learning and use*. Longman, Essex: Exploring Error Analysis.
- Kongkaew, S. C., P. (2018). An analysis of errors in online English writing made by Thai EFL authors. *International Journal of Applied Linguistics and English Literature*, 7(6), 86-96.
- Moqimipour, K., & Shahrokhi, M. (2015). The impact of text genre on Iranian intermediate EFL students' writing errors: An error analysis perspective. *International Education Studies*, 8(3), 122-137.
- Mulligan, C., & Garofalo, R. (2011). A collaborative writing approach: Methodology and student assessment. *The Language Teacher*, 35(3), 5-10.
- Oxnevad, S. (2013). *6 powerful Google docs features to support the collaborative writing process*. Retrieved from <http://www.tesl-ej.org/wordpress/issues/volume14/ej55/ej55m1/>
- Phoocharonsil, S., Moore, B., Gamppar, C., Geerson, E., Chaturongkul, P., Sutharaj, S., & Carlon, W. (2016). Grammatical and lexical errors in low-proficiency Thai graduate students' writing. *Learn Journal: Language Education and Acquisition Research Network*, 9(1), 11-24.
- Roongsitthichai, A., Sriboonruang, D., & Prasongsook, S. (2019). Error analysis in English abstracts written by veterinary students in Northeast Thailand. *Chophayom Journal*, 30(3), 21-30.
- Sermsook, K., Liamnimit, J., & Pochakorn, R. (2017). An analysis of errors in written English sentences: A case study of Thai EFL students. *English Language Teaching*, 10(3), 101-110.
- Strobl, C. (2015). Learning to think and write together: Collaborative synthesis writing, supported by a script and a video-based model. In M. Deane & T. Guasch (Eds.), *Learning and teaching writing online: Strategies for success*. In (pp. 69-95). The Netherlands: BRILL.
- Suwantarathip, O., & Wichadee, S. (2014). The effects of collaborative writing activity using Google Docs on students' writing abilities. *Turkish Online Journal of Educational Technology*, 13(2), 148-156.
- Waelateh, B., Boonsuk, Y., Ambele, E., & Jeharsae, F. (2019). An analysis of the written errors of Thai EFL students' essay in English. *Journal of Humanities and Social Sciences of Prince of Songkla University*, 25(3), 55-82.
- Wee, R., Sim, J., & Jusoff, K. (2010). Verb-form errors in EAP writing. *Educational Research and Reviews*, 5(1), 16-23.
- Weigle, S. C. (2002). *Assessing writing*. Cambridge, UK: Cambridge University Press.
- White, R., & Arndt, V. (1991). Process writing. In (pp. 5). Harlow, UK: Longman.
- Wu, H., & Garza, E. (2014). Types and attributes of English writing errors in the EFL contexts-A study of error analysis. *Journal of Language Teaching and Research*, 5(6), 1256-1262.