

# Education Quarterly Reviews

---

**Sariani, S., Yaningsih, Y, & Rozi, F. (2022). Implementing Content-Based Instruction (CBI) on EFL Student's Writing through Technology-Enhanced Language Teaching. *Education Quarterly Reviews*, 5(1), 174-184.**

ISSN 2621-5799

DOI: 10.31014/aior.1993.05.01.429

The online version of this article can be found at:  
<https://www.asianinstituteofresearch.org/>

---

Published by:  
The Asian Institute of Research

The *Education Quarterly Reviews* is an Open Access publication. It may be read, copied, and distributed free of charge according to the conditions of the Creative Commons Attribution 4.0 International license.

The Asian Institute of Research *Education Quarterly Reviews* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of education, linguistics, literature, educational theory, research, and methodologies, curriculum, elementary and secondary education, higher education, foreign language education, teaching and learning, teacher education, education of special groups, and other fields of study related to education. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Education Quarterly Reviews* aims to facilitate scholarly work on recent theoretical and practical aspects of education.



ASIAN INSTITUTE OF RESEARCH  
Connecting Scholars Worldwide



# Implementing Content-Based Instruction (CBI) on EFL Student's Writing through Technology-Enhanced Language Teaching

Sariani Sariani<sup>1</sup>, Yaningsih Yaningsih<sup>1</sup>, Fazrol Rozi<sup>1</sup>

<sup>1</sup> Department of English, Politeknik Negeri Padang, West Sumatera, Indonesia

<sup>2</sup> Department of Information Technology, West Sumatera, Indonesia

Correspondence: Sariani Sariani, Department of English, Politeknik Negeri Padang, West Sumatera, Indonesia, 2500. E-mail: sariani@pnp.ac.id

## Abstract

Several empirical studies of Content-Based Instruction (CBI) have concluded that this approach has positive impacts in improving language learning skills including writing in foreign language learning environments. However, many of them carried out this approach within the traditional setting; face-to-face interaction instead of the e-learning. This current study is aimed to examine the impact of CBI on EFL learner's writing through technology-enhanced language teaching. The approach was implemented in students who wrote e-brochure for the final project. It was a qualitative study where the data was obtained from assessing the writing documents using e-brochure scoring rubrics. The rubrics focused on functional adequacy containing of five dimensions: (1) organization of information, (2) content-accuracy and information validity, (3) spelling and mechanics, (4) attractiveness and organization, and (5) graphics/ pictures. Semi-structured interview was taken as the supporting data. The findings showed that CBI was beneficial on the EFL's writing in advancing the writing skill, increasing the creativity in designing the brochure, and enhancing the interaction with the lecturer through the use of technology. For further research, teachers are invited to engage the students with specific CBI activities in diversified contexts.

**Keywords:** Content-Based Instruction, E-brochure Writing, Language Learning Innovation, Technology-Enhanced Language Teaching

## 1. Introduction

In English language learning, writing as one of four skills in learning the language is intricate and more components to be acquired for the complex task (Harmer, 2007), and considered compulsory to be comprehended (Jaelani, 2017; Toquero et al., 2021). In writing, the students are required to be skillful and creative in expressing their ideas, analyzing and organizing, transferring and presenting them productively (Anwar & Ahmed, 2016; Harmer, 2007). It is a thoughtful activity where the focus is on the process and not the product. Within the activities, the students should have a sense of involvement in the target language by having relevant knowledge

on ideas and appropriate words in brainstorming, and communicating their ideas before presenting them into written form (Anwar & Ahmed, 2016; Heriyawati et al., 2014). In other words, precedently, the learners should have come up with the idea of what they are going to write, how they can deliver their ideas into written form, review the writing documents and make some needed adjustments (Baker, 2015).

Thereby, teachers are urged to conceptualize with compelling strategies in instruction which are not only to develop the students' writing capabilities, but also to assist them learning multiple strategies in resolving the problems occurred during the writing process (Anwar & Ahmed, 2016; Bailey, 2019; Dean, 2010; Toquero et al., 2021). By establishing appropriate strategies and creating supportive environment in learning can stimulate and motivate the students to be productive and proficient in writing (Jaelani, 2017). Writing strategies can facilitate the students to confront the challenges in achieving writing objectives by engaging them through deliberate practices. Hence, applying appropriate strategy can also decrease the anxiety level of the students, increase their engagement in the activity which leads to the enhancement of their own learning (Bailey, 2019). It is worth noting that teachers play a significant role in determining prolific teaching and learning strategies in writing concerning knowledge, and approaches taken to improve their students' writing skills. Purposeful and goal-directed activity should be carried out on how to make the students can produce meaningful contents in their writing comprising linkage between topics and the content, elucidations of materials, and retrieval of information (Dean, 2010).

Marashi & Zargari (2017, p.80) pointed out that "writing is a process of generating text as a communicative bridge between the reader and the writer", for this reason, content becomes a resource to actualize it, and concurrently develop the students' writing skills (Shibata, 2019). Learning the language through content is as designed in Content-Based Instruction (CBI) approach. Through CBI, the students are allowed to learn thematically organized material containing of meaningful information that can stimulate their interest to become actively engaged within the teaching-learning process (Iakovos et al., 2011; Jaelani, 2017). Due to number of compelling characteristics in language instruction that the approach has, it has become increasingly prominent in second language and foreign language teaching. Many of previous empirical researches (H. Brown & Bradford, 2016; Butler, 2005; Dupuy, 2000; Iakovos et al., 2011; Murphy & Stoller, 2001; Rohmah, 2015; Semmelroth, 2013; Shibata, 2019; Snow, 2014; Snow & Brinton, 2017) conceded that CBI was one of means in developing students' linguistic ability (Peachey, 2021) where the students were subjected to meaningful and comprehensive and coherent input as a principal feature of CBI. Undoubtedly, it could promote to deeper processing and understanding of students' language acquisition as it enhanced students' language and content knowledge through authentic, and meaningful contexts provided (Butler, 2005; Iakovos et al., 2011; Jaelani, 2017).

Since COVID-19 pandemic, March 2020, English Department, Politeknik Negeri Padang (PNP) has employed and integrated e-learning settings simultaneously into its teaching-learning method, including for writing skills. Both teachers and students have been carrying out language learning activities, and encouraging students being autonomous in their learning. Nevertheless, CBI as a new paradigm in language education has rarely been conducted in the process of language learning in this department, when in fact by employing this approach teachers can contextualize their learning embedding relevant discussion of specific subject matter when teaching useful language (Khonsari, 2005; Rohmah, 2015). Previous studies showed that integrating CBI and e-learning by making use of technology-enhanced learning can help the students to increase their target language skills focusing on content as a resource to accomplish it (Shibata, 2019). Likewise, by centralizing and encouraging cognitive and self-regulatory learning strategies through technology-enhanced learning (Ahmadi, 2018; Mohammadi et al., 2011; Roziewicz, 2015; Sariani et al., 2021) and implementing CBI within the language learning process, students were benefitted in terms of knowledge obtained and motivation built (H. Brown & Bradford, 2016; Heriyawati et al., 2014; Snow, 2014; Snow & Brinton, 2017).

Simply stated that teaching-learning process in writing skill concentrates on learning the linguistics aspects like graphic system of language, grammatical structures, and vocabulary related to the topic. Whereas the ultimate goal of the teaching-learning of writing skills is on how the students are able to convey the information or ideas one after another into the target language, as a result of thinking, drafting, and revising procedures. Accordingly, writing is a complex and very active process where the purpose is to focus on the "meaning" rather than the "format" of the language, and exploratory process based on the original ideas that have been generated throughout

the process (Anwar & Ahmed, 2016; D. H. Brown, 2001; Cole & Feng, 2015; Heriyawati et al., 2014; Toquero et al., 2021). At recent times, due to the impact of pandemic COVID-19, most of the learning has been carried out through online setting. However, the process of teaching-learning, especially in Indonesia as one of developing countries in the world has yet been effective since some of the teachers and students still encounter technical limitations by cause of less experience in using internet and computer (Heriyawati et al., 2014; Jaelani, 2017; Sariani et al., 2021).

### *1.1. Content-based instruction*

Content-Based Instruction (CBI) in teaching second and foreign languages is attractive as this approach requires the instructors to be resourceful in integrating language teaching aims and content-instruction in class (Snow, 2014; Villalobos, 2013). Instructors should be sensitive to the particular needs of the students in their class (H. Brown & Bradford, 2016) by providing and assembling comprehensible, suitable, and interesting source material. Hence the students can re-evaluating and restructuring the obtained information to develop their thinking skills (Khonsari, 2005; Peachey, 2021). Brown & Bradford (2016, p. 332) stated that “CBI is an approach to language teaching in which content, texts, activities, and tasks drawn from subject-matter topics are used to provide learners with authentic language input and engage learners in authentic language use.” Typically, a learning using CBI is emphasized on the development of students’ language and their content language (Butler, 2005) applying the strategies in negotiating meaning, organizing information from sets of authentic reading materials on selected topics, acquiring content knowledge, interpreting, and evaluating the information contained in them with the help of the teachers (Butler, 2005; Khonsari, 2005; Rohmah, 2015), so that they can provide feedback either orally or in writing (Iakovos et al., 2011). In other words, “CBI focuses on communicating the content rather on how to communicate” (Mesureur, 2012, p. 72), and encourages the engagement and interest of the students to enhanced motivation (Iakovos et al., 2011).

CBI can broadly be divided into three models: sheltered-instructions, adjunct instruction, and theme-based instruction where the first two models are mostly carried out in ESL context, and the latest one in EFL context. Theme-based instruction is more adequate to be applied in EFL environments due to its focus concerning specific content which is relevant to the learner’s needs (Mesureur, 2012; Shibata, 2019; Snow & Brinton, 2017). Rather than studying various topics throughout a semester, in theme-based instruction students will study one particular topic in certain period of time. By focusing on one topic, language teachers can provide the students with scaffolding techniques in teaching-learning process so that the students can focus on various aspects and explore diverse print and non-prints sources. Significantly, this learning process improves the student’s critical/ analytical thinking skills by evaluating, and comparing and contrasting the reading materials based on an array of viewpoints leading to a discovery of their own views (Murphy & Stoller, 2001; Pally, 2001; Semmelroth, 2013).

Several studies have highlighted and justified the integration of language and content on both theoretical and programmatic outcomes (Donato, 2016; Dupuy, 2000; Heriyawati et al., 2014; Semmelroth, 2013; Shibata, 2019; Snow, 2014; Suzuki, 2021). There is significant role of CBI in developing the writing skills in EFL secondary educational contexts (Donato, 2016), as identified by Shibata (2019) and Suzuki (2021) on first year student’s essays of Japanese secondary school in terms of their linguistics and functional aspects on their writing documents. In the overall survey data of the previous studies showed that there is an increase on the student’s vocabulary acquisition and their critical thinking skills seen from the number of words, and examples and reasons used within their essay. When focusing on a single topic rather than incoherent topics, students can improve their familiarity with the topic by frequently breaking down and re-using various vocabulary and key concepts concerning to the topic. The essays written by the students showed significant and meaningful improvement for processing and communicating information containing of stronger argumentation, rhetoric and analyzing skills (Khonsari, 2005; Pally, 2001; Semmelroth, 2013) including language function, text type suitability, linguistic impact, vocabulary complexity, and comprehensibility (Shibata, 2019, p. 353) which indicates that the student’s interest, motivation, and engagement are elevated. Indeed, those actively engaged students will be able to be more creative in producing brilliant ideas, and have great enthusiasm in learning (Heriyawati et al., 2014; Jaelani, 2017; Marashi & Mirghafari, 2019; Semmelroth, 2013).

Needless to say only a few experts came up with the shortcomings of this approach (Baecher et al., 2014; Lightbown, 2014; Shibata, 2019). Despite the beneficial of CBI onto the student's writing documents to deepen their understanding of the topic provided, widen their vocabulary acquisition, and developed the content quality of their essays, the students faced some challenges on their grammatical accuracy and complexity in writing (Lightbown, 2014; Shibata, 2019). Since CBI is centralized to learn a language within the context of the content, and organized around content or information, therefore teaching specific linguistic feature like grammar pattern receives considerably less attention (Baecher et al., 2014; Richards & Rodgers, 2001). These findings were similar to Heriyawati, Sulistiyo, & Sholeh (2014)'s study regardless the influence was unsubstantial due to the carelessness of the students' in using up the mechanics; punctuation; spelling; capitalization; and sentence structure in their writing.

### *1.2. Technology-enhanced language teaching*

There has been a greater significance change in language learning in recent years due to the current situation; pandemic and Industrial Revolution 4.0 where the learning has shifted from the traditional system into digital by utilizing technology-enhanced learning. Incorporating technology into language classes has been implemented by many teachers to facilitate the process of change which can result into a positive outcome in the learning system (Gaballo, 2019). There is a positive effect stated by experts on the use of technology in promoting teaching-learning process (Conolle & Martin, 2007; Gaballo, 2019; Hill et al., 2004; Thoušny & Bradley, 2011) in terms of advancing to a more learner-centered approach, communicative English as a foreign language (EFL) classroom, when independent language learning taken place by giving the learners control over their learning process (Gaballo, 2019; Mehring, 2017).

There are two significant ways for learners and teachers in accessing technology in educational settings; "learning from" and "learning with" technology. Learning from technology concerns on the instrumental use of technology to complement the traditional learning where the learners relatively passive in the process of teaching-learning. Taken as the example using the applications for online dictionary in personal mobile phones (Sariani, Yaningsih, et al., 2020), even though the students can optimize their learning and set the outcome for their personal learning experiences, the learning is ultimately occurred when the students have a good time management, embrace the availability of advanced opportunities in the mobile applications, and comprehend deep learning. On the contrary, learning with technology acquires the learners to be actively engaged and participated during the process (Gaballo, 2019; Hill et al., 2004; Thoušny & Bradley, 2011). Highlighted by Hill et al. (2004, p. 443) that "learning with technology method is no longer solely taking the information [but also] contributing to the knowledge base," and the learners can thrive for improvement on their critical thinking, creativity, and explore their analysis skill which simultaneously encouraging social interaction and learning (Thoušny & Bradley, 2011).

Undoubtedly, the effect of technology in the process of teaching and learning is not merely defined to enable the students to have easier access to new learning, but also regarded to provide appropriate and adequate learning environments between the teachers and the students in terms of providing the students with information and what they are able to do with it (Mehring, 2017; Thoušny & Bradley, 2011). It is worth noting that the use of technology in the field of e-learning can reinforce teacher's productivity and student's accomplishments in accordance with the language learning (Thoušny & Bradley, 2011) besides facilitating social interactions among them in keeping the regularity of the teaching process (Lan, 2019; Patsia et al., 2021). Several recent studies (Deslauriers et al., 2011; Mehring, 2017; Thoušny & Bradley, 2011) indicated that with the explosion of technology it has become easier to integrate the need for greater instructor-student, student-student interaction. Due to the equitable access to technology, the students are able to empower and enhance their learning as they can have immediate access and more opportunities to be exposed to the feedback from their teachers and classmates (Deslauriers et al., 2011). The learning experience that students found empowers them to manage their learning, contribute and expand their ideas and perceptions actively which leads to higher levels of engagement (Mehring, 2017).

In view of this, it can be assumed that employing CBI into the writing skills by making the best of technology can increase the language learning process itself. Primarily for this study, it can develop the students' comprehension and critical thinking on the writing skill as CBI focused on fostering student's competence in language learning

while advancing the knowledge of a subject matter. Likewise, guide language instruction in technology can enhance the contexts, and highlights questions that are still to be answered as this digital environments promoting more self-regulated strategies in the process of learning (An, 2013; Chung, 2015; Zhou & Wei, 2018). In regards, the aim of this study is to examine the impact of CBI on writing skills by promoting technology-enhanced language learning into the teaching-learning process between teachers and students. The study considers closely on how the students taking the advantage of the available technologies to communicate and on how the instruction of CBI evolves in the e-learning setting. Additionally, this study is also conducted in order to accommodate an alternative method for teaching and learning of writing where teachers guide students to achieve their learning goals that underpin university teaching approaches to technology integration in self-regulated learning environment.

Therefore, the research question of this study is “What is the impact of Employing Content-Based Instruction (CBI) approach in student’s writing skills by making the best use of technology-enhanced language learning?”, and “How the integration of this CBI approach with technology-enhanced learning can develop the student’s engagement within the learning process, and improve their writing skills?”. The limitation of the problem is focused on the implementation of CBI onto the writing skills for e-brochure. Additionally, the discussion of this study is also limited to the writing skill of the student’s final project as one of the compulsory requirements for them to graduate.

## 2. Method

The study in hand utilized qualitative approach as the research design in examining the impact of CBI implementation to the participant’s writing skills (Huang & Han, 2017) by using a great deal of technology-enhanced language teaching. Prior to carrying out the study, the participant was informed on the procedure of the study, and received ‘The Human Consent’ letter, when they wanted to proceed to participate in the study and could withdraw their participation at any convenient time (Mackey & Gass, 2005).

### 2.1 Participants

The participant of this study was the final year student (sixth semester) majoring in English, at Politeknik Negeri Padang (PNP). Their language proficiency was at the Level A2-Basic User based on the Common European Framework of Reference (CEFR) standard which was considered could understand sentences and frequently used expressions, communicate in simple and routine tasks described in simple terms aspects in the areas needed. The students chose writing e-brochure as their topic for their Final Project and they were treated with Content-based Instruction (CBI) since the initial process of their writing.

### 2.2 Instruments

There were three instruments employed within this study; 1) The participants’ writing documents, 2) The standard ‘Analytical’ scale for rating the e-brochure documents, and 3) Semi-structured interview for data triangulation. First instrument was the participants’ writing documents. The documents were obtained from the first draft written by the participants, and the last draft; the final writing product of the participants after receiving the content-based instructions within the teaching-learning process. Second was the analytical scoring rubric in assessing the e-brochure documents containing of five measuring parameters. Third was semi-structured interview for data triangulation carried out to the participant right after they had completed the final documents where the results of the interview were transcribed, and the final script was taken after receiving the approval from the participant.

### 2.3 Data collection and data analysis techniques

Data were collected by means of the student’s writing, for the duration of four months (June-September), and the semi-structured interview. There were three writing’ documents were collected from the participant on particular time-based. During the implementation of CBI into the process of writing, the participant was urged to have active involvement in each stage of writing the document, so that she could do some revisions on the document after being assessed by the raters before submitting the next one. In other words, the process of collecting the data

provided the participant learning experiences in producing a well-written product by going through the four stages in the process of writing; planning, drafting (writing), revising (redrafting), and editing (Seow, 2002). *Whatsapp* chat was chosen as the media for the researchers and the participants in facilitating immediate and effective communication.

These documents were carefully measured by two raters for analysis adopting analytical scoring which was more appropriate and effective in writing assessment (Huang & Han, 2013) focusing on brochure. For the anonymity of the raters, they were coded by Rater 1 and Rater 2. The scoring rubrics contains of five measuring parameters: (1) organization of information, (2) content-accuracy and information validity, (3) spelling and mechanics, (4) attractiveness and organization, and (5) graphics/ pictures, therefore particular and rich information on participant's performance can be obtained from this varied aspects of writing (Huang & Han, 2017; Weigle, 2002) . Whereas, there are four levels for the scoring criteria which are used by two raters in examining the writing documents of the participants: Excellent (15-13 pts), Good (12-10 pts), Satisfactory (9-6 pts), Needs Improvement (5-0 pts) (*Tri-Fold Brochure Rubric*, n.d.).

Semi-structured interview was set in exploring further information from the questions and the participant's answers. Even though it consisted of five questions, the interviewers could direct the participant in answering the questions for valuable information needed as the control was on their hand (McDonough & McDonough, 2008). The interview was carried out in participant' L1; Bahasa Indonesia to increase the quality and the amount of the data provided (Mackey & Gass, 2005). All the observed interviews were then fully transcribed into English by the researchers for data analysis. Certain excerpts from the transcripts were selected and then examined thoroughly for the analysis in accordance to conform the research questions. Concerning technology-enhanced in language learning and teaching setting, likewise, the data for the interview session was collected through zoom meeting, and recorded. By employing appropriate digital environments which was compatible to the learners' needs and circumstances could develop learner engagement and active learning (Son et al., 2017; Son & Park, 2015).

### 3. Results

The final writing document shows that there has been a consequential progress made by the participant starting from the first draft she wrote before being facilitated with Content-Based Instruction (CBI), in the matter of measuring components taken in assessing her writings. The results demonstrate that the participant' writing performance increased from the criteria of "Satisfactory" in the range of 6-9 points to "Excellent" in the range of 13-15 points. Below are charts that record the quantitative data of each rater's scoring.

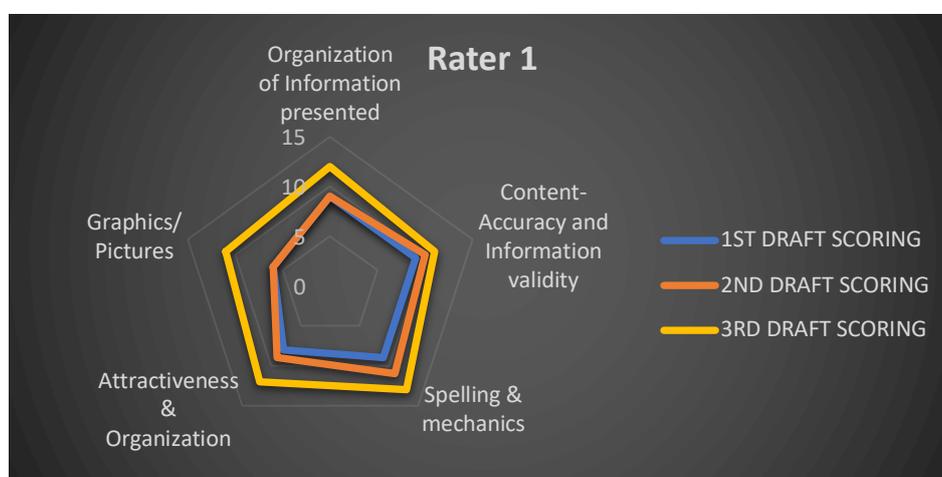


Figure 1: Scoring of Rater 1

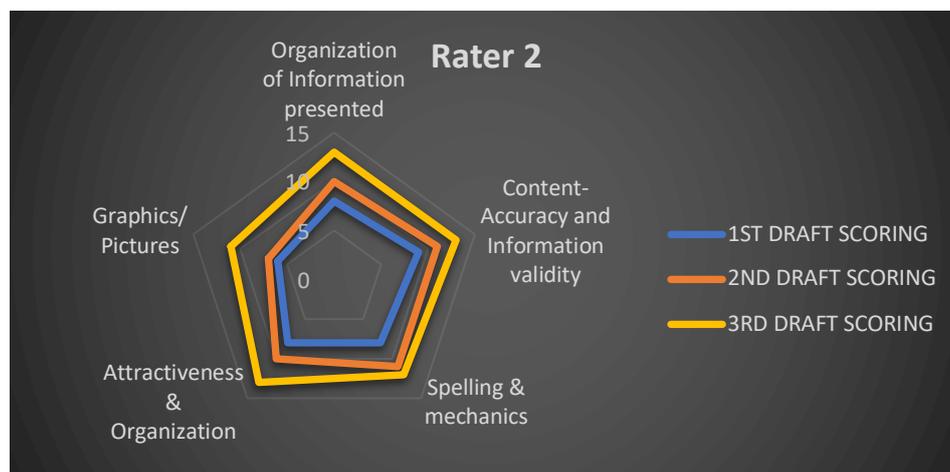


Figure 2: Scoring of Rater 2

As can be seen from Fig 1 and Fig 2 above, the score provided by the two raters points out that there is a positive effectiveness on the implementation of CBI into the participant' learning process. Taking into account for the 1<sup>st</sup> draft that for all five components of scoring rubrics in writing brochure: "The organization of information presented, Content-Accuracy and Information Validity, Spellings and Mechanics, Attractiveness and Organization, and Graphics/Pictures" are in the criteria of "Satisfactory" with various values but still within the range of 6-9 points. Similar scores (9 points) are given by the two raters for the criteria "Content-Accuracy and Information Validity," however there is a slight difference of score for 1 point which is between 8-9 points on the criteria "The organization of information presented" and "Spellings and Mechanics." The lowest one is on the criteria "Graphics/Pictures" where both Rater 1 and Rater 2 agree to give 6 points due to the lack of numbers and attractiveness on the photographs chosen for the brochure. The writing on this document do not provide specific and detailed information in order to raise people' curiosity concerning the product of the brochure. Additionally, even though this document has used general writing conventions, there are few errors found particularly in punctuation, and the use of capital and small letters. Despite the graphics/pictures in this document go well with the texts, it can be considered text-heavy since it has more segments on the texts compared to the graphics/ pictures used.

Concerning the scoring results of the 2nd draft, its marking criteria are in "Satisfactory" and "Good" levels with the values of "6-9 points" for the former and "10-12 points" for the latter. Out of five components in marking, there are two components develop to some degree. There are changes made in this writing document regarding "Content-Accuracy and Information Validity", and "Spelling and Mechanics". The criteria levels up from "Satisfactory" to "Good" with the score between 10 and 11 points. The composition for the e-brochure has contained more information and used persuasive vocabulary to captivate readers' attention for the product being offered. Nevertheless there are a few grammar errors discovered in the composition like the missing of the marker for singular and plural of both "noun" and "verb" in the sentences, the use of capital and small letters, and punctuation, they are negligible as the communication of the ideas is definite. Meanwhile for the other two components "The organization of information presented" and "Attractiveness and Organization," the two raters have different points of view. Rater 1 still puts the two components in "Satisfactory" criteria, whereas Rater 2 decides that these components have been in "Good" criteria even though the difference between the first rater and the latter is only for 1 point. In Rater 2 points of view, it is noticeable in the writing that there is an attempt made to enhance the information in the brochure by adding some specifications concerning to the promoted object seen from more new sentences and term-related vocabulary.

There is a striking difference in the value given by both raters on this 3rd draft. Raters 2 specifies "Excellent" criteria for four out of five components being assessed. The value is in between 12-13 points. Even though the value provided is in the lowest rank of "Excellent" criteria, it is obvious that the writing within this document has been escalating compared to the 1st draft. Nevertheless Rater 1 determines "Excellent" criteria for 1 component only, veritably the scores for "The organization of information presented, Content-Accuracy and Information Validity, and Attractiveness and Organization" have been improving from the scores obtained on the 1st and 2nd

draft. There is an increase by 1-3 points on these three components. Despite these components are still in “Good” criteria, the writing on this 3rd draft has shown that the participant is able to eliminate many unimportant words and sentences without reducing information, and make the sentences on the brochure becoming more effective, casual, persuasive, and informative. To some extent, there is a high increment on “Graphics/ Pictures” component given by both raters with 5 – 6 points raised compare to 1st and 2nd draft. It can be argued that teachers’ frequent constructive feedback both spoken and written concerning the amount of pictures used, their quality and display on the e-brochure has a positive impact on the student’ learning process (Baghbadorani & Roohani, 2014; El Khairat & Sariani, 2018).

Correspondingly, the results obtained from the interview support the analysis made by the raters. Taken from the final result of the participant’s writing document, she agrees that through CBI she can outperform herself and achieve better results for her writing skills. She becomes motivated, and creative in implementing new strategies to develop her writing performance in terms of language function, text type suitability, vocabulary complexity, comprehensibility, and grammatical complexity (Jaelani, 2017; Shibata, 2019, p. 353; Snow, 2014). There is an engagement occurred within the process. The communication and collaboration performed with the lecturer in curating and managing the information in her writing documents on each stage of her writing process facilitate her in integrating the other three language skills in her writing activities (Jaelani, 2017; Renandya, 2021; Shibata, 2019). It can be seen from her excerpts, *“In the early stage of writing the 1st draft, I mostly use the words which have been in my memory. I don’t know how to connect one word to another to make the sentences become longer. However, after experiencing the CBI into the learning, for the 2nd and 3rd draft, I have used e-dictionary to find the synonym of the words, and other words which are appropriate with the content that I want to express”*. To strengthen her previous answers, she also highlights that she has understood the meaning of the words obtained from the e-dictionary, and how to use them properly in her writing. With enthusiasm, she ensures that she will use the new words she found in her next writing activities. It is arguably that the increase in her personal understanding of the task and the appropriate choices of words can enrich her writing and enhance her learning (Sariani, El Khairat, et al., 2020). She confirms that the activities conducted through CBI have been assisted her in expanding her perception and enhancing her creativity with the word’s choice in her writing.

In her answers, she asserts the positive impact of the learning activities including the constructive feedback provided by the lecturer through the implementation of CBI within her writing process. She can have critical reflection on her own writing through the opportunities allocated in the process starting from the stage of compiling, synthesizing, interpreting and evaluating the information. She recognizes that upon the whole process of learning, she can deepen her comprehension of the content area thoroughly and explicitly can build up her language skill. As her writing concerns on the e-brochure, the learning strategies employed in CBI facilitate her to have deep understanding that the words and phrases needed in her writing are more into persuasive rather than descriptive and informative (Heriyawati et al., 2014; Jaelani, 2017; Shibata, 2019), as shown in the following excerpts, *“The words that I put in my 1st and 2nd draft of brochure are more descriptive and informative. I do put persuasive words in my draft, but the words are not straightforwardly persuading people”*. To put it simply, the sufficient attention provided through the learning process on the curricular integration starting from the contents, content’s selection, organization, and sequence stimulate learner’s high-order thinking skills to accelerate their learning process (Jacobs & Renandya, 2016; Renandya, 2013).

#### 4. Discussion

Taken from the overall data obtained in this study, there are some significance can be drawn on the implementation of CBI in improving EFL learner’s writing skills by utilizing technology-enhanced language teaching. Even though all the teaching-learning processes are performed in e-learning setting, the obtained outcomes are similar to the traditional one. It can be said that CBI facilitates the students emphasizing on mastering the content as reflected on the improvement on the writing documents on each stage of the process. There are developments in their composition, and an increase in the number of words used in their writing despite a few grammatical errors. The student has shown her ability in achieving the goal set by identifying aspects of her writing that she would like to improve.

Referring the integration of CBI approach with technology-enhanced learning, the opportunities provided in the learning process involve interactive learning between the teacher and student in terms of the constructive feedback given by the lecturer to each stage of the writing process. They have been established a well-managed communication and collaboration through the use of internet such as email corresponding, g-drive collaborating, whatsapp, and zoom meeting applications. The dialogue occurred between them develop and strengthen the student's understanding on her learning process by adapting and integrating other's ideas and opinions into one's thinking. This interaction provokes the student to be actively engaged in the learning, and influences their creativity in elaborating ideas and constructing them in line with the topic discussed.

In short, CBI can be an adequate technique in teaching writing to EFL learners to assist them in resolving problems they encounter during the writing process. It is because this technique is interesting, challenging, and stimulating the creativity of the learners. However, prior to employing CBI into the teaching-learning process, well-designed goals and objectives, language and content needs, and the interest of the students must be taken into consideration by the teacher.

### Acknowledgments

We would like to acknowledge Centre for Research and Community Service (CRCS), Politeknik Negeri Padang (PNP) for providing DIPA Research Grant, year 2021, with the Research Contract No: 338/PL9.15/PG/2021, dated 21 May, 2021.

### References

- Ahmadi, M. R. (2018). The use of technology in English language learning: A literature review. *International Journal of Research in English Education*, 3(2), 115–125. [www.ijreeonline.com](http://www.ijreeonline.com)
- An, I. S. (2013). Integrating technology-enhanced student self-regulated tasks into University Chinese language course. *International Journal of Computer- Assisted Language Learning and Teaching*, 3(1), 1–15.
- Anwar, M. N., & Ahmed, N. (2016). Students difficulties in learning writing skills in Second Language. *Science International*, 28(4), 735–739. <http://www.sci-int.com/pdf/636371044369572552.pdf>
- Baecher, L., Farnsworth, T., & Ediger, A. (2014). The challenges of planning language objectives in content-based ESL instruction. *Language Teaching Research*, 18(1), 118–136. <https://doi.org/10.1177/1362168813505381>
- Baghbadorani, E. A., & Roohani, A. (2014). The impact of strategy-based instruction on L2 learners' persuasive writing. *Procedia - Social and Behavioral Sciences*, 98, 235 – 241. <https://doi.org/10.1016/j.sbspro.2014.03.412>
- Bailey, D. R. (2019). Conceptualization of second language writing strategies and their relation to student characteristics. *Journal of Asia TEFL*, 16(1), 135. <https://doi.org/http://dx.doi.org/10.18823/asiatefl.2019.16.1.9.135>
- Baker, L. (2015). How many words is a picture worth? Integrating visual literacy in language learning with photographs. *ENGLISH TEACHING FORUM*. [americanenglish.state.gov/english-teaching-forum](http://americanenglish.state.gov/english-teaching-forum)
- Brown, D. H. (2001). *Teaching by principles. An interactive approach to language pedagogy* (2nd ed.). Longman.
- Brown, H., & Bradford, A. (2016). EMI, CLIL, & CBI: Differing approaches and goals. In P. Clements, A. Krause, & H. Brown (Eds.), *Transformation in Language Education* (pp. 328–334). JALT. <https://jalt-publications.org/files/pdf-article/jalt2016-ppc-042.pdf>
- Butler, Y. (2005). Content-based instruction in EFL contexts: Considerations for effective implementation. *JALT Journal*, 27(2), 227–245. <https://doi.org/10.37546/JALTJJ27.2-5>
- Chung, L.-Y. (2015). Exploring the effectiveness of self-regulated learning in massive open online courses on non-native English speakers. *International Journal of Distance Education Technologies*, 13(3), 61–73. <https://doi.org/10.4018/IJDET.2015070105>
- Cole, J., & Feng, J. (2015). Effective strategies for improving writing skills of elementary English Language Learners. *Chinese American Educational Research and Development Association Annual Conference*, 1–24.
- Conolle, G., & Martin, O. (2007). *Contemporary perspectives in e-learning research: Themes, methods and impact on practice*. Routledge.
- Dean, D. (2010). *What works in writing instruction: Research and practices*. National Council of Teachers of English. [https://cdn.ncte.org/nctefiles/resources/books/sample/52119chap01\\_x.pdf](https://cdn.ncte.org/nctefiles/resources/books/sample/52119chap01_x.pdf)

- Deslauriers, L., Schelew, E., & Wieman, C. (2011). Improved learning in a large-enrollment physics class. *Science*, 332, 862–864. <https://doi.org/10.1126/science.1201783>
- Donato, R. (2016). Sociocultural theory and content-based foreign language instruction: Theoretical insights on the challenge of integration. In L. Cammarata (Ed.), *Content-Based Foreign Language Teaching: Curriculum and Pedagogy for Developing Advanced Thinking and Literacy Skills* (pp. 25–50). Routledge.
- Dupuy, B. C. (2000). Content-based instruction: Can it help ease the transition from beginning to advanced foreign language classes? *Foreign Language Annals*, 33(2), 205–223. <https://doi.org/10.1111/j.1944-9720.2000.tb00913.x>
- El Khairat, M., & Sariyani, S. (2018). Developing students' skill in script writing for their final project by applying guided writing task. *Journal Humaniora*, 9(2), 141–148.
- Gaballo, V. (2019). Digital language teaching and learning: A case study. In *Innovation in Language Learning* (pp. 444–450). Filodiritto.
- Harmer, J. (2007). *The Practice of English Language Teaching*. Pearson Education.
- Heriyawati, D. F., Sulistiyo, T., & Sholeh, A. (2014). The Implementation of content-based approach in improving academic writing Skills of EFL students. *LINGUA*, 9(2), 135–144.
- Hill, J. R., Wiley, D., Nelson, L. M., & Hang, S. (2004). *Exploring research on internet-based learning: from infrastructure to interactions* (H. Jonassen (Ed.); pp. 433–460). Lawrence Erlbaum Associates.
- Huang, J., & Han, T. (2013). Holistic or analytic – A dilemma for professors to score EFL essays? *Leadership and Policy Quarterly*, 2(1), 1–8. <http://www.untestedideas.com/journals.php?journal=LPQ>
- Huang, J., & Han, T. (2017). Examining the impact of scoring methods on the institutional EFL writing assessment: A Turkish perspective. *PASAA*, 53, 112–147.
- Iakovos, T., Fragoulis, I., & Keramida, A. (2011). Content-based instruction in the teaching of english as a foreign language. *Review of European Studies*, 3(1), 115–121. <https://doi.org/10.5539/res.v3n1p115>
- Jacobs, G. M., & Renandya, W. A. (2016). Student-centred learning in ELT. In W. A. Renandya & H. P. Widodo (Eds.), *English Language Teaching Today: Linking Theory and Practice* (pp. 13–23). Springer International Publishing AG.
- Jaelani, S. R. (2017). Treating of content-based instruction to teach writing viewed from EFL learners' creativity. *English Language Teaching*, 10(11), 156–161. <https://doi.org/10.5539/elt.v10n11p156>
- Khonsari, S. (2005). Approaches to content-based academic writing. *THE JOURNAL OF ASIA TEFL*, 2(2), 117–137. <http://journal.asiatefl.org/>
- Lan, Y.-J. (2019). Guest deitorial: Language learning in the modern digital era. *Educational Technology & Society*, 22(2), 1–3. <https://www.jstor.org/stable/26819612>
- Lightbown, P. M. (2014). *Focus on content-based language teaching*. Oxford University Press.
- Mackey, A., & Gass, S. M. (2005). *Second language research*. Lawrence Erlbaum Associates, Inc.
- Marashi, H., & Mirghafari, S. (2019). Using content-based and task-based teaching in a critical thinking setting to improve EFL learners' writing. *Studies in English Language and Education*, 6(1), 26–43. <https://doi.org/10.24815/siele.v6i1.11745>
- McDonough, S., & McDonough, J. (2008). *Research method for English language teachers*. Arnold.
- Mehring, J. (2017). Technology as a teaching and learning tool in the flipped classroom. In M. Carrier, R. M. Damerow, & K. M. Bailey (Eds.), *Digital Language Learning and Teaching: Research, Theory and Practice* (pp. 67–78). Routledge & TIRF.
- Mesureur, G. (2012). Content-based instruction for all levels of EFL students. *Keisen University Bulletin*, 24, 71–80. [https://keisen.repo.nii.ac.jp/?action=repository\\_uri&item\\_%0Aid=691&file\\_id=22&file\\_no=1%0A](https://keisen.repo.nii.ac.jp/?action=repository_uri&item_%0Aid=691&file_id=22&file_no=1%0A)
- Mohammadi, N., Ghorbani, V., & Hamidi, F. (2011). Effects of e-learning on language learning. *Procedia Computer Science*, 3, 464–468. <https://doi.org/10.1016/j.procs.2010.12.078>
- Murphy, J. M., & Stoller, F. L. (2001). Sustained-content language teaching: An emerging definition. *TESOL Journal*, 10(2/3), 3–5. <https://doi.org/10.1002/j.1949-3533.2001.tb00026.x>
- Pally, M. (2001). Skills development in “Sustained” content-based curricula: Case studies in analytical/critical thinking and academic writing. *Language Education*, 15(4), 279–305. <https://doi.org/10.1080/09500780108666814>
- Patsia, A., Kazana, A., Kakkou, A., & Armakolas, S. (2021). The Implementation of the New Technologies in the Modern Teaching of Courses. *Asian Institute of Research, Education Quarterly Reviews*, 4(1), 159–167. <https://doi.org/10.31014/aior.1993.04.01.183>
- Peachey, N. (2021). *Content-based instruction*. <https://www.teachingenglish.org.uk/article/content-based-instruction>
- Renandya, W. A. (2013). Essentials factors affecting EFL learning outcomes. *English Teaching*, 68(4), 23–41. <https://doi.org/10.15858/ENGTEA.68.4.201312.23>
- Renandya, W. A. (2021). What makes great 21st century language teacher? *Post Covid 19: Language-Learning Teaching, Linguistics, and Literature in Local and Universal Contexts*.
- Richards, J. C., & Rodgers, T. S. (2001). *Approaches and methods in language* (2nd ed.). Cambridge University Press.

- Rohmah, I. I. T. (2015). The effect of implementing content-based instruction for young learners. *Journal Pendidikan Edutama*, 2(2), 26–33.
- Roziwicz, K. (2015). *Language e-Learning redefined*. <https://elearningindustry.com/language-e-learning-redefined>
- Sariani, S., El Khairat, M., & Yaningsih, Y. (2021). An optimization of language learning in writing through e-learning: Encountering Covid-19 pandemic. *International Journal of Language Education (IJoLE)*, 5(1), 528–541. <https://doi.org/10.26858/ijole.v5i1.15375>
- Sariani, S., El Khairat, M., & Yaningsih, Y. (2020). Advancing Vocabulary Acquisition by Integrating Visual Image and Texts in Writing: E-learning View. *Proceedings of the International Conference on Science and Technology on Social Science (ICAST-SS 2020)*, 493–498. <https://doi.org/10.2991/assehr.k.210424.096>
- Sariani, S., Yaningsih, Y., & El Khairat, M. (2020). Assessing the effectiveness of mobile-application technology: A project-based learning. *Journal of English Educators Society*, 5(1), 67–73. <https://doi.org/10.21070/jees.v5i1.376>
- Semmelroth, A. (2013). Sustained content based instruction for beginner ESL writing classes: A preliminary analysis. *The Journal of Kanda University of International Studies*, 25, 233–258.
- Seow, A. (2002). The writing process and process writing. In J. C. Richards & W. A. Renandya (Eds.), *Methodology in Language Teaching. An Anthology of Current Practice* (pp. 315–320). Cambridge University Press.
- Shibata, N. (2019). The effectiveness of content-based instruction on beginners' writing skills. In P. Clements, A. Krause, & P. Bennet (Eds.), *Diversity and Inclusion* (pp. 352–359). JALT. <https://doi.org/10.37546/JALTPCP2018-47>
- Snow, M. A. (2014). Content-based and immersion models of second/foreign language teaching. In M. Celce-Murcia, D. M. Brinton, & A. M. Snow (Eds.), *Teaching English as a second or foreign language* (4th ed., pp. 438–454). National Geographic Learning/Heinle Cengage Learning.
- Snow, M. A., & Brinton, D. M. (2017). *The evolving architecture of content-based instruction* (M. A. Snow & D. M. Brinton (Eds.); 2nd ed., pp. 2–20). University of Michigan.
- Son, J.-B., & Park, S.-S. (2015). Digital Literacy: EAP students' awareness and use of digital technologies. *The Globalization and Localization in CALL (GLoCALL)*. <http://drjbson.com/projects/dl/>
- Son, J.-B., Park, S.-S., & Park, M. (2017). Digital literacy of language learners in two different contexts. *The JALTCALL Journal*, 13(2), 77–96. <https://doi.org/https://doi.org/10.29140/jaltcall.v13n2.213>
- Suzuki, N. (2021). Effects of Content-Based Instruction (CBI) on EFL secondary school learners' writing linguistic and functional aspects. *Journal of Immersion and Content-Based Language Education*. <https://doi.org/https://doi.org/10.1075/jicb.20006.suz>
- Thouësny, S., & Bradley, L. (2011). Introduction on views of emergent researchers in L2 teaching and learning with technology. *Second Language Teaching and Learning with Technology: Views of Emergent Researchers*, 1–8.
- Toquero, C. M., Talidong, K. J. B., & Liu, Q. (2021). Attracting millennial learners: teachers' conceptualization of strategies in English writing instruction. *International Journal of Humanities Education*, 19(1), 1–14. <https://doi.org/https://doi.org/10.18848/2327-0063/CGP/v19i01/1-14>
- Tri-fold brochure rubric*. (n.d.). <http://mshartman.weebly.com>
- Villalobos, O. B. (2013). Content-based instruction: A relevant approach of language teaching. *Innovaciones Educativas*, 15(20), 71–83. <https://doi.org/10.22458/ie.v15i20.515>
- Weigle, S. C. (2002). *Assessing writing* (J. C. Alderson & L. F. Bachman (Eds.)). Cambridge University Press.
- Zhou, Y., & Wei, M. (2018). Strategies in technology-enhanced Language Learning. *Studies in Second Language Learning and Teaching*, 8(2), 471–495. <https://doi.org/10.14746/ssllt.2018.8.2.13>