ISSN 1798-4769
Journal of Language Teaching and Research, Vol. 14, No. 6, pp. 1502-1514, November 2023
DOI: https://doi.org/10.17507/jltr.1406.08

The Effects of the Application of Graphic Organizers on EFL Students' Ability to Write Opinion Essays and Self-Efficacy

Livianni Lambe*
Department of Educational Technology, Doctoral Program in Educational Technology, Universitas Negeri Malang, East Java, Indonesia

I Nyoman Sudana Degeng
Department of Educational Technology, Universitas Negeri Malang, East Java, Indonesia

Bambang Yudi Cahyono
Department of English Education, Universitas Negeri Malang, East Java, Indonesia

Henry Praherdiono
Department of Educational Technology, Universitas Negeri Malang, East Java, Indonesia

***Abstract*—This study examines the effectiveness of ready-to-use researcher-developed graphic organizers to boost students' abilities in writing opinion essays. The study was carried out in the COVID-19 pandemic situation, with the implementation of the teaching and learning process as part of a learning management system. Thirty-one students living in several regions of Indonesia were involved in the study. A Pre-Experimental One Group Pretest Posttest Design was applied in this study, and then descriptive statistics and N-gain scores as well as one way Anova were used to analyze the data. In the pretest and posttest, respondents wrote opinion essays. Furthermore, they filled out a questionnaire on writing self-efficacy. The results indicate a significant improvement in the means of the students as shown in the comparison of the pretest and posttest scores. In addition, the result shows that there is no effect of the application of graphic organizers on the students' self-efficacy.**

***Index Terms*—EFL students, graphic organizer, opinion essay, writing ability**

I. Introduction

Writing is a real challenge that must be faced by students as it is an extremely important element in both the academic world and the professional world of work (Squire & Clark, 2020; Philippakos et al., 2018). By writing, people can convince readers by conveying their ideas or opinions that are supported by relevant facts or events presented logically (Setyowati, 2016). For teachers, teaching the content and knowledge of language skills is highly essential in teaching a second or foreign language (Anderson et al., 2018). This includes writing, which is a very challenging language skill to teach in foreign language classes since it requires attention to the macro and micro parts of writing as well as the structure (Oshima & Hogue, 2007; Regan et al., 2018). An essay in which the writer expresses opinions critically and logically while supporting them with relevant information from reliable sources is known as an opinion essay (Squire & Clark, 2020). In countries where English is taught as a foreign language (EFL), opinion essay writing is usually taught in English classes at the university level (Baghbadorani & Roohani, 2014; Setyowati, 2016). While spoken expression of opinion is fairly simple, writing well-organized opinions can be incredibly difficult for most people.

To improve students' skills to write good quality essays, appropriate learning strategies or tools are needed. One of the ways in teaching EFL writing is to use graphic organizers (GO) which can be understood as visual learning aids that display structured logical relationships (Ayverdi et al., 2014; Khalaji, 2016) such as concepts, facts, ideas, single words or phrases, and new information with existing knowledge (Baxendell, 2003; Delrose, 2011; Shaw et al., 2012). The application of structured graphics in writing courses or lessons can improve students' ability to compose words, sentences, paragraphs, and essays (Ahmed, 2018; Boykin et al., 2019; Mochizuki et al., 2019; Regan et al., 2018; Tayib, 2015). Several prior studies have examined the use of GO in various forms, such as concept maps, mind maps, clustering, fish bones, Venn diagrams, and many others, for writing narrative, descriptive, persuasive, expository, and argumentative texts at the elementary school to university levels (Ahmed, 2018; Al-Zyoud et al., 2017; Baghbadorani &

* Corresponding author, Email: livianni03@gmail.com

Roohani, 2014; Boykin et al., 2019; Cheng & Gwo, 2019; Eltahir et al., 2019; Evmenova et al., 2020; Fadhil & Yamat, 2020; Fan & Chen, 2021; Juniarti et al., 2017; Lee & Tan, 2010; Mochizuki et al., 2019; Ningrum et al., 2016; Regan et al., 2018; Takacs et al., 2014; Wei et al., 2019; Younis, 2019). However, studies on students' skills in writing opinion essays and the graphic tools are still very limited, and the subjects of the existing studies in this topic were elementary school students (Squire & Clark, 2020; Philippakos et al., 2018; Philippakos & MacArthur, 2020).

Squire and Clark (2020) investigated the application of GOs in the form of Idea Coral and Opinion Essay Organizer where students expressed their ideas or opinions in Idea Coral and transferred these ideas or opinions using words, phrases, or sentences in the Opinion Essay Organizer before writing an opinion essay. Meanwhile, the layered graphics used in studies by Philippakos et al. (2018) and Philippakos and MacArthur (2020) are Collaborative Reasoning and Strategy Instruction. The present study attempted to develop a graphic organizer (GO) in the form of a five-step sequence chart to improve students' ability to write opinion essays. The analysis investigated whether the developed GO improves students' opinion essay writing skills and influences their self-efficacy in writing opinion essays. This study aims to test and describe the effect of a researcher-developed GO on student opinion essay writing and student self-efficacy. Thus, the research questions are:

1. Do EFL students' skills in writing opinion essays improve after being taught using GO?
2. Does the application of GO affect EFL students' writing self-efficacy?

II. Literature Review

A. Graphic Organizer

A graphic organizer is a visual display and graphs which connect ideas or concepts structurally (Ayverdı et al., 2014; Khalaji, 2016). The root of GOs is Advance Organizer, an instructional tool proposed by Ausubel (1968) for outlining students' expository text learning. The purpose of this instructional technique is to give a bridge to bring together students' new schemes and new information (Robinson, 1997; Susilowati et al., 2019). The layout of this tool is presented graphically, thus being referred to as a graphic advanced organizer or graphic organizer by some researchers (Ayverdı et al., 2014). Irwin-DeVitis et al. (1999) explained that these graphic layers serve as visual literacy frames that provide information structurally by classifying certain characteristics of a concept or topic into configurations using labels. Other names for this learning tool include concept map (Read, 2008), mind map (Bahadori & Gorjian, 2016), semantic map (Johnson et al., 1986), argumentation graphic organizer (Wei et al., 2019), Venn diagram, KWL chart, fishbone, herringbone, Y diagram, Storyboard Notes, Six Frames, SQ4R, flow chart, Science Fair Organizer, Math Factors, Pie Organizer, Story Map, Story Pyramid, and Persuasive Writing (McKnight, 2013). Even though a variety of graphical tools go by many names and combinations, most of them are of four primary types, namely conceptual, hierarchical, cyclical, and sequential (Irwin-DeVitis et al., 1999), as shown in Figure 1.

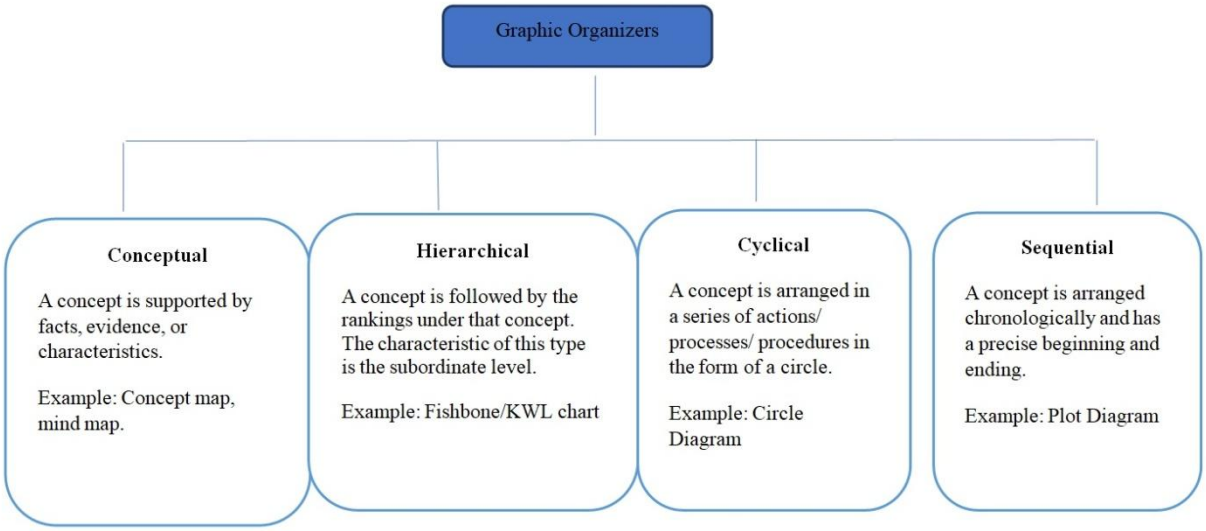

Figure 1. Types of Graphic Organizers

In this study, a layered visual graph was developed based on the structure of opinion essay proposed by Oshima and Hogue (2007). In writing opinion essays, students are required to formally express their opinions, in accordance with the organization of the essay which consists of three parts, namely: introduction, body, and conclusion. The introductory paragraph of an essay contains several general statements and a thesis statement in the form of the author's opinion regarding the discussed problem or topic. The body paragraph(s) covers 2-3 reasons for the thesis statement and a detailed explanation of these reasons. Meanwhile, the last paragraph, which is the conclusion, restates the thesis

statement in other words (Oshima & Hogue, 2007). The structure of opinion essay according to Oshima and Hague (2007) is presented in Figure 2.

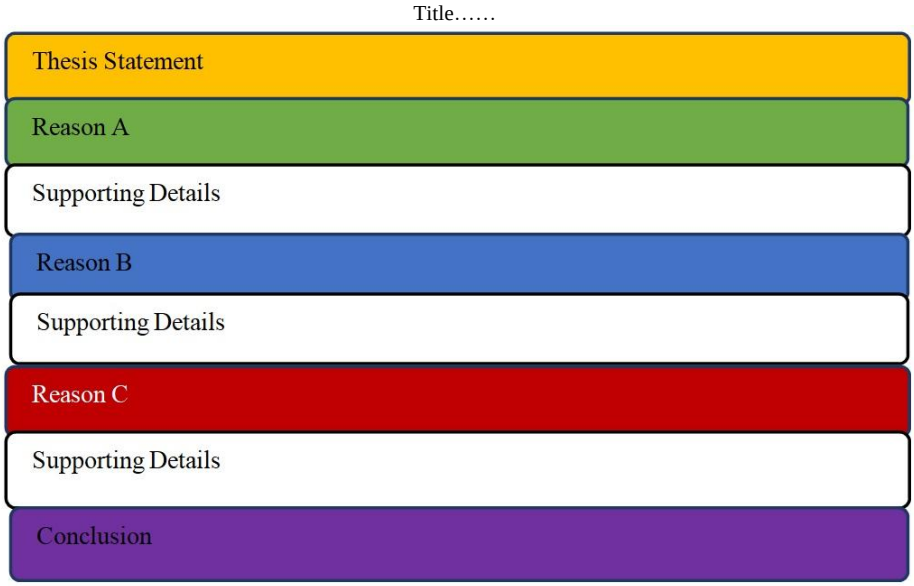

Figure 2. Generic Structure of Opinion Essay

The structure of opinion essay is similar to that of graphic organizers. Therefore, a new model of GO for an opinion essay was created in this study in sequential layer (See Figure 3). In the first step (Rectangle 1), students are directed to write an introductory paragraph which provides an overview of the problem to be discussed, and then followed by a thesis statement which states the author's position. Meanwhile, in the next step (Rectangles 2-4), body paragraphs are compiled, each consisting of a topic sentence which conveys the supporting reason, accompanied by a detailed explanation in the form of examples/data/sources/events relevant to the discussed problem. Transition words are used to connect one paragraph to another to help readers understand the essay easily. The supporting details lead readers to the last rectangle, which is the conclusion. There are several ways to conclude. The arrow that connects the first and the last rectangles in this graph means that the last paragraph restates the thesis statement conveyed in the first paragraph in other words, whereas the small arrows from top to bottom means that the last paragraph summarizes the reasons in the previous paragraphs using different words, ultimately leading to the expression of solutions or predictions.

Several theories have proven that graphic organizers are effective in assisting students in their study. Cognitive theory states that students can organize and link information in a structured way to make it easier to work on or answer questions (Davoudi & Yousefi, 2014; Tayib, 2015). Meanwhile, constructivism theory relates to students' ability to create concepts or ideas and express their own opinions on their essays (Cheng & Gwo, 2019; Fadhil & Yamal, 2020; Mochizuki et al., 2019; Anderson et al., 2018; Ponce et al., 2013; Wei, 2019; Younis, 2019). Cognitive Load Theory, on the other hand, signifies that graphic organizers can lighten students' excessive cognitive load when combining ideas in their writing that are tailored to the purpose of the writing (Lee & Tan, 2010). This is connected to the schema theory, which argues that visual graphics can aid students in connecting their new knowledge with their previous knowledge, thus helping them to easily understand the concepts of the lessons and directing them to recognize the structure of the teaching material (Alfares, 2019; Sabarun, 2018; Roozbeh et al., 2016; Mahmood et al., 2013).

According to Miller (1998), there are three models of writing based on research studies and teaching methodologies. The first model focuses on the analysis of the final product of writing, such as linguistic and grammatical, rhetorical, stylistic, and discourse characteristics. The second model is the process of supervising writing as a recursive activity, which incorporates approaches, methods, and strategies. Meanwhile, the last model is a social activity that illuminates the written product with the structure of the type of text adopted by the community. Writing activities with this model may recognize the final product, the writing process, or a combination of both (Cahyono & Widiati, 2011). The model of writing as a process explains the need for methods, approaches, and strategies in the teaching and learning process so that a well-written final product of writing can be produced. One of the strategies for teaching writing is the use of graphic organizers. Previous studies have revealed that visual graphics are effective to improve students' writing skills.

Khalaji (2016) found that graphic learning tools in essay writing "make it easier for students to organize ideas and information to support the topic to be written according to the elements of essay. Graphic organizers create an order and arrangement of information in students' minds" (p. 103). Bukhari (2016), on the other hand, applied mind maps to writing courses. Mind maps "assist students to easily develop cohesive and coherent contents by following the structure of the writing, namely topic sentences, supporting sentences, and conclusions" (pp. 75-76). In addition, Younis (2019) revealed that mind maps "can help develop ideas quickly as all ideas are written with keywords in a hierarchical form. Mind maps work effectively so that the topic of the writing is well understood by students" (p. 7). Meanwhile, the

results of a study by Ewoldt and Morgan (2017) emphasized that colored graphic organizers really "help students in writing paragraphs as the colors can aid them to see the relationship between the early stages of writing and drafting" (p. 183).

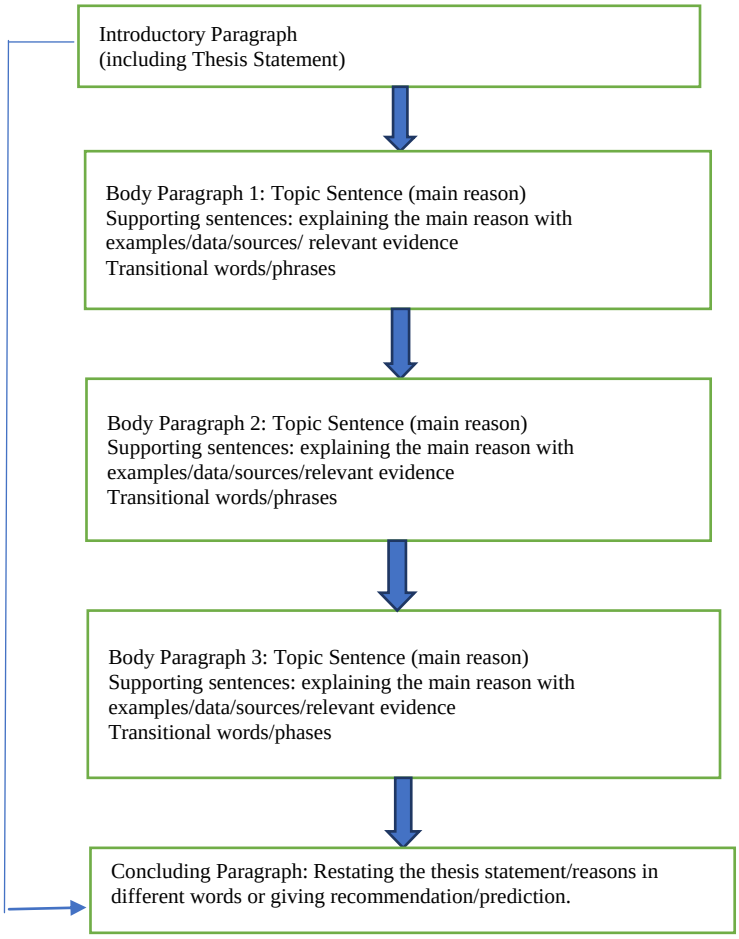

Figure 3. The Developed Graphic Organizer for Opinion Essay

When graphic organizers are applied in writing argumentative essays, they can be used in drafting the arguments. Cheng and Gwo (2019) conducted a study by applying argument maps and revealed that students "can write argumentative essays with general to specific opinions by first making an argument map which makes it easier for them to convey their arguments as well as comprehend the examples and explanations included in the map" (pp. 22-23). Wei et al. (2020) applied a researcher-developed graphic organizer called QT_{GO} to enhance students' ability to write argumentative essays. The results proved that the developed GO "had an effect on both the quality of the writing and the strength of students' arguments which significantly increased with the attainment and insertion of argumentative essay elements" (p. 10).

Graphic organizers can also be used as scaffolding. In this regard, students create and fill out the layered learning tool as scaffolding for writing paragraphs (Ponce et al., 2013). Lee and Tan (2010) also described GO as scaffolding that" can be given feedbacks to make it easier for students to write paragraphs. In addition, graphic organizers are also effective in improving students' ability to compose words and sentences" (pp. 145-147). A study conducted by Hughes et al. (2019) proved that computer-based graphic organizers "improve students' ability to write words, sentences, and transition words in persuasive essays" (p. 8). A previous study by Anderson et al. (2018) also noted that the application of a layered learning tool before writing " has an influence on both the product of writing and the planning of writing as an information process. In the information process, the tool focuses students on selecting important information, supports their ability to define and classify their ideas or opinions, and helps them to organize these ideas or opinions to be more structured in writing their opinions sequentially and consistently. With regard to the product of writing, the graphs provide organized and consistent information in the writing" (pp. 16-19).

Squire and Clark (2019) in their study on 4th grade students in Utah applied two graphic organizer models for opinion essay writing, namely Idea Corral where students express concepts or ideas in circles and Opinion Essay Organizer which consists of five essay structures that increase students' writing skills by an average of 10 sentences. The results showed that students "were able to organize their ideas and their essays became coherent and cohesive" (p. 69). A more recent study by Philippakos and Mac Arthur (2020) on a total of 80 2nd grade students in the eastern United States which combined GO with collaborative reasoning and strategic instruction noted "the role of GO as a tool for

organizing ideas and drafting opinions in opinion essays. The results revealed that the quality of students' opinion essays in terms of ideas, writing organization, and word choices improved, and students were able to write and deal with the three important elements of an opinion essay. In addition, students' essays were consistent with the hooks/topics, opinions, and evidence such as facts or sources, and they managed to properly form a conclusion by restating their opinions and messages" (pp. 8-9).

B. Graphic Organizers and Self Efficacy

Layered controllers have been proven successful in remediating the academic achievement of students at the elementary school to university levels, both those with special needs (Boykin et al, 2019; Hughes et al., 2019) and those without special needs, who have cognitive problems in learning (Ayverdı et al., 2014; Drapeau, 2016; Khalaji, 2016; Mochizuki et al., 2019; Ponce et al., 2018). Apart from using strategies to improve academic results, self-efficacy also has a crucial role as a variable in enhancing students' abilities in the academic world (Bruning et al., 2013; Golpavar & Khafi, 2021).

Some studies have indicated the relationship between learning strategies, graphic organizers, and self-efficacy in enriching students' cognitive intelligence (Boroumand et al., 2020; Eissa, 2012; Estacio, 2021; Nobahar, 2013). A study by Estacio (2021) confirmed that the self-efficacy of the treatment group increased after being exposed to several types of GO in the classroom. In other words, teaching and learning process that combines various types of layered tools "have been shown to bring gains in student self-efficacy. This is as evidenced by the significant distinction in the mean scores between the treatment group and the control after the experiment, meaning that graphic organizers escalated students' self-efficacy for learning. When asked to present their work, students were able to articulate their ideas by answering "why" and "how" questions. In other words, the application of graphic organizers helps students plan what to write, initiate group brainstorming, improve their reading comprehension, identify problems and propose solutions, demonstrate cause and effect, as well as compare and contrast ideas" (pp. 83-84).

In addition, Boroumand et al. (2020) who linked concept maps and self-efficacy found that students' self-efficacy increased rapidly after being given treatment. The results revealed that the posttest mean score of the treatment group increased, whereas that of the control group decreased. Compared to the control group, the treatment group achieved higher self-efficacy after being instructed and motivated to implement concept-mapping strategies in their assignments. The self-efficacy scores of the treatment group accumulated unevenly after the instructional period. This "indicates a more significant improvement in low- and moderate-achieving students than high-achieving students" (p. 29). Furthermore, a study conducted by Nobahar et al. (2013) showed that explicit teaching of concept mapping increased the self-efficacy and ability of EFL students. This means that concept map as a cognitive tool "can enhance students' self-efficacy as it makes students more confident in doing their assignments. This confirms that training by applying concept maps not only leads to an increase in language skills but also involves energetic internal changes in the learning process" (pp. 2124-2125).

Another prior study on this topic was conducted by Eissa (2012) who examined the effects of using an advanced graphic organizer on academic achievement, self-efficacy, and learning motivation of students with special needs. He found that the applied graphic organizer "assisted students to organize their thoughts and ideas into a single well-understood concept, enabling them to confidently answer questions and share their knowledge. Thus, their academic achievement improved along with the increase in their self-efficacy and motivation" (pp. 20-22).

III. METHOD

A. Research Design, Participants, and Setting

This study applied the Pre-Experimental One Group Pretest-Posttest design to test the effectiveness of the developed graphic organizer as a learning tool for opinion essay writing. The procedure includes doing a preliminary test, making intervention by applying the developed GO, and carrying out a final test.

This study was conducted at the Department of English Education at a university in North Sulawesi, Indonesia, with a total of 31 students (21 female students and 10 male students aged 19-20 years) participating as research subjects. This study was carried out during the COVID-19 pandemic, where the teaching and learning process took place synchronously and asynchronously. The respondents of this study were from various cities and regencies in Sulawesi and Sumatra, as well as Ambon City and Ternate City.

B. Teaching and Learning Process

The teaching of opinion essay writing was carried out synchronously via Zoom or Google Meet and asynchronously. There are three main menus on the site to help students do their assignments, i.e., Learning Objectives, Writing Skills Review, and Assessment. The first menu has General Instructional Objectives (GIO) and Specific Instructional Objectives (SIO) sub-menus which explain what students will learn about various types of opinion essays based on questions supplemented with examples, such as To What Extent, Two Part Questions, Problem and Solution, and Advantage and Disadvantage. The Writing Skills Review is a page dedicated for the elements of writing, namely writing mechanics, four types of English Sentences, Writing Opinion Essay, Introductory Paragraph, Body Paragraph, Concluding Paragraph, and Transitional Words and Phrases. After reading the materials in this page, students went to

the Assessment menu, the main "content of the web" consisting of three parts: Thinking, Answering, and Posting. In the Thinking section, students were asked to read the given topic but they were not allowed to access other topics. The text and the questions, as well as the developed GO, are presented in an interface system to make it easier for students to do their assignments. The developed GO plays a major role in brainstorming and scaffolding where each box has clues relating to the structure of opinion essay and can be filled out by students. In the Answering session, on the other hand, students filled out the GO and wrote an essay to be submitted to their lecturer. After being reviewed and edited by an English writing lecturer, the essays were sent back to the students to be revised based on the feedbacks and then resubmitted to the lecturer. If there was no revision, the students could publish their essays in the Posting section.

The learning process was in accordance with the Self-Regulated Learning strategy by Zimmerman (2000) which consists of three stages, i.e., forethought or planning, performance, and self-reflection/self-evaluation (Huh & Reigeluth, 2017). In the Forethought stage, students began by analyzing the given assignments and then setting their writing goals to be achieved by looking at writing materials and essay examples. The menu on the website for this stage was labeled "Learning Objectives". Students who had difficulties understanding the elements of academic writing could learn more on the Writing Skills Review menu. The next stage was Performance, where students did the given assignment by transforming their ideas into an opinion essay using the developed GO and elaborating the ideas using complete sentences and transitional words. The menu on the website for this stage was labeled "Assessment". Finally, in the Self-Reflection stage, students made self-evaluation of their essay through Self-Editing. Students reflected on their work through self-editing worksheets before submitting it to the lecturer in the Assessment menu.

In the teaching and learning process, three texts were provided as writing exercises in six meetings, with the discussion being carried out individually between each student and the writing lecturer with the process of revising, drafting, and editing. In this study, students used the Merriam-Webster Thesaurus dictionary and Grammarly application. The texts were provided as information and the type of level questions categorized under "Analyzing" sub-menu served as a guide for students to write their essays.

C. Measurements

Assessments of the product of writing were divided into two parts: the completeness of opinion essay elements and students' writing quality. The completeness of opinion essay elements refers to the configuration of the developed graphic organizer. The introduction contains an overview of the problem or topic, including a thesis statement which states the position of the writer's opinion. Meanwhile, the body has three paragraphs, each of which consists of a topic sentence, supporting details, and transitional words or phrases. The topic sentence includes a reason to support the thesis statement which is strengthened by supporting details. In this part, students provided relevant examples, data, sources, and/or evidence to justify the reason. Then, transitional words or phrases were added in the end of each paragraph to connect it to the next paragraph. The last element of opinion essay is the conclusion, where students restated their thesis statement or summarized their reasons and proposed predictions or suggestions. Assessment of the completeness of these elements used the criteria from Wei et al. (2019). As for the assessment of writing quality, the raters should pay attention to the aspects of opinion essay assessment, namely organization/purpose, evidence/elaboration, and convention. However, this study did not address the use of proper language in students' essays, even though some errors in the grammar and writing mechanics were found. Two writing lecturers who have taught Advanced Writing courses for over 10 years were appointed to conduct the writing assessment.

After having the test, students were asked to fill out a questionnaire on self-efficacy adapted from Bruning et al. (2013), with a total of 15 questions consisting of five questions for each aspect of writing self-efficacy. The assessed aspects were Ideation, Convention, and Self-Regulation with a range of values from 1 - *I can't do it at all* to 5 - *I can do it well.* The self-efficacy assessment was adapted from Bijl and Shortridge-Baggett (2001), with score ranges of 100-80 (high), 79-50 (moderate), and 49-0 (low).

D. Data Analysis

To answer the first research question, a descriptive statistical analysis was performed due to different scores of the pretest and posttest on the elements of opinion essay and the writing quality. The analysis aims to observe changes in writing before and after implementing the developed GO through the gain score criteria by Hake (1999). Measurement of intra- and inter-rater reliability was done to see consistent decisions of the raters about one's ability to perform a job/task (Cohen, 2017). As for the second research question, one-way ANOVA was made to determine whether the developed GO affects students' self-efficacy in writing essays.

IV. Results and Discussion

A. The Effects of Using the Developed GO on the Writing Ability of EFL Students

In this study, the learning outcomes of students majoring in English in understanding opinion essays with the developed GO were described in the form of the completeness of opinion essay elements in their writing and the writing quality. This was achieved by conducting a pretest to recognize students' initial ability to write opinion essays before the application of the developed graphic organizer. The reliability score of the two raters for the completeness of opinion essay elements was 67.74 and the score for the writing quality was 51.82.

TABLE 1
SCORES FOR THE COMPLETENESS OF THE ELEMENTS OF OPINION ESSAY BASED ON THE DEVELOPED GO

Elements of Opinion Essay based on GO	N	Pretest		Posttest		Gain Score
		Mean	SD	Mean	SD	
Introductory Paragraph	31	.2258	.25294	1.0484	.63711	.4516
Topic Sentences (Reasons)	31	.2258	.25294	1.2581	.64383	.5753
Supporting Reasons	31	.1935	.24757	.8871	.60152	.3871
Transitional words/phrases	31	.3387	.27040	1.2258	.66881	.5565
Concluding Paragraph	31	.2258	.25294	1.1129	.55842	.4892
Total Score	31	1.2097	1.00643	5.0968	2.47460	.4407

Table 1 shows the total mean score of 1.2097 for the pretest, illustrating that 31 students did not understand the elements of opinion essays. As seen in Table 1, the introductory paragraph has the same mean score of .2258 as topic sentences and concluding paragraph, followed by transitional words/phrases and supporting reasons which have a mean score of .3387 and .1935, respectively.

TABLE 2
SCORES FOR WRITING QUALITY

Writing Quality	N	Pretest		Posttest		Gain Score
		Mean	SD	Mean	SD	
Organization/Purpose	31	.9839	.15726	2.1452	.69754	.3822
Evidence/Elaboration	31	.9355	.24973	1.9032	1.09102	.3159
Convention	31	1.9677	.12487	2.3387	.55358	.3548
Total Score	31	35.3452	4.62485	58.3871	18.79482	.3555

Meanwhile, as seen in Table 2, analysis on students' writing quality obtained the total mean score of 35.3452 for the pretest, comprising of a mean score of .9839 for the organization/purpose, .9355 for the evidence/elaboration, and 1.9677 for the convention. This signifies that the completeness of opinion essay elements has not been clearly described in students' works, causing the low quality of their essays.

After intervention with the application of a layered learning tool adapted to the structure of opinion essay, the total mean score for the posttest increased to 5.0968. This is reflected in the mean score for each element of opinion essay, i.e., 1.0484 for introductory paragraph, 1.2581 for topic sentences, .8871 for supporting reasons, 1.2258 for transitional words/phrases, and 1.1129 for concluding paragraph. Along with the increasing completeness of opinion essay elements, the quality of students' writing also experienced an increase with a total mean score of 54.9677 consisting of 2.1452 for the organization/purpose, 1.9032 for the evidence/elaboration, and 2.3387 for the convention. Based on the results of the two assessments, the smallest increase was seen in supporting reasons and evidence/elaboration. The gain score measures students' learning achievement after following the teaching and learning process. In this study, the gain score calculated on the pretest and posttest results is consistent to that of the elements of opinion essay. The obtained total gain score was .4407 for the elements of opinion essay and .3555 for the writing quality. Improvements can be seen in each element of opinion essay as follows: .4516 for the introductory paragraph, .5753 for the topic sentences/main reasons, .3871 for the supporting reasons, .6129 for the transitional words/phrases, and .4892 for the concluding paragraph.

TABLE 3
ELEMENTS OF OPINION ESSAY

Criteria	Gain Score	Category
Introductory paragraph	.4516	Moderate
Topic Sentences (main reasons)	.5753.	Moderate
Supporting reasons	.3871	Moderate
Transitional words/phrases	.5565	Moderate
Concluding paragraph	.4892	Moderate

As for the writing quality, each criterion also showed improvement, namely: .3822 for the organization/purpose, .3159 for the evidence/elaboration, and .3548 for the convention. Based on the gain score criteria, the increase in the completeness of opinion essay elements and the writing quality was > 0.3, meaning that the increase was moderate (See Tables 3&4).

TABLE 4
WRITING QUALITY OF OPINION ESSAY

Element	Gain Score	Category
Organization/Purpose	.3822	Moderate
Evidence/Elaboration	.3159	Moderate
Convention	.3548	Moderate

A sequential GO was developed in this study based on the theory of opinion essay by Oshima and Hogue (2007) (See Figure 3). In the final test after implementing the developed GO, questions were provided as clues to be answered by the students to make an opinion essay. The topic was the plant in the area where the students live and what they can do

to preserve the plant for the next generation. In the first rectangle, students had to write an introductory paragraph consisting of two parts, namely an overview or general description of the topic to be discussed and a thesis statement which signifies the position of their opinion as the controlling idea. In the thesis statement, students conveyed their opinions on what they can do to preserve the plant.

The next rectangles are the body of the opinion essay, where students developed the thesis statement by providing reasons supported by relevant facts, data, quotations, or evidence. Based on the directions included in these rectangles, each paragraph in this section must begin with a topic sentence to be elaborated with supporting reasons in form of personal experiences and other relevant evidence. Then, transitional words/phrases were added in the end of each paragraph to connect it with the next paragraph.

The last rectangle of the developed GO is the concluding paragraph where students restated the thesis statement or summarized their reasons by paraphrasing them and provided predictions or solutions. In this part, students began by writing a conclusion marker. Overall, the content of students' essays was well-organized cohesively and coherently. The following is an example of opinion essay written by a student with the initials NP.

> *The popular plant in my area is coconut. Coconut is the only member of the palm family Cocos or Arecaceae. Coconut is very useful in my place, especially for the people in my place. Many things I can do to coconut plants and how I protect them for the young generation.*
>
> *The first thing I can do is to treat the cleanness of the tree. Coconut is a plant that does not require special care. I always help my parents on a coconut plantation and see how they clean them. For example, the way to care for the plant is to weed the grass and pick up the fallen coconut leaves around the tree.*
>
> *In addition, I can do to the plant as an economic source to support my family's finance. As I know, plants have two main parts namely fruits and leaves. Both of them have benefits if we process them to be valuable goods because they have a selling price. First, I can make coconut milk, coconut oil and food from coconut meat. Then, I sell the leaves for building materials as the roof of homes or huts. The last, the shell can create amazing art to be souvenirs.*
>
> *Furthermore, I, as a generation who feel the great positive impact of coconut, have a responsibility to provide a good understanding to the next generation about coconut plants. Here, my way to protect them as I will write articles or make videos on how to be able to plant coconut plants well, how to produce them properly and how to protect the trees from pests without pesticides.*
>
> *Overall, the famous plant in my place is the coconut and to keep them alive I have to clean weeds around it as well as save coconut trees for young people by composing on paper or recording on camera some activities because they give precious things in our life.*

Students' essays were in line with the layout of the developed GO, meaning that the design is consistent with the needs of students. Wei et al. (2019) stated that the creation of GO that" corresponds to the elements of essay can lead to the completeness of these elements in students' writing" (p. 10). In addition, Robinson (1997) argued that teachers or tutors" must design a GO according to the material or subject matter being taught so that it can lighten the memory load of students" (pp. 99-100). This is in accordance with a statement by Ponce et al. (2013) that designing a GO that "represents text elements can direct students to compose a text that has good congruence with these elements" (pp. 835-836). Furthermore, Ewoldt and Morgan (2017) expressed that designing visual organizers that "match the elements of the writing must provide labels or instructions for each layer to be able to help students recall the constituent elements easily" (pp. 181-183).

Overall, students' essays were found to have three elements, namely the introductory paragraph which includes a thesis statement, the body, and the concluding paragraph. Students' ideas were presented in the thesis statement and then developed in the body paragraphs based on their personal experiences. Students also applied transition words/phrases to connect one paragraph to another and to clarify the relationship between the sentences. In the concluding paragraph, students summarized their statements by paraphrasing them. This finding is in line with several prior studies which found that the GO applied as scaffolding directs students to write essays by filling it out (Lee & Tan, 2010; Ponce et al., 2013).

Thus, researcher-developed graphic organizers have been proven to be able to improve students' writing skills such as in maintaining the suitability of the structure (Wei, 2019; Ewoldt & Morgan, 2017; Khalaji, 2016; Ponce et al., 2013), explaining organized ideas (Squire & Clark, 2019; Philippakos & Mac Arthur, 2020)), writing topic sentences with explanations (Bukhari, 2016), composing essays and paragraphs cohesively and coherently (Squire & Clark, 2019; Bukhari, 2016), increasing the number of transition words in paragraphs (Hughes et al., 2019), and developing a framework for arguments or opinions (Ceng & Gwo, 2019; Wei et al., 2019).

B. The Effects of Using the Developed GO on Students' Writing Self Efficacy

Furthermore, the effect of the developed GO on students' writing self-efficacy was tested. However, the results indicated no effect of the layered tool on students' self-efficacy. To analyze the self-efficacy, one-way ANOVA was performed to see whether the developed layered graph affected students' self-efficacy, which was categorized into high, moderate, and low levels. The homogeneity test showed that the results for three groups were significant (> 0.05), meaning that the three groups can be seen as having the same variance (See Table 5).

TABLE 5
VARIANCE HOMOGENEITY TEST ON WRITING SKILL

Levene's Test	df1	df2	Sig.
1.644[a]	1	28	.210

a. Groups that have only one case were ignored in this variance homogeneity test.

Meanwhile, in the descriptive statistical test for writing quality, the mean scores were 36.6 for the low SE, 16.2 for the moderate SE, and 18.4 for the high SE (See Table 6).

TABLE 6
DESCRIPTIVE STATISTICS OF GO AND SE

Level of SE	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower bound	Upper bound		
High	15	18.4333	18.10784	4.67542	8.4055	28.4611	-17.40	36.60
Moderate	15	16.2067	13.36608	3.45111	8.8048	23.6086	-.40	40.80
Low	1	36.6000	-	-	-	-	36.60	36.60
Total	31	17.9419	15.79932	2.83764	12.1467	23.7372	-17.40	40.80

The ANOVA test obtained a significance of 0.467 > 0.05, meaning that there was no difference in students' ability to write opinion essays in the three groups on their self-efficacy with the application of the developed GO (See Table 7).

This result contradicts several previous studies which found a relationship between academic achievement and self-efficacy, where high-achieving students have high self-efficacy, and vice versa (Boroumand et al., 2020; Eissa, 2012; Estacio, 2021; Nobahar et al., 2013). Likewise, the application of GO in courses increased students' learning outcomes from low and moderate to moderate and high levels, along with an increase in self-efficacy (Boroumand et al., 2020; Eisa, 2012; Estacio, 2021; Nobahar et al., 2013).

TABLE 7
ANOVA TEST ON GO AND SE

Criteria	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	396.913	2	198.456	.784	.467
Within Groups	7091.643	28	253.273		
Total	7488.555	30			

Based on the results above, no correlation was found between students' writing ability and their self-efficacy. This was influenced by several factors. First, several studies have described the effects of GO on self-efficacy in English proficiency by conducting tests specifically designed to measure and classify the English proficiency level (Boroumand et al., 2020; Nobahar, 2013). This was not conducted in the present study as students' writing scores were issued by the faculty/department. The second factor was the creation of virtual study groups that allows students to discuss their assignments. Study groups were not made in this study as it focused on independent learning through LMS. In addition, the COVID-19 pandemic caused students to study independently at home, while students actually need their peers to study together and motivate each other to work on their assignments (Tsao, 2021). Sharing assignments enable students to compare their abilities with each other so that they learn to measure their self-efficacy (Hashemnejad et al., 2014). The third factor was the short learning period. The teaching and learning process in this study was taken place in 6 weeks for 3 topics. In a relatively short time, the learning process with the application of the developed GO was not effective enough to improve students' ability to write opinion essays. This is because other factors within the students also influence their academic success, one of which is self-efficacy. Yan et al. (2022) argued that a short period of less than 1-2 months to apply concept mapping in the learning process is not effective. Academic achievement related to the application of learning tools cannot be observed directly as it requires other factors, such as self-efficacy. This is a chain that cannot be broken or stand-alone, but rather continuous and time-consuming.

V. CONCLUSION

This study examined whether the researcher-developed GO can improve students' ability to write opinion essays in an English Education course. The pretest results revealed that students' essay had a low quality as it did not contain all of the proper elements of an essay. After going through the teaching and learning process with the application of GO, brainstorming, drafting, editing, and revision, a posttest was done and the quality of students' essays increased significantly. The completeness of opinion essay elements in students' writing is associated with the quality of a well-organized writing. In the posttest, students' essays begin with an introductory paragraph consisting of the general statement of the topic being discussed and a thesis statement. This becomes an umbrella of ideas elaborated in topic sentences and supporting details in the form of personal experiences in the following paragraphs.

The results of this study showed that students were able to connect paragraphs by adding transitional words so that their essays flowed naturally. In the concluding paragraph, students paraphrased the reasons stated previously in the body paragraphs. Based on the results of this study, the use of the developed GO as a visual learning tool are proven to be able to remind students of the elements of opinion essay and direct them to compose well-written opinion essay. However, the application of the developed GO has shown no significant effect on students' writing self-efficacy. In other words, there are no significant differences in the essay writing achievement of students with high, moderate, and low self-efficacy levels, meaning that students' ability to write essays cannot be judged or overestimated based on their self-efficacy (Shawer, 2010). This is consistent with the results of a study by Klassen (2004) that Asians have low self-efficacy compared to Westerners.

VI. Limitations and Recommendations for Further Studies

This study applied the Pre-Experimental One Group Pretest-Posttest design with a small sample size. The design was selected due to limited funding and research time, as well as the different locations of the research subjects spread across several regions in Indonesia. Thus, it is highly recommended for further studies to use other research designs and examine a bigger number of research subjects. In addition, this study only examined one type of text, i.e., opinion essay. Future studies on this topic can allocate more time (more than three months is highly suggested) to use different types of GO in each group with various texts such as descriptive, narrative, problem-solving, and comparison/contrast. While going through the teaching and learning process, it is extremely important to measure students' self-efficacy. Writing mechanics, including sentence structure, word choice, and grammar were not addressed in this study as it only focused on the organization and content of the essays as directed at the rectangles in the developed GO. Therefore, the other elements of essay such as vocabulary and grammar can be discussed in further studies. During the teaching and learning process, the developed GO was employed with SRL. In future studies, heterogeneous small-group learning (combining GO with cooperative learning) can be applied and peers can be involved in assessing the strengths and weaknesses of students' works. Further studies may also consider students' proficiency level as a moderating variable by giving a language proficiency test (e.g., TOEFL) to classify students' proficiency level as high, moderate, and low, prior to conducting the study.

VII. Practical and Theoretical Implications of the Study

The main practical implication of this study is that the developed graphic learning tool is consistent with the elements of opinion essay and can help students to improve their skills in writing an opinion essay in three parts: introduction, body, and conclusion. The completeness of these elements can be seen in the five paragraphs of their opinion essays. Paragraph 1 is the introductory paragraph which includes a thesis statement. Meanwhile, Paragraphs 2-4 are the body of the essay in which students elaborate their ideas by writing topic sentences as their reasons and providing relevant evidences to support them. Transitional words are used in the end of each paragraph to connect it to the next paragraph, making it flow naturally and easy to follow. Then, in the concluding paragraph, students restate the reasons mentioned previously in the body paragraphs by paraphrasing them.

Theoretically, this study supports the theory that visual graphics help students organize their writing plans (Anderson et al., 2018; Ewoldt & Morgan, 2017). Anderson et al. (2018) stated that GO has two functions, i.e., as an information process and a product of writing. After implementing a researcher-developed GO, students can process information through the development of ideas by stating their own opinions and supporting them with examples drawn from their own experiences which are arranged systematically and consistently in their essays. Then, as a product, their writing includes all elements of an opinion essay and the content of their essay is coherent and cohesive from beginning to end.

Acknowledgements

The first author would like to thank Indonesian Endowment Fund for Education for financially supporting this work and her study.

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Livianni Lambe: A doctoral student at Educational Technology, State University of Malang, as well as a lecturer at English Education Department, Manado State University, North Sulawesi Indonesia. Research Interest: English Language Teaching.

I Nyoman Sudana Degeng: A senior professor at Educational Technology, State University of Malang. Research Interest: Teaching and Learning, Curriculum Development, Pedagogy and Education, Collaborative Learning, Educational Evaluation, Online Learning, Blended Learning, Constructivism, Cooperative Learning, and Lifelong Learning.

Bambang Yudi Cahyono: A senior professor at English Education Department, State University of Malang. Research Interest: Applied linguistic, Language Teaching, Teaching English as Foreign Language, Essay Writing, and English Language Teaching.

Henry Praherdiono: Associate professor at Educational Technology, State University of Malang. Research Interest: E-Learning, Teaching and Learning, Online Learning, Online Education, Pedagogy and Education, Distance Education, Instructional Technology, ICT in Education, Technology Enhanced Learning, and Blended Learning.