

**THE USE OF INFOGRAPHICS TO ENHANCE THE ENGLISH  
WRITING SKILL OF MATTHAYOMSUKSA 3 STUDENTS  
AT DARA ACADEMY, CHIANG MAI PROVINCE**

การใช้อินโฟกราฟิกเพื่อเพิ่มพูนทักษะการเขียนภาษาอังกฤษของนักเรียน  
ชั้นมัธยมศึกษาปีที่ 3 โรงเรียนดาราวิทยาลัย จังหวัดเชียงใหม่

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF MASTER OF ARTS  
IN ENGLISH LANGUAGE STUDIES  
GRADUATE SCHOOL, CHIANG MAI RAJABHAT UNIVERSITY  
YEAR 2021**

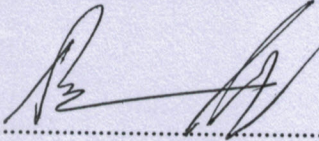


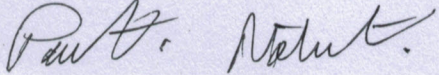
**Independent Study Title** The Use of Infographics to Enhance the English Writing Skill of Matthayomsuksa 3 Students at Dara Academy, Chiang Mai Province  
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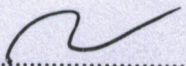
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**Independent Study Title** : The Use of Infographics to Enhance the English Writing Skill of Matthayomsuksa 3 Students at Dara Academy, Chiang Mai Province

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### ABSTRACT

The objectives of this research were to investigate the effects of the use of infographics on students' English writing skill and to explore students' opinions on the use of infographics. The population was 288 Matthayomsuksa 3 students at Dara Academy, Chiang Mai, Thailand. The sample group comprised 50 students obtained by applying the cluster sampling method. The research instruments included the lesson plans, the pre-test and post-test, writing practices, and a questionnaire. Statistical methods for data analysis included percentage, mean, standard deviation, and t-test.

The results revealed that the use of infographics was able to enhance the student's writing skill. The post-test scores were higher than the pre-test scores at the significance level of 0.05. In terms of the students' opinions on the use of infographics, it was found that the students had positive opinions on the use of this instructional media. They found writing class with the use of infographics enjoyable, and they viewed that the use of infographics enabled them to better generate, connect, and organize ideas in their writing.

**Keywords:** Infographics, Enhance, Writing Skill

### III

หัวข้อการค้นคว้าอิสระ : การใช้อินโฟกราฟิกเพื่อเพิ่มพูนทักษะการเขียนภาษาอังกฤษ  
ของนักเรียนชั้นมัธยมศึกษาปีที่ 3 โรงเรียนดาราวิทยาลัย  
จังหวัดเชียงใหม่

ผู้วิจัย : อริยะ มิตาโย

สาขาวิชา : ภาษาอังกฤษศึกษา

อาจารย์ที่ปรึกษาการค้นคว้าอิสระ : ผู้ช่วยศาสตราจารย์ ดร.ปัทมรัศมี นาคนิยฐนนต์

#### บทคัดย่อ

การวิจัยในครั้งนี้ มีวัตถุประสงค์ เพื่อศึกษาผลการใช้อินโฟกราฟิกเพื่อเพิ่มพูนทักษะการเขียนภาษาอังกฤษ และเพื่อศึกษาความคิดเห็นของผู้เรียนที่มีต่อการใช้อินโฟกราฟิก ประชากรในการวิจัย ได้แก่ นักเรียนชั้นมัธยมศึกษาปีที่ 3 โรงเรียนดาราวิทยาลัย จังหวัดเชียงใหม่ จำนวน 288 คน กลุ่มตัวอย่าง ได้แก่ นักเรียนชั้นมัธยมศึกษาปีที่ 3 จำนวน 50 คน ได้จากการสุ่มตัวอย่างแบบกลุ่ม (Cluster Sampling) เครื่องมือที่ใช้ในการวิจัย ได้แก่ แผนการจัดการเรียนรู้โดยใช้อินโฟกราฟิกเป็นสื่อการสอน แบบทดสอบก่อนและหลังเรียน (Pre-test and Post-test) แบบฝึกการเขียนท้ายคาบเรียน และแบบสอบถามความคิดเห็น สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ ค่าร้อยละ (%) ค่าเฉลี่ย ( $\bar{X}$ ) ส่วนเบี่ยงเบนมาตรฐาน (S.D.) และการทดสอบค่าที (t-test)

ผลการวิจัยพบว่า การใช้อินโฟกราฟิกเพิ่มพูนทักษะการเขียนภาษาอังกฤษของนักเรียน โดยคะแนนหลังเรียนสูงกว่าคะแนนก่อนเรียนอย่างมีนัยสำคัญที่ระดับ 0.05 ในด้านความคิดเห็นของนักเรียนที่มีต่อการใช้อินโฟกราฟิกนั้น พบว่า นักเรียนมีความคิดเห็นเชิงบวกต่อการใช้อินโฟกราฟิก โดยเห็นว่าสื่อดังกล่าวทำให้ชั้นเรียนวิชาการเขียนสนุก และช่วยสร้างความตระหนักในการสร้าง เชื่อมต่อ และจัดระเบียบความคิด

คำสำคัญ : อินโฟกราฟิก, เพิ่มพูน, ทักษะการเขียน

## ACKNOWLEDGEMENTS

First of all, I would like to express my gratitude to my advisor, Assistant Professor Dr. Pathamarat Nakanitanon for her valuable guidance, help and support throughout the course of this study. I am gratefully indebted to her for her valuable insights, whole hearted support, and constructive comments on my work. This independent study would not have reached completion without her constant encouragement and support.

My sincere gratitude also goes to Assistant Professor Dr. Chongrak Liangpanit, a lecturer at Khon Kaen University; and Assistant Professor Dr. Chalermchai Chaichompoo and Dr. Kuanhathai Kuadnok, lecturers at the Department of Western Languages, Chiang Mai Rajabhat University, who kindly provided valuable comments for improving the research instruments. Without their professional guidance, the data collection could not have been successfully conducted.

I would like to express my sincere appreciation to the teachers and the students of Lower Matthayom Department at Dara Academy, Chiang Mai, Thailand for their active participation in this study. Without their collaboration, my independent study would not have been successful.

I would also like to thank my friends for their help in my work. Without their assistance, my study would not have been possible.

Finally, I am indebted to my family, especially to my beloved mother and my sister, for their unfailing love and encouragement throughout my years of study.

A-riya Mitayo

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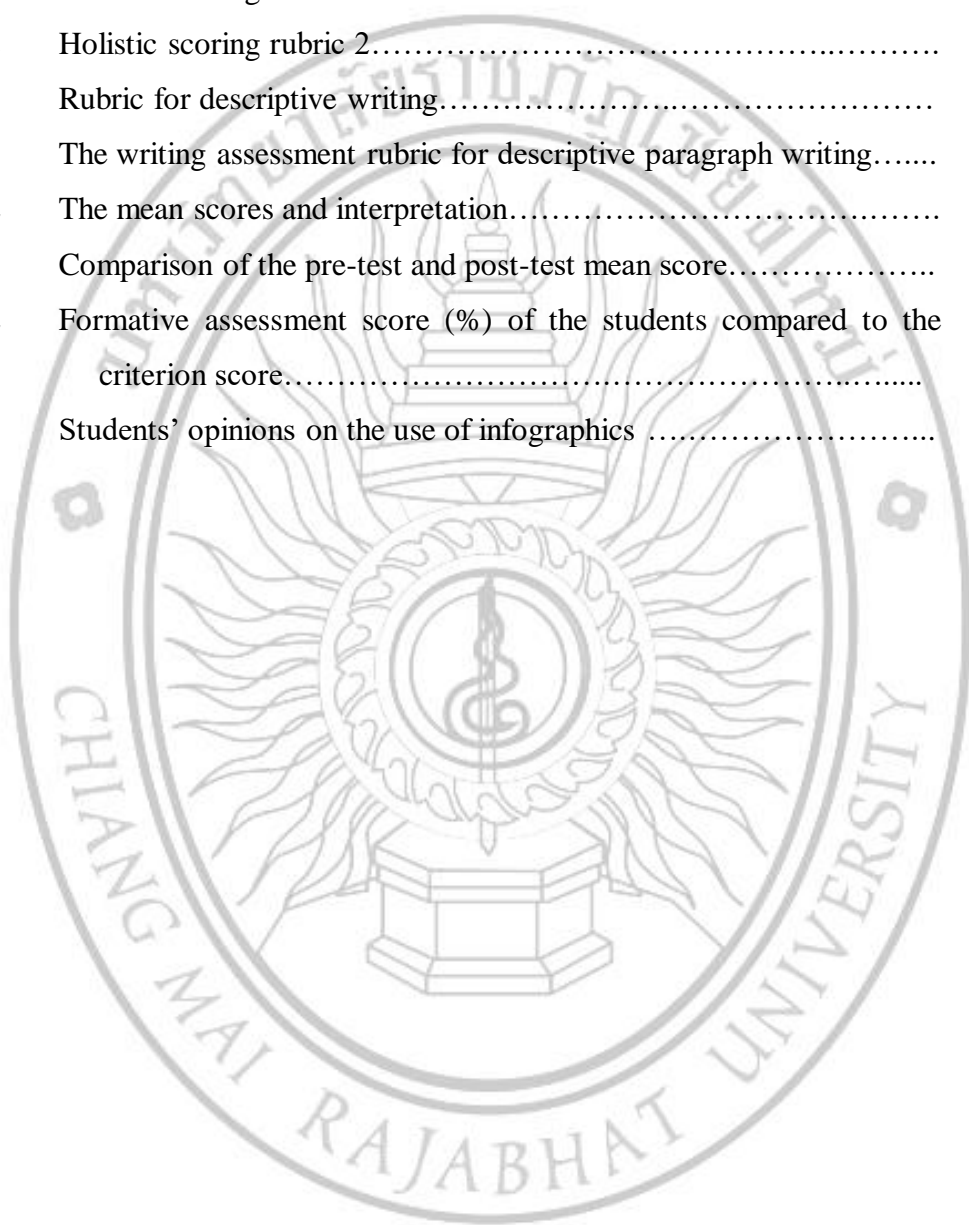
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# **CHAPTER 1**

## **INTRODUCTION**

This chapter aims to provide the overview of this study. The contents, which are divided into eight main sections, cover the background and rationale of the study, research objectives, research questions, expected results, research hypotheses, scope of the study which includes population and sample, scope of contents, scope of time and place, scopes of variables as well as definitions of terms and conceptual framework. Details of each section are as follows.

### **Background and Rationale**

Writing is one of the most significant English skills necessary for various purposes of communication such as business, politics, and education. For second language learners, students with good command of writing can convey their message well. In most English classes, writing is considered as the most difficult skill to acquire (Negari, 2011) and one of the most complicated tasks to pay attention to (Ahmed, 2010). In addition, writing is a way of communication that allows people to share ideas, opinions and emotions (White & Arndt, 1991). Writing is an effective feature that enables students to learn more accurately and to enhance their understanding of what they have been taught (Voon Foo, 2007). Mohamed and Zouaoui (2014) also assert that writing is a necessary skill; the improvement of learners' English writing skills and confidence may lead to professional opportunities in the future as well as empowering learners to take on new roles as citizens within the community. Many researchers agree that writing in the ESL/EFL context is a complex, difficult and demanding task (Al-Khairy, 2013). Consequently, students at all the educational level need to improve their writing skill.

To help improve students' writing skill, educational institutions offer them courses of writing and one of the most significant elements of the teaching and

learning process that can ensure the learning accomplishment is the teaching method. An effective teaching method with effective teaching media to improve students' writing ability is used to equip the skills they need to generate appropriate and effective written communication. Therefore, teachers need to use effective teaching method which incorporates appropriate techniques to help students develop their writing competence (Alsmari, 2019). Teachers have to try new teaching methods to achieve learning goals (Adas & Bakir, 2013). Several learning methods have been used by teachers. These teaching methods include the audio-lingual method, community language learning, silent way, and suggestopedia (Freeman, 1990) which are the methods used in general classes. For writing classes, several methods, techniques, and activities are employed and they are such as peer response, scaffolding, self and peer correction, mobile learning, and infographics.

Infographics is a representation of information in a designed graphic format. Infographic is the form of data visualization that conveys complex information to the reader in an easier and faster to understand (Nikolay, 2018). Nowadays, infographic is used for many purposes such as business, health, and education. Some teachers see the infographic as a potential visual media that can be used in the teaching process to teach various subjects (Saadah, 2019) such as grammar, vocabulary, and writing. The use of infographic is an alternative way to improve students' writing skill. Davis and Quinn (2014) state that apart from reading skill, infographics enhance writing skills. There are some previous research studies supporting the use of infographics to develop the English writing skill. Saadah (2019) ascertained that using infographics media in teaching and learning activity has an effect on students' writing skill. Furthermore, Ridaillah (2018) claims that infographics give significant effect in students' writing summary skill. Infographics, previously known as graphic organizers, helps the students in generating, connecting ideas, and organizing information which can be used for developing the written text (Grabe & Kaplan, 1996). Teachers see infographics as a potential visual media that can be incorporated into the teaching process, and they find infographics useful in attracting the students' attention (Ridaillah, 2018; Saadah, 2019). For Alrwele (2017) and Cifci (2016), using infographics has a positive impact on students' writing skill development, academic achievement, and creative thinking. Although there are a lot of advantages of the use

of infographics, there is still a small number of writing classes that incorporate the use of this tool to improve students' writing skill.

In the EFL context, several studies have been conducted by using graphic organizer, mind mapping, and pictures. The studies which use infographics in teaching English writing have been done by several researchers such as Mahdah (2018), Saadah (2019), and Mubarak and Asri (2020), but in the context of this study there is a small number of the studies on such topic despite the recognition of effectiveness of the use of infographics according to the previous studies found in other contexts.

Therefore, this research aimed to uncover whether the use of infographics could enhance students' English writing skill. The results of this study would be beneficial to the teaching and learning of English writing classes in the context of Dara Academy.

### **Research Objectives**

The objectives of this research were as follows.

1. To investigate the effects of the use of infographics on students' English writing skill
2. To explore the students' opinions on the use of infographics

### **Research Questions**

Based on the objectives of the research listed above, this study centers around the following research questions:

1. Is there any significant difference between the students' English writing skill before and after the use of infographics?
2. What are the students' opinions on the use of infographics?

### **Expected Results**

The expected results were as follows.

1. The students' English writing skill is better after the use of infographics.
2. The students have positive opinions on the use of infographics



## **Research Scope**

### **Population and sample group**

The population of this experimental design study was 288 Matthayomsuksa 3 students at Dara Academy, Chiang Mai, Thailand. They enrolled in a supplementary English subject in the summer semester of Academic Year 2020. The sample group consisted of 50 students derived by applying the cluster sampling method.

### **Scope of content**

The content taught and learned during the experiment was English paragraph writing, particularly the descriptive type by using infographics. Based on the course description, the students were required to write paragraphs to describe an animal, famous people, favorite pictures, and future education.

### **Scope of duration time and place**

This experiment was conducted for eight fifty-minute periods in four weeks, two periods a week at Dara Academy, Chiang Mai, Thailand from April to May, 2021.

### **Scope of variables**

**Independent variable:** Teaching descriptive paragraph writing with the use of infographics

**Dependent variable:** Students' English paragraph writing skill and their opinions on the use of infographics

## **Definition of Terms**

**Infographics** is a collection of imaginary charts and minimal text that gives an easy to understand overview of a topic. In this study, it is used for teaching and learning in the English descriptive paragraph writing class at Dara Academy.

**English writing skill** refers to the students' English descriptive paragraph writing ability which is evaluated by using a holistic scoring rubric focusing on five aspects of writing: content, organization, vocabulary, language use, and mechanics.

**Students** refer to Matthayomsuksa 3 students enrolling in the Supplementary English course at Dara Academy, Chiang Mai, Thailand during the months of April and May, 2021.

**Students' opinions** refer to the ideas on the use of infographics to enhance students' writing skill.

**Teaching English paragraph writing using infographics** is a teaching activity with the following steps:

Step 1: The researcher, who is one of the two teachers grading students' paragraphs, teaches the components of a descriptive paragraph and introduces the process of writing to students.

Step 2: The researcher introduces infographics to the students and trains them how to use the infographics in generating ideas.

Step 3: Students generate their ideas on an assigned topic through creating infographics on a website (Canva.com).

Step 4: The teachers give feedback on students' infographics.

Step 5: Students write a paragraph by using their infographics as an outline and submit it to the teachers.

Step 6: The teachers give feedback to the students' paragraphs.

Step 7: The students revise their first draft after getting feedback from the teachers.

Step 8: The students submit the final draft to the teacher for grading via email.

## **Summary**

This chapter presents the overview of the study which aimed to investigate the effects of the use of infographics on students' English writing skill. The contents cover the background and rationale of the study, research objectives, research questions, expected results, research hypotheses, scope of the study, definitions of terms and conceptual framework. The next chapter discusses the related literature.

## **CHAPTER 2**

### **LITERATURE REVIEW**

This chapter focuses on related literature about writing description, types of writing, writing process, writing assessment, teachers' feedback, visual media, infographic, teaching and learning of writing through the use of infographics, core curriculum, and related studies on the use of infographics to improve students' writing skill.

#### **Writing**

Writing has been defined in many ways. According to Harmer (1998), writing skill has been recognized as one of the fundamental skills for language learning. Writing is the process that begins with the production and arrangement of ideas, followed by the production, revising, editing, and improving of the first draft to the final edition (Martinez, 2019). In addition, writing is a process of formulating and organizing ideas in right words to deliver the aim and present them on a piece of paper. According to Nunan (2003), writing is a physical as well as a mental activity. Writers express their own ideas and writing requires generations of ideas, expression, and organization into sentences and paragraph that easy to understand. Since writing needs to be effective by having accuracy of grammar, structure, vocabulary, and organization of the ideas (Alfaki, 2015), Javed (2013) states that writing skills demands that the ideas be presented in the well-organized structure.

In conclusion, writing refers to the communication of ideas in the written form comprising brainstorming good ideas, organizing, and language use including sentence structure, grammar, and vocabulary.

## **Types of Writing**

Writing is categorized into four types include descriptive, narrative, expository, and persuasive writing (Hutchinson, 2005; Sarikas, 2018; The University of Sydney, 2019) as follows:

1) Descriptive writing is used to describe a character, event, or place in details. Its purpose is to provide facts or information. The author might describe the scene in terms of all five senses.

2) Narrative writing is used to tell a story. The author will create different characters and tell what happens to them. Narrative writing can also include dialogue. Novels, short stories, and poetry are some types of narrative writing.

3) Expository writing is used to inform or explain the subject to the reader. This type of writing focuses on telling about a given topic or subject by using facts and figures without voicing author's personal opinions or background. It is founded widely in textbooks and how-to articles.

4) Persuasive writing justifies reasons to convince the readers to agree with the author's point of view. Persuasive writing contains the opinions and biases of the author. In addition, to convince others, persuasive writing contains justifications and reasons.

In conclusion, there are four main types of writing: descriptive, narrative, expository, and persuasive. Each of these four writing types has a specific aim and requires a particular writing skill. In this study, the researcher selects descriptive paragraph writing so that it is in accordance with the school curriculum.

## **Writing Process**

According to Graves (1983) and Tompkins (1994), there are five stages of the writing process including prewriting, drafting, revising, editing, and publishing as follows (Laksmi, 2006; Listyani, 2018; Seow, 2002):

### **Prewriting**

Prewriting activities take place before starting on the first draft of a paper. At this stage, students write about topics based on their own experiences. They gather



and organize ideas. Moreover, they define a topic sentence. Finally they write an outline for their writing.

### **Drafting**

It is an actual stage where the students write about their topic on paper. At this stage, students write a rough draft. They also emphasize content rather than grammatical and mechanical errors (Bae, 2005). More than that, students may also use the infographic to help organizing their ideas.

### **Revising**

Revising occurs after the students have finished their first draft. It involves making changes that enhance the match between plan and text. While revising, students reread their writings. They share their writings and participate constructively in discussion about their writing with teacher. Revising almost always includes getting suggestions from peers or teachers on how to improve the writing. Students make changes in their compositions to reflect the reactions and comments of them. Also, students make substantive rather than only minor changes.

### **Editing**

Editing occurs after revision of the work. The goal is to give the paper a professional appearance. Students proofread their own writings. They increasingly identify and correct their own mechanical errors focusing on punctuation, sentence length, spelling, agreement between subjects and predicates, language use, and style.

### **Publishing**

At this stage, students make the final copy of their writings and publish their writings in appropriate forms. This stage also called “sharing” (Bae, 2005). They share their finished writings with the teacher or publish to others.

Many authors, such as Seow (2002) limit process writing’s steps to planning, drafting, revising, and editing. According to Martinez (2019), the process writing steps consist of planning, drafting, revising, editing, and publishing. These stages receive different names by different authors in the field of writing; however, they convey the same process.

In brief, there are five stages of writing process namely prewriting, drafting, revising, editing, and publishing which assist students to generate and organize their

ideas into a paragraph by focusing on content, organization, vocabulary, language use, and mechanics.

### **Writing Assessment**

The objective of assessment is to evaluate in order to enhance students learning process. Rubric is a grading tool that describes the criteria, or "what counts," for the assignment (Mesacc, 2012). It also describes each of the criteria according to gradations of quality, with descriptions of strong, middling, and problematic student work. Writing assessment for writing can be done in two ways, direct and indirect assessment. According to Grabe and Kaplan (1996), direct writing assessment focuses on writing on a single topic while indirect writing assessment is a multiple choices test that evaluates students' grammar, vocabulary, and expression. The rubrics used for grading the writing test are divided into holistic scoring and analytic scoring. In this study, the holistic scoring rubric is used for evaluating students' writing skill through the direct assessment.

#### **Holistic scoring**

Holistic scoring consists of a single scale with all criteria to be included in the evaluation being considered together (Hyland, 2002). Holistic scoring uses a variety of criteria to produce a single score. Holistic assessments provide only an overall score for the performance (Hyland, 2002; Weigle, 2002) and are often used for large-scale assessments. This method of scoring has the benefit of being faster and less expensive method (Weigle, 2002, as cited in Torwong, 2003). The specific criteria selected depend on local instructional programs and language arts objectives. It focuses on the reader judge's attention (White, 1985, as cited in Torwong, 2003). The rationale of using a holistic scoring system is that the total quality of written text is more than the sum of its components. Writing is viewed as an integrated whole. The following is some examples of holistic scoring rubrics:

Table 2.1 Holistic scoring rubric 1

## Writing Assessment Rubric

## ESL Composition Profile

Student \_\_\_\_\_ Date \_\_\_\_\_ Topic \_\_\_\_\_

	Score	Level	Criteria	Comments
Content		30-27	<b>EXCELLENT TO VERY GOOD:</b> - knowledgeable, -substantive, - thorough development of thesis, -relevant to assigned topic	
		26-22	<b>GOOD TO AVERAGE:</b> - some knowledge of subject, - adequate range, - limited development of thesis, -mostly relevant to topic but lacks details	
		21-17	<b>FAIR TO POOR:</b> -limited knowledge of subject, - little substance, - inadequate development of topic	
		16-13	<b>VERY POOR:</b> -does not show knowledge of subject, -nonsubstantive, -not pertinent, - OR not enough to be evaluated	
Organization		20-18	<b>EXCELLENT TO VERY GOOD:</b> - fluent expression, - ideas clearly stated/supported, - succinct, -well-organized, -logical sequencing, -cohesive	
		17-14	<b>GOOD TO AVERAGE:</b> - somewhat choppy, -loosely organized but main ideas stand out, -limited support, -logical but incomplete sequencing	
		13-10	<b>FAIR TO POOR:</b> - non-fluent, - ideas confused or disconnected, -lacks logical sequencing and development	
		9-7	<b>VERY POOR:</b> - does not communicate, -no organization, - OR not enough to be evaluated	
Vocabulary		20-18	<b>EXCELLENT TO VERY GOOD:</b> -sophisticated range, -effective word/idiom choice and usage, -word from mastery, - appropriate register	
		17-14	<b>GOOD TO AVERAGE:</b> - adequate range, -occasional errors of word/idiom form, choice, usage but meaning not obscured	
		13-10	<b>FAIR TO POOR:</b> -limited range, - frequent errors of word/idiom form, choice, usage, - meaning confused or obscured	
		9-7	<b>VERY POOR:</b> - essentially translation, - little knowledge of English vocabulary, idioms, word form – OR not enough to be evaluated	
Language Use		25-22	<b>EXCELLENT TO VERY GOOD:</b> - effective complex constructions, - few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions	
		21-18	<b>GOOD TO AVERAGE:</b> - effective but simple constructions, - minor problems in complex constructions, -several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions but meaning seldom obscured	
		17-11	<b>FAIR TO POOR:</b> - major problems in simple/complex constructions, - frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions, - meaning confused or obscured	
		10-5	<b>VERY POOR:</b> - virtually no mastery of sentence construction rules, - dominated by errors, -does not communicate, - OR not enough to be evaluated	
Mechanics		5	<b>EXCELLENT TO VERY GOOD:</b> - demonstrates mastery of conventions - few errors of spelling, punctuation, capitalization, paragraphing	
		4	<b>GOOD TO AVERAGE:</b> occasional errors of spelling, punctuation, capitalization, paragraphing but meaning not obscured	
		3	<b>FAIR TO POOR:</b> - frequent errors of spelling, punctuation, capitalization, paragraphing - poor handwriting – meaning confused or obscured	
		2	<b>VERY POOR:</b> - no mastery of conventions -dominated by errors of spelling, punctuation, capitalization, paragraphing - handwriting illegible - OR not enough to evaluate	

Source: Jacobs, Zinkgraf, Wormouth, Hartfiel, and Hughey, 1981, p.30

**Table 2.2 Holistic scoring rubric 2**

<b>Score Point</b>	<b>Criteria</b>
5	<p>The composition accomplishes the following:</p> <ul style="list-style-type: none"> <li>● Effectively addresses the topic and the task.</li> <li>● Is clearly well-organized and well developed using clearly explanations, examples, support or details.</li> <li>● Displays unity, progress, and coherence.</li> </ul>
4	<p>The composition accomplishes the following:</p> <ul style="list-style-type: none"> <li>● Addresses the topic and the task well, though some points may be fully elaborated.</li> <li>● Is generally well-organized and well developed, using appropriate and sufficient explanation, examples or details.</li> <li>● Displays unity, progression, and coherence though it may contain redundancy, digression, or unclear corrections.</li> </ul>
3	<p>The composition is marked by one or more of the following:</p> <ul style="list-style-type: none"> <li>● Addresses the topic and the task using somewhat developed examinations, example, or details.</li> <li>● Displays unity, progression, and coherence, though connection of ideas may be occasionally obscured.</li> </ul>
2	<p>The composition may reveal one or more of the following:</p> <ul style="list-style-type: none"> <li>● limited development in response to the topic and the task.</li> <li>● Inadequate organization or connection of ideas.</li> <li>● Inappropriate or in sufficient examples or details to support or illustrate generalizations in response to the task.</li> </ul>
1	<p>The composition is seriously flawed by one or more of the following:</p> <ul style="list-style-type: none"> <li>● Serious disorganization or underdevelopment</li> <li>● Irrelevant specifics or questionable responsiveness to the task.</li> <li>● Little or no detail</li> </ul>
0	Any composition at this level merely copies words from the topic, rejects the topic, is otherwise unconnected to the topic, or is blank.

**Source:** Elashri, 2013, p.79



**Table 2.3 Rubric for descriptive writing**

Category	4- Excellent	3- Very Good	2-Satisfactory	1-Needs Improvement
<b>Ideas</b>	*“paints a picture” for the reader *well-focused on the topic *clear ideas are well-supported with interesting and vivid details	*creates some clear images for the reader *focused on the topic *ideas are well-supported with details	*sometimes strays from the topic *ideas are not well-developed *more details are needed	*poorly focused on the topic *ideas are unclear *few details are given
<b>Organization</b>	*well-focused on the topic *logical organization *excellent transitions *easy to follow	*generally focused on the topic *some lapses in organization *some transitions *usually easy to follow	*somewhat focused on the topic *poor organization *few transitions *difficult to follow	*not focused on the topic *no clear organization *no transitions *difficult to impossible to follow
<b>Introduction</b>	Introductory paragraph clearly states subject of essay and captures reader's attention.	Introductory paragraph states subject of essay but is not particularly inviting to the reader.	Introductory paragraph attempts to state subject of essay but does not capture reader's attention.	No attempt is made to state the subject of the essay in an introductory paragraph.
<b>Word Choice</b>	*precise, vivid and interesting word choices *wide variety of word choices	*fairly precise, interesting and somewhat varied word choices *wording could be more specific	*vague, mundane word choices *wording is sometimes repetitive *more descriptive words are needed	*very limited word choices *wording is bland and not descriptive
<b>Sensory Detail</b>	Paragraph includes details that appeal to at least three of the five senses (taste, touch, sound, sight, smell).	Includes details that appeal to fewer than three of the five senses.	Includes details that appeal to only one of the five senses.	Includes no details that appeal to one of the five senses.
<b>Sentence Fluency</b>	*uses complete sentences *varying sentence structure and lengths	*uses complete sentences *generally simple sentence structures	*occasional sentence fragment or run-on sentences *simple sentence structure is used repeatedly	*frequent use of sentence fragments or run-on sentences *sentences are difficult to understand
<b>Conventions</b>	*proper grammar, usage *correct spelling *correct punctuation *correct capitalization	*few errors of grammar and usage *mostly correct spelling, punctuation and capitalization	*errors in grammar, usage and spelling sometimes make understanding difficult *some errors in punctuation and capitalization	*frequent errors in grammar, usage, spelling, capitalization and punctuation make understanding difficult or impossible

**Source:** Blacklick Valley School District, 2020

In summary, holistic scoring rubric reflects a level of performance by assessing performance across multiple criteria as a whole. In this study, the holistic scoring rubric from the assessment rubrics of Blacklick Valley School District (2020), Elashri (2013), and Jacobs et al (1981) are adapted and it is suitable for the research objective which tends to evaluate the enhancement of students' English writing ability. Therefore, the researcher will adapt this rubric to use in this study.

### **Teachers' Feedback**

Feedback is one of the essential factors used in learning and teaching process of writing teaching (Keh, 1999). Teachers' feedback is a combination of gestural, written, verbal, formative and summative (Javed, 2020). Writings can be polished and improved via the feedback, which has a great influence on quality of a written work. Carson (1979) defined feedback in the writing instruction as the information that students receive from teachers to improve their writing. According to Lalande (1982), feedback is a process that aims to inform a learner which part in the written work is right or wrong. Then, Keh (1999) states that teachers' feedback could provide effective revision that was brought students' effective understanding. In other words, feedback has an influence on students and is helpful to improve their learning. In conclusion, teacher feedback is an essential part which cannot be overlooked in English writing teaching.

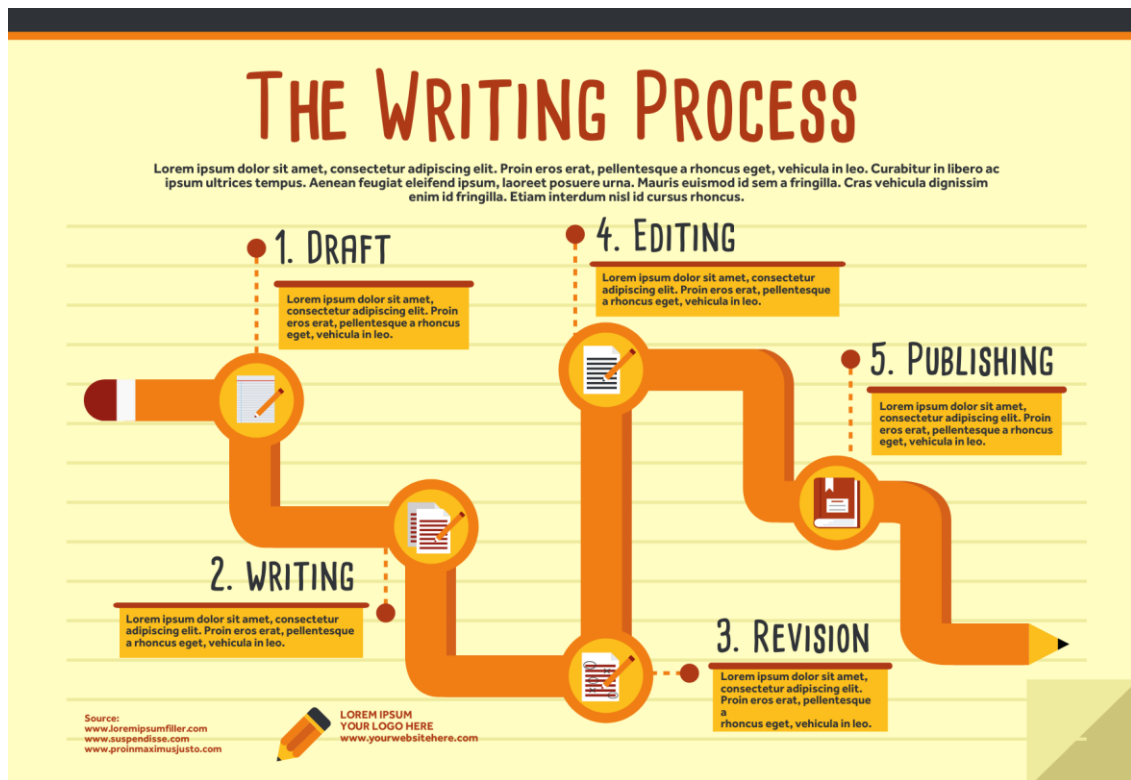
### **Visual media**

Visual media has been used by many people from several years. Visual media is defined as a thing that can only be seen and there is no sound (Burhanudin, 2009) such as picture, chart, diagram, map, and graphic organizer. In order to generate information, connecting ideas, finding ways to organize the information, and using the information to develop an effective written text, semantic mapping and graphic organizer are a well-known technique for use in the classroom (Grabe & Kaplan, 1996). There are many kinds of graphic organizer included flow charts, hierarchical tree structure, classification arrays, charts, tables, figures, histogram, diagram, maps,

and outline (Armbruster, 1991; Mohan, 1986; Tierney, Readance & Disshner, 1990 as cited in Grabe & Kaplan, 1996) These materials can be created by both teachers and students and used as a guide or an outline during pre or post writing activity. Nowadays, the term “graphic organizer” was replaced by the word “infographic”. According to Routine (2014), infographics are method of expressing information in a visual form. Infographics increase the level of the learning process and provide more effective and attractive diverse information.

### **Infographics**

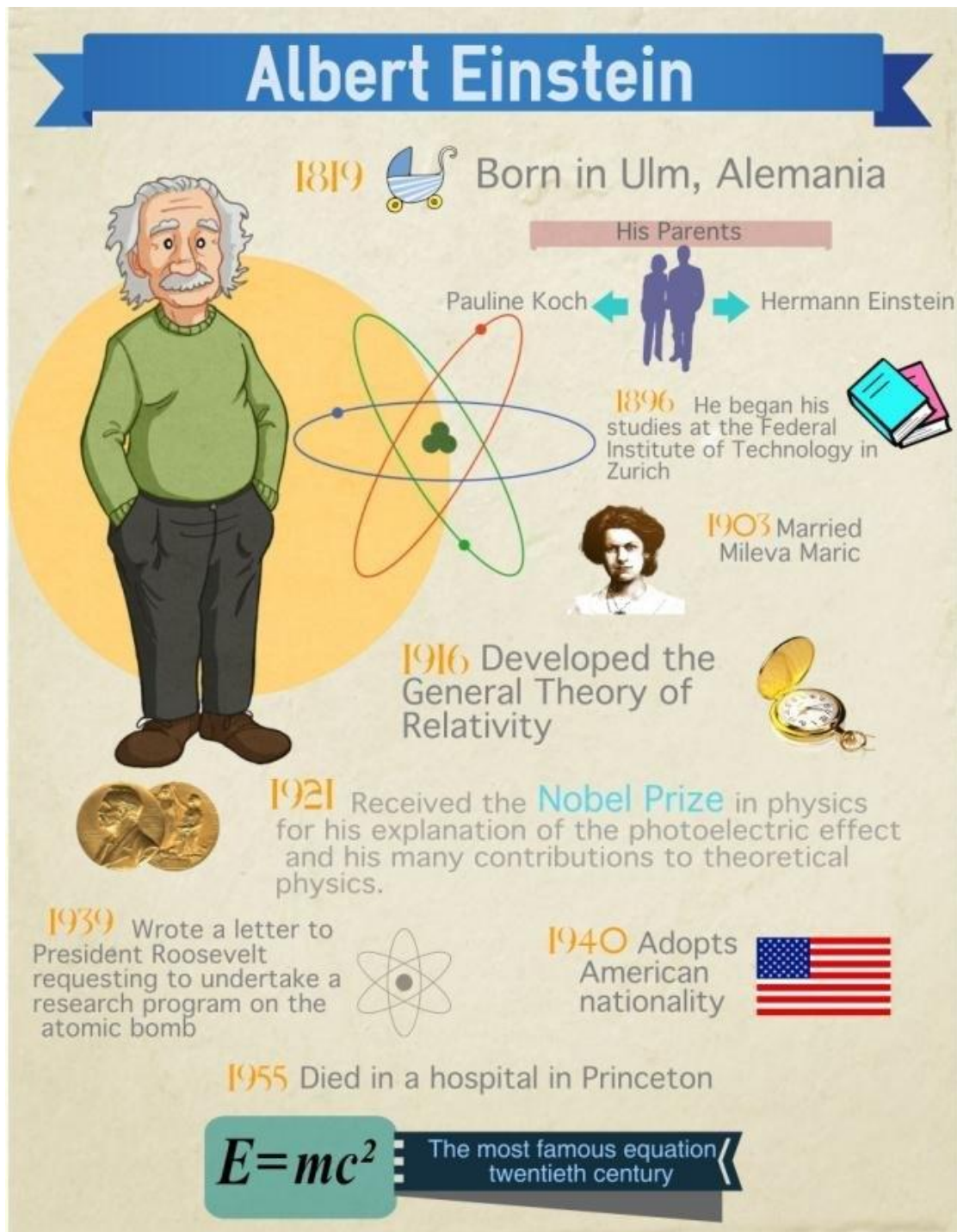
Infographics are one of the many visual materials that are used to support learning and teaching. They have been utilized for hundreds years ago. In the past, a form of infographic is maps that combine words and pictures to transfer information and message (Tompson, 2016). The infographic is originally from the words “information graphic” which refers to a category of visual multimedia tools to describe information and convey ideas (Polman & Gebre, 2015). Moreover, infographics are often referred to as information illustrations (Glasgow, 1994). In infographic, a mark, a symbol or visual element typically stand for quantitative information, data or knowledge while color, size, and shape usually provide the qualitative aspect. Infographic uses text as labels and for short explanations to make the data useful (Ridaillah, 2018). Here are examples of infographics used in language teaching and learning:



**Figure 2.1** Example of infographics in the teaching writing process

**Source:** Tomboc, 2020





**Figure 2.2** Example of infographics for descriptive writing

**Source:** Vernons, 2015

Previously, infographics can be designed and created in applications such as Adobe InDesign, Adobe Photoshop, and CorelDRAW (Mubarak & Asri, 2020).

Nowadays, tools to build infographics come up in various free, low-priced, and easy-to-use programs. Several researchers suggest certain websites in creating infographics namely, Canva, Piktochart, Infogr.am, Easi.ly, and Visua.ly (Parkinson, 2016; Davis & Quinn, 2014; Guevara & Moore, 2013). Each website has its uniqueness, features and specific characteristics for the users in visualizing information. Maryani (2017) explains that the infographic media to be created is in the context of a visual digital native generation that appears to prefer visual artifacts instead of writing. According to Matrix and Hodson (2014), the uses of infographics in the education process inspire students and develop a different learning style that promotes acquiring knowledge and performing communication and information. Infographic is interesting, effective, and attractive visual that easy to understand as well as make more enthusiastic in writing (Saadah, 2019).

In conclusion, Infographic is a visual display which combines a graphic design along with information to deliver the message. Moreover, it shows complicated information briefly and clearly.

### **Teaching and Learning of Writing Through the Use of Infographics**

In English language classroom, teaching materials has been used to help students to learn. "Infographic" is originated from the words "information graphic" which refer to illustrations that combine graphic design with a data collection to deliver message instead of writing to the target audiences in a short period of time and to establish good communication with them ( Krauss, 2012; Maryani, 2017; Smiciklas, 2012). The use of infographic is an alternative way to improve students' writing skill. Davis and Quinn (2014) state that infographics enhance writing skills. Infographics have emerged as a popular visual approach to deliver abstract, complex, and dense messages (Lamb, Polman, Newman, & Smith, 2014; Smiciklas, 2012; Vanichvasin, 2013). In addition, using infographics enables teachers to make ready various learning activities in order to persuade students with the contents and make more chances for interaction (Vanichvasin, 2013).

Infographics as a tool for facilitating learning can be used through the learning process presented by teachers (MohdAmin, 2014). In education, infographics used to help the teacher in delivering the subject matter to students and some teachers

see the infographic as a potential visual media that can be used in the teaching process (Saadah, 2019). There are many infographic for education purpose especially for learning English that can be found or created easily on the internet. English teachers can use the infographic for teaching such as grammar, writing, vocabulary and other English skills. According to Alrwele (2017), infographics can be implemented as an instrument to make students understand the information and able to create instruction easier and accessible. With infographics, teachers can combine visual with words in the classroom. Teacher can use infographics to engage students and stimulate learning. In the implementation, the researcher acted as a teacher will use infographics as a teaching tool during the process of teaching English paragraph writing. The writing topic given will be presented in infographic formats. Several other studies have ascertained the benefits of using infographics as a media. Using infographics has a positive impact on students' intellectual, life skills, and effective development (Alrwele, 2017). In addition, infographics has a positive impact on the academic success. Moreover, the use of infographics in education had influenced the retention levels of the students' achieved knowledge positively (Ozdal & Ozdamli, 2017). Furthermore, infographics increase academic achievement and attitude levels of the students and can also contribute to visual and verbal learning levels (Cifci, 2016). By requiring students to make infographics, they employ their organization, creative, and analytical ability (Smiciklas, 2012).

Therefore, infographics are tools that play a significant role in helping students and teachers to create the instruction and lead to the written text. Moreover, infographics have an advantage in developing students' writing skill. This study aims to investigate the use of infographics to enhance students' English writing skill.

### **Core Curriculum**

According to The Basic Education Core Curriculum B.E. 2551 (A.D. 2008), The learning area for foreign languages is aimed at enabling learners to acquire a favorable attitude towards foreign languages, the ability to use foreign languages for communicating in various situations, seeking knowledge, engaging in a livelihood and pursuing further education at higher levels. Students will be able to use foreign languages for listening, speaking, reading and writing, exchanging data and

information, expressing feelings and opinions, interpreting, presenting data, concepts and views on various matters, and creating interpersonal relationships appropriately. Based on Strand 1: Language for Communication; Standard F1.3: Ability to present data, information, concepts and views about various matters through speaking and writing; Grade level indicators M.3/1, students will be able to speak and write to describe themselves, experiences/ matters/ various issues of interest in society. To conclude, English is a foreign language that is the one of preferred languages in Thailand. Furthermore, the learners will be able to use English for communication as well as for easier and wider access to various types of knowledge, and will have vision in leading their lives.

### **Related Studies**

Mahdah (2018) studied the use of infographics for enhancing students' summary writing skill. The research is aimed at obtaining the empirical data about the effect of infographics on students' writing summary skill. The writer used a quasi-experimental research design and the sample was chosen by using the purposive sampling method. In the experimental group, infographics were used as teaching media. The writing pre-test and post-test was analyzed by using SPSS program. Furthermore, the result of the research could be concluded that infographics show a significant effect on students' writing summary skill. Infographics will be a new contribution of writing for English teachers who want to adopt this media as one of the alternative strategies in teaching writing skill. Infographics are one of the media to improve writing skill.

Mubarok and Asri (2020) employed infographics to enhance students' writing ability. During the implementation, a teacher gave some feedback to the students to revise their works. The researchers applied infographics media to improve students' writing skills in composing instructions in the form of procedural text to solve the problems. The results of the research showed that infographics are beneficial and successful in improving students' writing skills, especially in using sequence adverbs and imperative verbs. In addition, infographics can also enhance students' creativity and understanding ideas by implementing the graphic and text in a single picture.

Saadah (2019) investigated the use of infographics to enhance students' writing skill. The research is aimed to obtain the empirical data about the effect of infographic media on students' writing skill. The quasi-experimental research design was used and the sample was chosen by using purposive sampling technique. The researcher used infographic media as teaching tool. The instrument of the research was writing test which was divided into a pre-test and post-test. The research found that there is a significant difference in teaching with the use of infographics media on students' writing skill.

In brief, a number of researches have been carried out in the area of using infographics to enhance students' English writing skill in the (ESL or EFL) English writing teaching and learning classes. The results of those researches are mostly consistent with one another in that the use of infographics is one of the effective materials to improve students' writing ability.

### **Summary**

This chapter discusses the related literature. The focus is on writing description, types of writing, writing process, writing assessment, visual media, infographic, teaching and learning of writing through the use of infographics, core curriculum, and related studies on the use of infographics to improve students' writing skill. The next chapter discusses the research methodology.



## CHAPTER 3

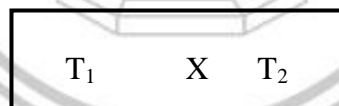
### RESEARCH METHODOLOGY

This chapter focuses on the research methodology. The contents of this chapter are divided into four sections, namely, research design, population and sample group, research instruments, data collection and analysis, and research procedure. Following are the details of each section.

#### Research Design

Based on the problems stated in the introduction and review of literature, this study intended to enhance students' writing skill through the use of infographics and to study students' opinions about the use of infographics to improve their writing. The design of this experimental research was the single group pre-test and post-test. The quantitative method was employed to collect the data. The diagram of this study design is illustrated as follows:

Diagram of a single group pre-test and post-test design



(Fitz-Gibbon, 1987)

- T<sub>1</sub>      refers to the pre-test
- T<sub>2</sub>      refers to the post-test
- X        refers to the use of infographics

## **Population and Sample Group**

### **Population**

The population of this study was 288 Matthayomsuksa 3 students who enrolled in a supplementary English subject in the summer semester of Academic Year 2020 at Dara Academy, Chiang Mai, Thailand. There were six classes in Matthayomsuksa 3. Each class consisted of students with the different levels of English ability.

### **Sample Group**

The sample group consisted of 50 students obtained by using the cluster sampling method. To select the sample group, the researcher simply drew one class out of six classes of the whole population.

## **Research Instruments**

This study employed quantitative methods for collecting data. Two kinds of research tools included tools for the experiment and tools for the data collection. The tools for the experiment consisted of eight lesson plans, and those for data collection were the pre-test, the post-test, writing practices, and a questionnaire.

### **Tools for experiment**

#### **Lesson plans**

The lesson plans were created based on the curriculum of Dara Academy (Supplementary English) and National Education Curriculum. The lesson plans covered eight hours during April-May 2021. The schedule of teaching was twice a week, two periods a week on Wednesday and Thursday and each period lasted 50 minutes. The teaching and learning process involved the following steps:

1. The researcher, who is one of the two teachers grading students' paragraphs, taught the components of a descriptive paragraph and introduced the process of writing to students and the students were given the topics to produce descriptive paragraphs on an animal, famous people, favorite pictures, and future education. Each topic was taught and learned twice a week, two periods a week.

2. The researcher introduced infographics to the students and trained them how to use the infographics in generating ideas.

3. Students generated their ideas on an assigned topic through creating their own infographics by using infographic creator on the website (Canva.com).

4. The teachers gave feedback on students' infographics

5. Students wrote a paragraph by using their infographics as an outline and submitted it to the teachers.

6. The teachers gave feedback to the students' paragraphs.

7. The students revised their first draft after getting feedback from the teachers.

8. Via email, the students submitted their final draft to the teacher for grading by taking picture of their writing paper.

To ensure the validity of the lesson plans, three experts who had had more than 10 years of experience in English language teaching were involved in validating the lesson plans utilized in this study. The IOC value obtained was 0.93.

#### **Writing assessment rubric**

In this study, a holistic scoring rubric was employed to assess students' paragraph writing. The two English language teachers were involved in grading by using average scores. This rubric was adapted from the assessment rubrics of Blacklick Valley School District (2020), Elashri (2013), and Jacobs et al (1981).

**Table 3.1: Writing assessment rubric for descriptive paragraph writing**

<b>Score</b>	<b>Aspects</b>	<b>Criteria</b>
<b>Excellent 18 -20 points</b>	<b>Content</b>	Clear ideas are well-supported with interesting and vivid details
	<b>Organization</b>	Well-focused on the topic
	<b>Vocabulary</b>	Wide variety of vocabulary
	<b>Language Use</b>	- Use different types of sentences: simple, compound, and complex - Use correct grammar: agreement, tense, number, word order/function, articles, pronouns, and prepositions
	<b>Mechanics</b>	Correct spelling, punctuation, capitalization, and paragraphing
<b>Very Good 14-17 points</b>	<b>Content</b>	Focused on the topic and ideas are well-supported with details
	<b>Organization</b>	Generally focused on the topic
	<b>Vocabulary</b>	Fairly precise, interesting and somewhat varied vocabulary
	<b>Language Use</b>	- Use some types of sentences: simple, compound, and complex - Few errors of grammar: agreement, tense, number, word order/function, articles, pronouns, and prepositions
	<b>Mechanics</b>	Few errors of spelling, punctuation, capitalization, and paragraphing
<b>Satisfactory 10-13 points</b>	<b>Content</b>	Ideas are not well-developed and more details are needed
	<b>Organization</b>	Somewhat focused on the topic
	<b>Vocabulary</b>	More descriptive vocabulary are needed
	<b>Language Use</b>	- Use some types of sentences: simple, compound, and complex - Many errors of grammar: agreement, tense, number, word order/function, articles, pronouns, and prepositions
	<b>Mechanics</b>	Many errors of spelling, punctuation, capitalization, and paragraphing
<b>Needs Improvement 7-9 points</b>	<b>Content</b>	Poorly focused on the topic and ideas are unclear
	<b>Organization</b>	No clear organization
	<b>Vocabulary</b>	Vocabulary is bland and not descriptive
	<b>Language Use</b>	- Use some types of sentences: simple, compound, and complex - Major errors in agreement, tense, number, word order/function, articles, pronouns, and prepositions
	<b>Mechanics</b>	Major errors in spelling, punctuation, capitalization, and paragraphing

**Source:** Adapted from Blacklick Valley School District, 2020; Elashri, 2013; Jacobs et al.,1981

## **Tools for data collection**

### **Pre-test and post-test**

A direct writing test was used as the pre-test and the post-test to assess students' writing skill. The test was conducted based on the school curriculum and the topic taught and learned. The sample group took the writing test before and after the intervention on the same topic to describe an interesting place (The Place You Should Not Miss). Based on the curriculum of Dara Academy, students were given 50 minutes to write a descriptive paragraph. Two English language teachers gave comments and evaluate the students' work.

To increase validity, after the writing test was established, three language experts evaluated it in responding to the objective of the test construction by using Index of Item–Objective Congruence (IOC) form. The IOC value obtained was 0.93, which was acceptable according to George and Mallery (2003).

### **Writing practices**

During the class, the students were assigned to do the writing practices. They were assigned to write four descriptive paragraphs during the experiment. These four topics included animals, a famous person, favorite pictures, and future education. Selection of these topics was based on the school curriculum.

### **Questionnaire**

The questionnaire was the 5 points Likerts' scale. It consisted of two parts. The first part was students' personal information and the second part was the students' opinions towards the use of infographics to enhance their writing skill. The reliability of the questionnaire which aimed to obtain data on students' opinions about the use of infographics was analyzed using Statistical Packages for the Social Sciences (SPSS) to obtain the Cronbach's Alpha value which was .903, higher than the acceptable value (0.70). This indicated that the questionnaire was highly reliable. In analyzing the data from the questionnaire, the researcher conducted based on the mean score ranges and interpretation as shown in Table 3.2.



**Table 3.2: The mean score and interpretation**

Mean Range	Interpretation
4.25-5.00	Highest
3.43-4.24	High
2.62-3.42	Moderate
1.81-2.61	Low
1.00-1.80	Lowest

**Source:** Yamane, 1999

After the questionnaire was developed, it was evaluated by three experts to ensure the content validity by using the Index of Item–Objective Congruence (IOC) form. The IOC value derived was 0.93 meaning that the instrument had a high validity. The researcher revised the instrument according to the experts’ comments and suggestions.

#### **Data collection and analysis**

The data from the pre-test and post-test, the writing test, and the questionnaire were collected at the pre-experiment, during the experiment, and post-experiment continually. The data were analyzed using Statistical Packages for the Social Sciences (SPSS). Mean ( $\bar{x}$ ), standard deviation (S.D.), and t-test were employed to compare the writing test scores of the students in the sample group before and after learning through the use of infographics.

#### **Research procedure**

The research procedure was consisted of three parts, namely, pre-experiment, during the experiment, and post-experiment.

#### **Pre-experiment**

1. Related theories and the previous studies were explored in which infographics were used to improve students’ English writing skills.

2. The instruments for experiment were developed and constructed which included infographics, the lesson plans and the questionnaire. All the instruments were evaluated by the three experienced experts to ensure the content validity by using the Index of Item–Objective Congruence (IOC) form. After the instruments were improved, they were implemented with the sample group.

3. The pre-test was administered to the students. The students had a direct descriptive paragraph writing test on the topic “The Place You Should Not Miss”. The time allocated was 50 minutes.

4. The teacher as the researcher introduced infographics and how to create it through website during the orientation.

### **During the experiment**

5. The teacher as the researcher taught the students the process and structure of paragraph writing and used examples of infographics as teaching tools.

6. The teacher assigned the students to create an infographic and to write a descriptive paragraph each week for four weeks. The process was that after the students produced the first draft and submitted to the teachers, they received verbal and written feedback from the teachers during the teaching hours. Then, they revised it.

7. Through email, the students submitted the final drafts to the teachers for grading. The students’ writing was graded based on the school’s standard formative assessment criterion (70%).

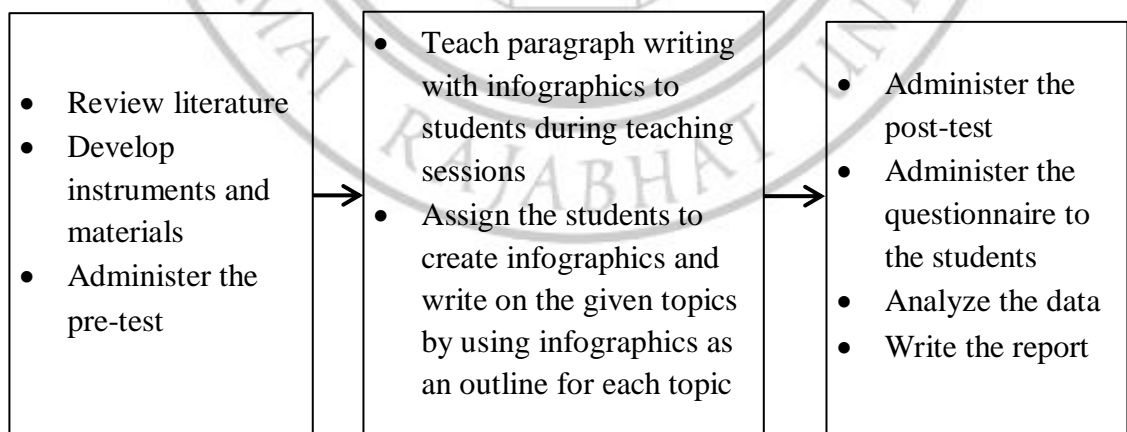
### **Post-experiment**

8. The post-test and the questionnaire were administered to the students.

9. The data from the pre-test and the post-test, the writing test, and the questionnaire were analyzed.

10. The findings, recommendations, and suggestions were presented accordingly.

The entire procedure of this research is illustrated in figure 3.1 below.



**Figure 3.1** Research procedure

**Summary**

This chapter discusses the research method of the present study. The content covers the overview of research design, population and sample group, research instruments, data collection and analysis, and research procedure. Results of this data analysis are presented in the next chapter.



## CHAPTER 4

### RESULTS OF DATA ANALYSIS

This chapter presents the results of data analysis. The data analysis focused on the effects of the use of infographics on students' paragraph writing skill and to explore their opinions on the use of infographics. The data were analyzed by using Statistical Packages for the Social Sciences (SPSS). The results of the data analysis from the pre-test, the post-test, writing practices, and the questionnaire are divided into two parts in response to the research objectives.

#### **Difference between the Students' English Writing Skill Before and After the Use of Infographics**

This section presents the analysis results of the pre-test and post-test scores which indicated the students' writing skill before and after the experiment. The data analysis results of data analysis are shown in Table 4.1 below.

**Table 4.1 Comparison of the pre-test and post-test mean scores**

Tests	N	Mean	Std. Deviation	Mean Difference	t	Sig.
Pre-test	50	11.32	4.53	3.70	17.65	.00*
Post-test	50	15.02	3.65		29.09	

\* $p < 0.05$

Table 4.1 presents the results of the statistical data from the pre-test and post-test scores. It can be seen that there was a statistically difference between the pre-test and post-test scores of the students at the significance level of 0.05. The mean scores of the pre-test and post-test were 11.32 (S.D.=4.53) and 15.02 (S.D.=3.65), respectively.

The table below illustrates the formative assessment scores of the students' writing practices compared to the criterion score (70%). The aim was to present the progress of the students' writing performance.

**Table 4.2 Formative assessment scores (%) of the students compared to the criterion score (70%)**

Topic	Average Score (%)	Number of students obtaining scores $\geq 70\%$	Percentage of a number of students obtaining scores $\geq 70\%$
Week 1: Animals	53.20	19	38.00
Week 2: A Famous Person	60.00	22	44.00
Week 3: Favorite Pictures	63.60	27	54.00
Week 4: Future Education	75.20	37	74.00

*n*=50

Table 4.2 presents the formative assessment scores (%) of the students compared to the criterion score (70%). It can be seen that more number of students achieved the criterion scores when they were taught and learned with the use of infographics. Only 19 students (38%) achieved the criterion scores and the average score was 53.20%. However, many of them achieved the criterion score (70%)—in the second week, 22 students (44%) achieved the criterion scores and the average score was 60.00%, in the third week, 27 students (54%), and the last week 37 students (74%), with the average scores of 63.60% and 75.20% respectively.

### **The Students' Opinions on the Use of Infographics**

The data from the questionnaire were analyzed by using the mean and standard deviation. The results focused on the students' opinions on the use of infographics to enhance their paragraph writing skill. The results of the data analysis are shown in table 4.3.



**Table 4.3 Students' opinions on the use of infographics**

Items	Mean	Std. Deviation	Interpretation
1. Creating infographics allowed me to brainstorm and explore new ideas.	4.22	0.81	High
2. The use of infographics helped me create clear scope of the ideas before writing a paragraph.	4.14	0.88	High
3. The use of infographics helped me organize ideas better in my paragraph writing.	4.24	0.84	High
4. The use of infographics motivated me to write more.	3.98	0.76	High
5. The use of infographics helped me to write a coherent descriptive paragraph.	4.12	0.82	High
6. The use of infographics helped me to write a cohesive descriptive paragraph.	4.10	0.83	High
7. Learning with the use of infographics took less time.	4.16	0.81	High
8. The use of infographics allowed me to generate ideas relevant to the topic I write.	4.26	0.89	Highest
9. The use of infographics promoted the collaborative skill.	4.06	0.86	High
10. I enjoyed the writing class when the teacher used infographics to teach in class.	4.44	0.67	Highest
<b>Overall Scores</b>	4.17	0.12	High

*n=50*

Table 4.3 presents the students' opinions on the use of infographics. The opinions of the students on the use of infographics allowing them to generate ideas relevant to the assigned topics were at the highest level ( $\bar{x} = 4.26$ , S.D. = 0.89).

On the infographics making writing class enjoyable, the opinions were at the highest level ( $\bar{x} = 4.44$ , S.D. = 0.67). On the infographics helping them to organize their ideas better in paragraph writing, the opinions were at a high level ( $\bar{x} = 4.24$ , S.D. = 0.84). The opinions of the students on creating the infographics allowing them to brainstorm and explore new ideas were at a high level ( $\bar{x} = 4.22$ , S.D. = 0.81). Many students had a high level of opinions ( $\bar{x} = 4.16$ , S.D. = 0.81) on that learning with the use of infographics took less time. Moreover, the majority of the students had a high level of opinions ( $\bar{x} = 4.14$ , S.D. = 0.88) on that the use of infographics helped them create a clearer scope of the ideas before writing a paragraph. On the infographics helping them to write a coherent descriptive paragraph as well as a cohesive descriptive paragraph, the opinions were at a high level ( $\bar{x} = 4.12$ , S.D. = 0.82), ( $\bar{x} = 4.10$ , S.D. = 0.83). Furthermore, it can be noticed that a large number of students showed a high level of opinions on that the use of infographics promoted the collaborative skill ( $\bar{x} = 4.06$ , S.D. = 0.86). The opinions of the students on the use of infographics motivating them to write more were at a high level ( $\bar{x} = 3.98$ , S.D. = 0.76). Furthermore, the other opinions revealed that the students also expressed their positive opinions on the use of infographics to enhance their paragraph writing skill as follows.

### **Descriptive Feedback**

According to the descriptive feedback, all students in the sample group had positive attitudes towards the use of infographics. They enjoyed learning with the use of infographics in writing class. Using infographics provided more understandings about what they needed to write as well as made the writing structure to be more obvious. The use of infographics as an outline helped them to scope their idea and enable their writing to be better organized. Overall, the students very much enjoyed learning with the use of infographics. Infographics have a positive impact on students' writing skill. The students viewed that teaching and learning with the use of infographics were beneficial to them. They were able to use infographics to scope well-organized ideas. Moreover, the students had a positive attitude toward learning English descriptive paragraph writing by using infographics as teaching and learning

tools. Based on the questionnaire and feedback, it can be concluded that the students were satisfied with the use of infographics in their English writing.

### **Summary**

This chapter concludes the results of the study and data analysis. Regarding the effects of the use of infographics, the results of the data analysis revealed that the use of infographics had a positive impact on student's writing.



## **CHAPTER 5**

### **CONCLUSION, DISCUSSION, LIMITATIONS AND RECOMMENDATIONS**

This chapter presents the conclusion, discussion, limitations, and recommendations. First, the chapter concludes and discusses the effects of the use of infographics on students' paragraph writing skill and the students' opinions on the use of infographics. After that, it presents the limitations and implications of the research.

#### **Conclusion**

This section draws the conclusion from the results of the data analysis in order to answer each research question. The summary of the answers to the research questions as follows.

##### **Answers to Research Question 1**

**Is there any significant difference between the students' English writing skill before and after the use of infographics?**

The results from the comparison between the pre-test and the post-test scores showed that there was a significant difference between the students' English writing skill before and after the use of infographics. The post-test mean scores (15.02) were significantly higher than the pre-test mean scores (11.32) at the significance level of 0.05. In addition, the students' formative test scores were in an upward direction, that were 53.20%, 60.00%, 63.60%, and 75.20% respectively. It can be seen that the average scores of the last formative assessment met the criterion score of 70%, indicating that the students' writing skill was improved during the experiment. More number of students achieved the criterion scores when they were taught and learned with the use of infographics. It can be concluded that there was a significant difference between the students' English writing skill before and after the use of infographics—the-post test score was significantly higher than the pre-test score. This

indicated that the use of infographics was able to improve the students' English writing skill.

### **Answers to Research Question 2**

#### **What are the students' opinions on the use of infographics?**

According to the data from the questionnaire, it was noticed that the majority of the students had positive opinions on the use of infographics. Most of them enjoyed the writing class when the teacher used infographics to teach in class ( $\bar{x} = 4.44$ , S.D. = 0.67). They viewed that using infographics helped them develop coherent descriptive paragraphs ( $\bar{x} = 4.12$ , S.D. = 0.82) and cohesive descriptive paragraphs writing ( $\bar{x} = 4.10$ , S.D. = 0.83). Most importantly, a large number of the students (76%) agreed that the use of infographics helped them to create clear scope of the ideas before writing ( $\bar{x} = 4.14$ , S.D. = 0.88) and to organize ideas better in writing ( $\bar{x} = 4.24$ , S.D. = 0.84). Furthermore, the use of infographics allowed them to brainstorm and explore new ideas while creating infographics ( $\bar{x} = 4.22$ , S.D. = 0.81) and generate ideas relevant to the topics they wrote ( $\bar{x} = 4.26$ , S.D. = 0.89). Interestingly, many students agreed that learning with the use of infographics took less time ( $\bar{x} = 4.16$ , S.D. = 0.81), motivated them to write more ( $\bar{x} = 3.98$ , S.D. = 0.76), and promoted the collaborative skill ( $\bar{x} = 4.06$ , S.D. = 0.86).

In conclusion, the students thought that the use of infographics was beneficial in motivating students to write and bettering their awareness on generating, connecting, and organizing ideas.

### **Discussions**

This section discusses the results of the data analysis on the use of infographics to enhance students' writing skill and the opinions of students on the use of infographics.

#### **The effects of the use of infographics**

The results of the pre-test and the post-test indicated that the students' writing skill was improved after the use of infographics. This finding agreed with Saadah's (2019) in a teaching and learning by using infographics, students' writing skill was better. Furthermore, Mahdah (2018) contained that infographics are one of

the media that helped improve the writing skill. According to Davis and Quinn (2014), infographics can enhance writing skills. In addition, Mubarok and Asri (2020) found in their study that infographics could improve students' writing ability. Grabe and Kaplan (1996) state that, generally, infographics is a well-known technique for generating information, connecting ideas, searching ways to organize the information, and using the information to develop an effective writing. In addition, infographics can also enhance students' creativity and understanding ideas by implementing the graphic and text in a single picture. During the process of implementing infographics in this study, it was also found that the students enjoyed creating infographics, sharing and giving feedback to one another, and taking less time to study. Similarly, Bicen and Beheshti (2017) also found that students enjoyed learning and creating infographics. Using infographics motivated students to communicate with others and it made them learn faster. From the classroom observation, it was also found that the students were happy during learning with infographics. They were allowed to work individually and with peers. In addition, they had creative and systematic thinking. It can be concluded that the use of infographics helped the students to write an effective written text.

Regarding the classroom activity, infographics as teaching and learning materials facilitate teachers in monitoring students' work. In this study, it was found that the use of infographics enabled the teacher to monitor and manage the students' learning process more conveniently. This finding confirmed Vanichvasin (2013) in that using infographics enables teachers to make ready learning activities in order to persuade students with the contents and provide more chances for interaction. The use of infographics allows the teacher and the students to check, edit and share infographics and pieces of writing. The teachers' feedback during the teaching and learning process has positive effects on academic achievement of students. This finding was in line with Javed (2020) in that the teacher feedback is an effective way to encourage students to reach higher levels of academic achievement. Furthermore, receiving feedback on students' works from the teacher makes students happy and motivates them to achieve their academic writing goal (Crisp, 2007). With the infographics, the students could scope relevant ideas before writing a cohesive and coherent descriptive paragraph. According to Grabe and Kaplan, infographics is used



for generating information, connecting ideas, finding ways to organize the information, and using the information to develop an effective written text. This agreed with Alrwele (2017) in that infographics had a positive impact on students' effective development in writing. In addition, infographics is beneficial for teaching and learning of writing in that infographics will be a new contribution of writing for English teachers who want to adopt this media as one of the alternative strategies in teaching writing (Mahdah, 2018). In conclusion, the use of infographics is beneficial for teaching and learning writing in terms of increasing students' motivation, helping students generate and organize ideas, and assisting the teachers to manage the classroom activities more conveniently.

### **Students' opinions on the use of infographics**

The students in this study viewed that the use of infographics helped raise their awareness on generating, connecting, and organizing ideas. The infographics that the students created were used as their outline for writing. These positive opinions were a reflection of students' satisfaction according to Alrwele (2017), Cifci (2016), and Ozdal and Ozdamli (2017). Interestingly, they showed a high level of satisfaction with the use of infographics to generate and organize ideas better in paragraph writing. According to Grabe and Kaplan (1996), infographics are used for generating information, connecting ideas, searching ways to organize the information, and using the information to develop an effective written text. To put it simply, the data elicited from the questionnaire indicated that most students expressed their positive opinions on the use of infographics in their writing.

### **Limitations**

Similar to other studies, the present study had some limitations. One of the limitations was related to the unexpected situation regarding the experiment. Due to the pandemic of the COVID-19, the school was closed to prevent the infections and the teacher was unable to teach in class. The onsite classroom was changed to the online classroom. As a result, the time table was postponed for 2 weeks. If the study had been held in a normal class, it might yield different results.

Some students had limited computer skill. Thus, the normal class at school with necessary technology equipment should be better than at what was available at their homes.

## **Recommendations**

The following are recommendations which could be beneficial to the implementation of infographics to enhance students' writing skill and for further studies.

### **Recommendations for this research**

The teacher should monitor the class closely during the time students created their infographics. Some students spent more time for creating and organizing ideas. Therefore, the teacher should provide students enough training on the computer technology relevant to the use of infographics in their writing.

### **Recommendations for further studies**

This study was conducted with only EFL students in Matthayomsuksa 3 (Grade 9) of Dara Academy, Chiang Mai, Thailand. It therefore would be interesting to conduct the study with students at different levels of education and find out whether the use of infographics has similar or different effects on students' writing skill. It was also suggested that to further validate the effects of the use of infographics to enhance students' writing skill, further studies in this area should be conducted by increasing the number of samples as well as using the two-group pre-test and post-test design to compare the writing performances of the experimental group and the control group.

This study focused only on the descriptive writing type. Hence, it would be advantageous to investigate whether the use of infographics with other types of writings would result in students' better writing skill.

## **Summary**

This chapter concludes the findings of the present study and then discusses them in accordance with the related literature. Limitations and recommendations were also listed. Overall, the results revealed that the use of infographics improved the students' writing skill and the students were satisfied with using them in their writing.

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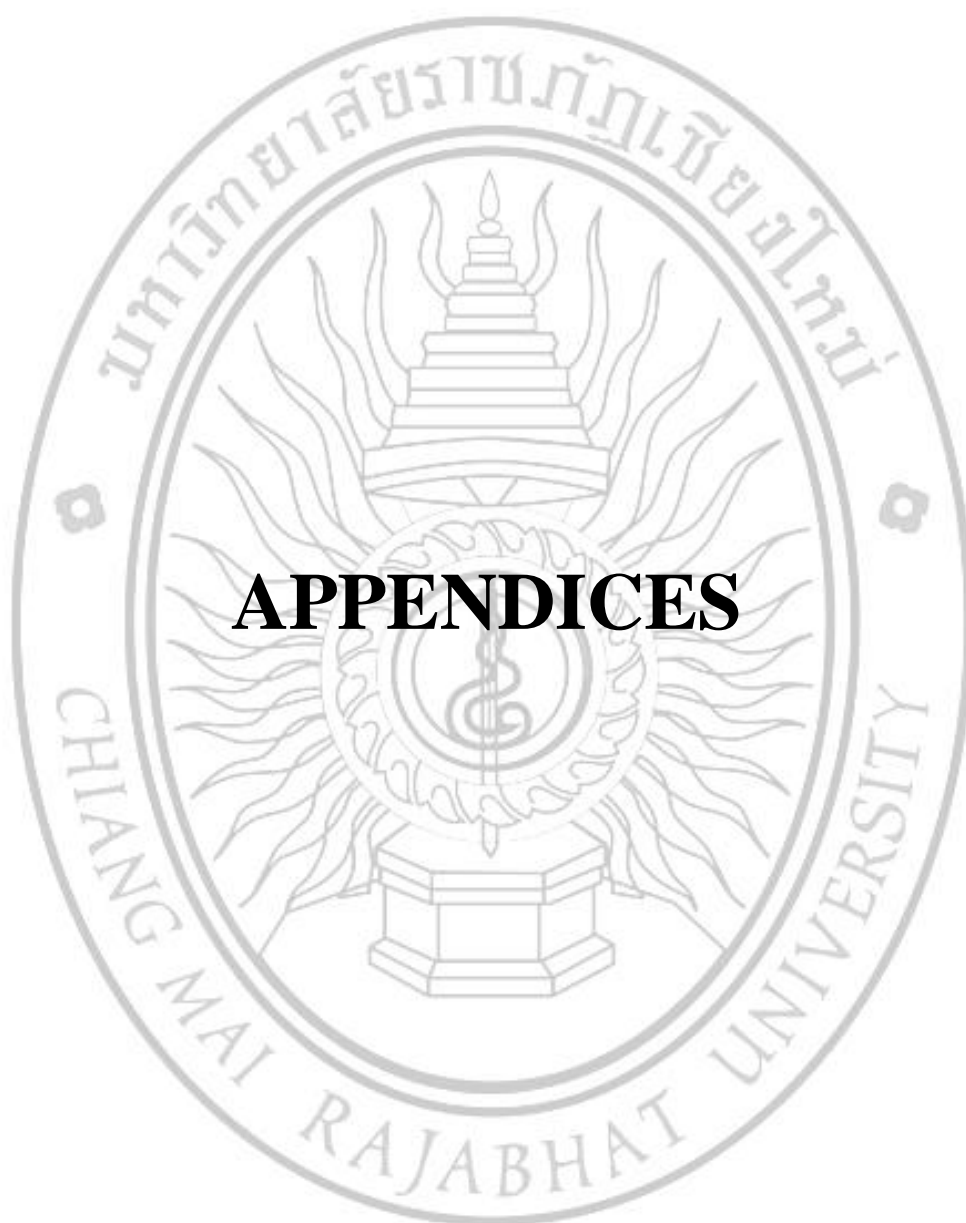
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# **APPENDICES**

## Paragraph Writing Test

**Matthayomsuksa 3**  
**Total 20 Points**  
**Paragraph Writing Test**

Name \_\_\_\_\_ Level \_\_\_\_\_ No. \_\_\_\_\_

**Objective:** To assess students' English descriptive paragraph writing skill.  
**Directions:** Write a paragraph on the topic “**The Place You Should Not Miss**”.  
Your paragraph should comprise at least 10 sentences in different types of sentences.

## Appendix B

### Questionnaire

**Purpose:** To obtain data on opinions towards the use of infographics to enhance English descriptive paragraph writing skill of Matthayomsuksa 3 students

**Directions:** This questionnaire consists of two main parts: Part 1 personal information and Part 2 students' opinions. For part 1, put a check mark ☒ in the box in front of your answer and write your answer in the space given. For Part 2, put a check mark ☒ in the box of your opinions: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree.

#### Part 1: Personal Information

1. Gender ☐ Male ☐ Female
2. GPA .....
3. Grade level of the previous writing course .....

#### Part 2: Students' Opinions towards the Use of Infographics in the writing class

No.	Content	Opinions				
		5	4	3	2	1
1.	Creating infographics allowed me to brainstorm and explore new ideas.					
2.	The use of infographics helped me create clear scope of the ideas before writing a paragraph.					
3.	The use of infographics helped me organize ideas better in my paragraph writing.					
4.	The use of infographics motivated me to write more.					
5.	The use of infographics helped me to write a coherent descriptive paragraph.					
6.	The use of infographics helped me to write a cohesive descriptive paragraph.					
7.	Learning with the use of infographics took less time.					
8.	The use of infographics allowed me to generate ideas relevant to the topic I write.					
9.	The use of infographics promoted the collaborative skill.					
10.	I enjoyed the writing class when the teacher used infographics to teach in class.					

Others (please specify): \_\_\_\_\_

## Appendix C

### Writing Assessment Rubric

Score	Aspects	Criteria
<b>Excellent 18 -20 points</b>	Content	Clear ideas are well-supported with interesting and vivid details
	Organization	Well-focused on the topic
	Vocabulary	Wide variety of vocabulary
	Language Use	- Use different types of sentences: simple, compound, and complex - Use correct grammar: agreement, tense, number, word order/function, articles, pronouns, and prepositions
	Mechanics	Correct spelling, punctuation, capitalization, and paragraphing
<b>Very Good 14-17 points</b>	Content	Focused on the topic and ideas are well-supported with details
	Organization	Generally focused on the topic
	Vocabulary	Fairly precise, interesting and somewhat varied vocabulary
	Language Use	- Use some types of sentences: simple, compound, and complex - Few errors of grammar: agreement, tense, number, word order/function, articles, pronouns, and prepositions
	Mechanics	Few errors of spelling, punctuation, capitalization, and paragraphing
<b>Satisfactory 10-13 points</b>	Content	Ideas are not well-developed and more details are needed
	Organization	Somewhat focused on the topic
	Vocabulary	More descriptive vocabulary are needed
	Language Use	- Use some types of sentences: simple, compound, and complex - Many errors of grammar: agreement, tense, number, word order/function, articles, pronouns, and prepositions
	Mechanics	Many errors of spelling, punctuation, capitalization, and paragraphing
<b>Needs Improvement 7-9 points</b>	Content	Poorly focused on the topic and ideas are unclear
	Organization	No clear organization
	Vocabulary	Vocabulary is bland and not descriptive
	Language Use	- Use some types of sentences: simple, compound, and complex - Major errors in agreement, tense, number, word order/function, articles, pronouns, and prepositions
	Mechanics	Major errors in spelling, punctuation, capitalization, and paragraphing

Adapted from Blacklick Valley School District, 2020; Elashri, 2013; Jacobs et al., 1981

## Appendix D

### Lesson Plans

#### Lesson Plan

**Subject:** Supplementary English

**Semester:** Summer

**Academic Year:** 2020

**Week:** 1

**Date:** April ,2021

**Time:** 2 hours

**Teacher:** A-riya Mitayo

- **Unit 1** **Topic:** Descriptive Paragraph Writing **Period:** 1
- **Learning strands, standards, and indicator**  
**Strand 1:** Language for Communication  
**Standard F1.3:** Ability to present data, information, concepts and views about various matters through speaking and writing  
**Indicators M.3/1:** Students will be able to speak and write to describe themselves, experiences/ matters/ various issues of interest to society
- **Lesson Objective:** Students will be able to write the descriptive paragraph.
- **Thinking Skills:** Systematic thinking, analytical thinking, and creative thinking
- **Learning Activities**

<b>D.I.Y.</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teacher lets the students brainstorm and discuss about descriptive paragraph.</li> <li>• The teacher shows an example of descriptive paragraph.</li> </ul>
<b>Action</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teacher presents the steps of writing process including prewriting, writing, and revising and types of sentences used in descriptive writing.</li> <li>• The teacher lets students read the example, and then explains the paragraph organization and gives examples of how to write a paragraph.</li> <li>• The teacher presents infographics and introduces how to use the infographics in brainstorming ideas on writing a paragraph.</li> <li>• The students practice creating an infographic together and the teacher gives comments.</li> </ul>
<b>Reflection</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teacher assigns the students to work in a group of four.</li> <li>• The teacher introduces infographics and assigns the students to brainstorm on the topic “My Favorite Pet”.</li> <li>• The students generate ideas, share them in their group, and create the infographic for their paragraph writing.</li> </ul>
<b>Assessment</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teachers correct the infographics and each student improves their work before submitting to the teacher.</li> </ul>

- **Teaching Materials**  
1. Google slide presentation    2. Student’s book    3. Infographics
- **Assessment Evidence**    1. Writing task
- **Teaching Record**

\_\_\_\_\_  
Teacher’s signature

**Remarks:** D.I.Y. stands for Do It Yourself



**Lesson Plan****Subject:** Supplementary English**Semester:** Summer**Academic Year:** 2020**Week:** 1**Date:** April ,2021**Time:** 2 hours**Teacher:** A-riya Mitayo

- **Unit 1**                      **Topic:** Descriptive Paragraph Writing                      **Period:** 2

- **Learning strands, standards, and indicator**

**Strand 1:** Language for Communication**Standard F1.3:** Ability to present data, information, concepts and views about various matters through speaking and writing**Indicators M.3/1:** Students will be able to speak and write to describe themselves, experiences/ matters/ various issues of interest to society

- **Lesson Objective:** Students will be able to write the descriptive paragraph.
- **Thinking Skills:** Systematic thinking, analytical thinking, and creative thinking
- **Learning Activities**

<b>D.I.Y.</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teacher lets the students review the steps and the organization of descriptive paragraph writing.</li> <li>• The teacher reviews the types of sentences and writing mechanics.</li> </ul>
<b>Action</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teacher explains how to use adjectives to describe an animal.</li> <li>• The teacher lets students create their own infographic on the topic “Animals” and use it as an outline at the pre writing stage.</li> </ul>
<b>Reflection</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The students write a descriptive paragraph on the topic “Animals”. Then submit it to the teachers via email.</li> <li>• The two English language teachers give feedback and comments.</li> </ul>
<b>Assessment</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teachers correct the students’ works and students revise and improve their work before submitting to the teachers.</li> </ul>

- **Teaching Materials**

1. Google slide presentation                      2. Student’s book                      3. Infographics

- **Assessment Evidence**

1. Writing task

- **Teaching Record**

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*Teacher’s signature*

**Lesson Plan****Subject:** Supplementary English**Semester:** Summer**Academic Year:** 2020**Week:** 2**Date:** April ,2021**Time:** 2 hours**Teacher:** A-riya Mitayo

- **Unit 1**                      **Topic:** Descriptive Paragraph Writing                      **Period:** 3

- **Learning strands, standards, and indicator**

**Strand 1:** Language for Communication**Standard F1.3:** Ability to present data, information, concepts and views about various matters through speaking and writing**Indicators M.3/1:** Students will be able to speak and write to describe themselves, experiences/ matters/ various issues of interest to society

- **Lesson Objective:** Students will be able to write the descriptive paragraph.
- **Thinking Skills:** Systematic thinking, analytical thinking, and creative thinking
- **Learning Activities**

<b>D.I.Y.</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teacher let the students review the types of sentences.</li> <li>• The teacher reviews the steps of how to create an infographic and how to use it as a writing guideline.</li> </ul>
<b>Action</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teacher lets students create their own infographic on the topic “Famous Person/ Celebrity/ Idol” and use it as an outline for their writing.</li> </ul>
<b>Reflection</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teachers give comments and suggestions on students’ infographic of “Famous Person/ Celebrity/ Idol” then the students improve their work.</li> </ul>
<b>Assessment</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teachers ask the students to work in pair and share their infographic with friends and encourage them to give comments and suggestions on their friends’ work.</li> </ul>

- **Teaching Materials**

1. Google slide presentation                      2. Student’s book                      3. Infographics

- **Assessment Evidence**

1. Writing task

- **Teaching Record**

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**Lesson Plan****Subject:** Supplementary English**Semester:** Summer**Academic Year:** 2020**Week:** 2**Date:** April ,2021**Time:** 2 hours**Teacher:** A-riya Mitayo

- **Unit 1**                      **Topic:** Descriptive Paragraph Writing                      **Period:** 4

- **Learning strands, standards, and indicator**

**Strand 1:** Language for Communication**Standard F1.3:** Ability to present data, information, concepts and views about various matters through speaking and writing**Indicators M.3/1:** Students will be able to speak and write to describe themselves, experiences/ matters/ various issues of interest to society

- **Lesson Objective:** Students will be able to write the descriptive paragraph.
- **Thinking Skills:** Systematic thinking, analytical thinking, and creative thinking
- **Learning Activities**

<b>D.I.Y.</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The students brainstorm and discussion the important parts of descriptive paragraph writing.</li> <li>• The teacher reviews the steps of how to create an infographic and how to use it as a writing guideline.</li> </ul>
<b>Action</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teacher gives an example of how to describe people by using descriptive adjectives.</li> <li>• The teacher asks the students to write the descriptive paragraph on the topic “Famous Person/ Celebrity/ Idol”.</li> </ul>
<b>Reflection</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The students write their own paragraph on the topic “Famous People” and use the infographic as an outline.</li> <li>• The teachers monitor the class closely and give comments and suggestions on students’ work. Then submit it to the teachers via email.</li> </ul>
<b>Assessment</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teachers correct the students’ works and students revise and improve their work before submitting to the teachers.</li> </ul>

- **Teaching Materials**

1. Google slide presentation                      2. Student’s book                      3. Infographics

- **Assessment Evidence**

1. Writing task

- **Teaching Record**

\_\_\_\_\_ *Teacher’s signature*

**Lesson Plan****Subject:** Supplementary English**Semester:** Summer**Academic Year:** 2020**Week:** 3**Date:** April ,2021**Time:** 2 hours**Teacher:** A-riya Mitayo

- **Unit 1**                      **Topic:** Descriptive Paragraph Writing                      **Period:** 5

- **Learning strands, standards, and indicator**

**Strand 1:** Language for Communication**Standard F1.3:** Ability to present data, information, concepts and views about various matters through speaking and writing**Indicators M.3/1:** Students will be able to speak and write to describe themselves, experiences/ matters/ various issues of interest to society

- **Lesson Objective:** Students will be able to write the descriptive paragraph.
- **Thinking Skills:** Systematic thinking, analytical thinking, and creative thinking
- **Learning Activities**

<b>D.I.Y.</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teacher let the students review the steps of how to create an infographic and how to use it as a writing guide.</li> <li>• The students share their ideas on creating infographics.</li> </ul>
<b>Action</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teacher asks students individually about their favorite pictures and lets students create their own infographic on the topic “Favorite Pictures” and use it as an outline.</li> <li>• The teacher gives more explanation of writing a good paragraph.</li> </ul>
<b>Reflection</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teachers gives comments and suggestions on students’ infographic of “Favorite Pictures” then the students improve their work.</li> </ul>
<b>Assessment</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teacher asks the students to share their infographic with friends and encourages them to give comments and suggestions on their friends’ work.</li> </ul>

- **Teaching Materials**

1. Google slide presentation                      2. Student’s book                      3. Infographics

- **Assessment Evidence**

1. Writing task

- **Teaching Record**

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*Teacher’s signature*

**Lesson Plan****Subject:** Supplementary English**Semester:** Summer**Academic Year:** 2020**Week:** 3**Date:** April ,2021**Time:** 2 hours**Teacher:** A-riya Mitayo

- **Unit 1**                      **Topic:** Descriptive Paragraph Writing                      **Period:** 6

- **Learning strands, standards, and indicator**

**Strand 1:** Language for Communication**Standard F1.3:** Ability to present data, information, concepts and views about various matters through speaking and writing**Indicators M.3/1:** Students will be able to speak and write to describe themselves, experiences/ matters/ various issues of interest to society

- **Lesson Objective:** Students will be able to write the descriptive paragraph.
- **Thinking Skills:** Systematic thinking, analytical thinking, and creative thinking
- **Learning Activities**

<b>D.I.Y.</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teacher let the students review the important parts of descriptive paragraph writing.</li> <li>• The teacher reviews the paragraph organization.</li> <li>• The teacher reviews the use of relative pronouns.</li> </ul>
<b>Action</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teacher asks the students to write the descriptive paragraph on the topic “Favorite Picture”.</li> </ul>
<b>Reflection</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The students write their own paragraph on the topic “Favorite Pictures” and use the infographic as an outline. Then submit it to the teachers via email.</li> <li>• The two English language teachers give feedback and comments.</li> </ul>
<b>Assessment</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teachers correct the students’ works and students revise and improve their work before submitting to the teachers.</li> </ul>

- **Teaching Materials**

1. Google slide presentation                      2. Student’s book                      3. Infographics

- **Assessment Evidence**

1. Writing task

- **Teaching Record**

\_\_\_\_\_ *Teacher’s signature*

**Lesson Plan****Subject:** Supplementary English**Semester:** Summer**Academic Year:** 2020**Week:** 4**Date:** April ,2021**Time:** 2 hours**Teacher:** A-riya Mitayo

- **Unit 1**                      **Topic:** Descriptive Paragraph Writing                      **Period:** 7

- **Learning strands, standards, and indicator**

**Strand 1:** Language for Communication**Standard F1.3:** Ability to present data, information, concepts and views about various matters through speaking and writing**Indicators M.3/1:** Students will be able to speak and write to describe themselves, experiences/ matters/ various issues of interest to society

- **Lesson Objective:** Students will be able to write the descriptive paragraph.
- **Thinking Skills:** Systematic thinking, analytical thinking, and creative thinking
- **Learning Activities**

<b>D.I.Y.</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teacher let the students share their opinions on what will they be in the future.</li> <li>• The teacher reviews the important parts of descriptive paragraph writing and paragraph organization.</li> <li>• The teacher reviews the future tense usage.</li> </ul>
<b>Action</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teacher talks about the future education.</li> <li>• The teacher asks students to brainstorm and note down their ideas.</li> <li>• The teacher lets students create their own infographic on the topic “Future Education” and use it as an outline.</li> </ul>
<b>Reflection</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teachers give comments and suggestions on students’ infographic of “Future Education”, and then the students improve their work.</li> </ul>
<b>Assessment</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teacher asks the students to share their infographic with friends and encourages them to give comments and suggestions on their friends’ work.</li> </ul>

- **Teaching Materials**

1. Google slide presentation                      2. Student’s book                      3. Infographics

- **Assessment Evidence**

1. Writing task

- **Teaching Record**

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*Teacher’s signature*



**Lesson Plan****Subject:** Supplementary English**Semester:** Summer**Academic Year:** 2020**Week:** 4**Date:** April ,2021**Time:** 2 hours**Teacher:** A-riya Mitayo

- **Unit 1**                      **Topic:** Descriptive Paragraph Writing                      **Period:** 8

- **Learning strands, standards, and indicator**

**Strand 1:** Language for Communication**Standard F1.3:** Ability to present data, information, concepts and views about various matters through speaking and writing**Indicators M.3/1:** Students will be able to speak and write to describe themselves, experiences/ matters/ various issues of interest to society

- **Lesson Objective:** Students will be able to write the descriptive paragraph.
- **Thinking Skills:** Systematic thinking, analytical thinking, and creative thinking
- **Learning Activities**

<b>D.I.Y.</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teacher let the students discuss about the important parts of descriptive paragraph writing.</li> <li>• The teacher reviews the paragraph organization.</li> <li>• The teacher reviews the future tense usage.</li> </ul>
<b>Action</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The teacher asks the students to write the descriptive paragraph on the topic “Future Education”.</li> </ul>
<b>Reflection</b> <b>20 mins</b>	<ul style="list-style-type: none"> <li>• The students write their own paragraph on the topic “Future Education” and use the infographic as an outline. Then submit it to the teachers via email.</li> <li>• The two English language teachers give feedback and comments.</li> </ul>
<b>Assessment</b> <b>5 mins</b>	<ul style="list-style-type: none"> <li>• The teachers correct the students’ works and students revise and improve their work before submitting to the teachers.</li> </ul>

- **Teaching Materials**

1. Google slide presentation                      2. Student’s book                      3. Infographics

- **Assessment Evidence**

1. Writing task

- **Teaching Record**

\_\_\_\_\_  
*Teacher’s signature*

## Appendix E

### IOC of Instruments

#### The Item Objective Congruence (IOC) Index of Paragraph Writing Test

Expert's name: \_\_\_\_\_

**Objective of the test:** To assess students' English descriptive paragraph writing skill.

**Instruction:** Please rate the following elements of the paragraph writing test according to the degree of the Item Objective Congruence (IOC) Index.

-1: incongruent

0: questionable or unclear

+1: congruent

Items	IOC Values			Comments
	-1	0	+1	
<b><i>Paragraph Writing Test</i></b>				
1. Write a paragraph on the topic “ <b>The Place You Shouldn’t Miss</b> ”.				
<b><i>Overall Tests</i></b>				
1. The paragraph writing test is appropriate and sufficient.				
2. The time allocated of 50 minutes to do the paragraph writing test is proper for the students.				

Signature: \_\_\_\_\_

( \_\_\_\_\_ )

Date: \_\_\_\_\_

### The Item Objective Congruence (IOC) Index of Questionnaire

**Expert's name:** \_\_\_\_\_

**Purpose of the questionnaire:** To obtain data on opinions towards the use of infographics to enhance English descriptive paragraph writing skill of Matthayomsuksa 3 students

**Instruction:** Please rate the following elements of the questionnaire according to the degree of the Item Objective Congruence (IOC) Index.

-1: incongruent

0: questionable or unclear

+1: congruent

#### Part 1: Personal Information

Items	IOC Values			Comments
	-1	0	+1	
1. Gender				
2. GPA				
3. Grade of the previous writing course				

#### Part 2: Students' Opinions towards the Use of Infographics

Items	IOC Values			Comments
	-1	0	+1	
1. Creating infographics allowed me to brainstorm and explore new ideas.				
2. The use of infographics helped me create clear scope of the ideas before writing a paragraph.				
3. The use of infographics helped me organize ideas better in my paragraph.				
4. The use of infographics motivated me to write more.				
5. The use of infographics helped me to write a descriptive paragraph which has cohesion.				
6. The use of infographics helped me to write a descriptive paragraph which has coherence.				
7. I preferred to use infographics rather than the outline given in the textbook.				
8. The use of infographics allowed me to generate ideas relevant to the topic I write.				

9. The use of infographics promoted the collaborative skill.				
10. I enjoyed the class when the teacher used infographics to teach in class.				

Signature: \_\_\_\_\_

( \_\_\_\_\_ )

Date: \_\_\_\_\_



### The Item Objective Congruence (IOC) Index of Writing Score Rubrics

**Expert's name:** \_\_\_\_\_

**Instruction:** Please rate the following elements of the writing score rubrics according to the degree of the Item Objective Congruence (IOC) Index.

-1: incongruent

0: questionable or unclear

+1: congruent

Items	IOC Values			Comments
	-1	0	+1	
1. The writing score rubrics is suitable for use to assess students' descriptive paragraph writing.				
2. The content rubric is suitable.				
3. The organization rubric is suitable.				
4. The vocabulary rubric is suitable.				
5. The language use rubric is suitable.				
6. The mechanics rubric is suitable.				

Others \_\_\_\_\_

Signature: \_\_\_\_\_

( \_\_\_\_\_ )

Date: \_\_\_\_\_

### The Item Objective Congruence (IOC) Index of Lesson Plans

**Expert's name:** \_\_\_\_\_

**Instruction:** Please rate the following elements of the lesson plans according to the degree of the Item Objective Congruence (IOC) Index.

-1: incongruent

0: questionable or unclear

+1: congruent

Items	IOC Values			Comments
	-1	0	+1	
1. The lesson plans is appropriate and sufficient.				
2. 50 minutes to teach for each lesson is proper for the students.				
3. The contents that taught and learnt is proper for the students.				
4. Teaching materials is suitable for the students.				
5. The teaching activities are appropriate for the students.				

Signature: \_\_\_\_\_

( \_\_\_\_\_ )

Date: \_\_\_\_\_



## Appendix F

### Examples of Students' Paragraph Writing Pre/Post Test

Dara Academy  
Time: 50 Minutes  
Teacher: A-riya Mitayo

Matthayom 3  
Total 20 Points  
Paragraph Writing Test

Name Norada Ruensorn Level 3/4 No. 9

**Objective:** To assess students' English descriptive paragraph writing skill.

**Directions:** Write a paragraph on the topic "The Place You Shouldn't Miss".

Your paragraph should comprise of at least 10 sentences in different types of sentences.

There are many amazing places that I had been. But "the place you shouldn't miss" is my grandfather's home. My grandfather's home is Phayao. There are lots of trees. The weather is very fresh. He has two dogs. Every dinner time we always share our story that happen in our life. I like to listen the story in his past. In the morning, we go to the market. It's a local market. There are many foods. We can cook a local food. It's very delicious. My routine is very slow. I sharing my stress with my grandfather. I like to live without the pollution. and rush hour. It's very important place for me. If we have a chance you should come with me. You must feel like you're very close with the nature.

Dara Academy  
Time: 50 Minutes  
Teacher: A-riya Mitayo

Matthayomsuksa 3  
Total 20 Points  
Paragraph Writing Test

Name Narada Ruensorn Level 3/4 No. 9

**Objective:** To assess students' English descriptive paragraph writing skill.

**Directions:** Write a paragraph on the topic "The Place You Should Not Miss".

Your paragraph should comprise at least 10 sentences in different types of sentences.

The Place You Should Not Miss

My favorite place has always been my Grandma's house especially my Grandma's big amazing garden.

I remember spending many warm summer days there as a child, running around as fast as a airplane. I can remember hearing all the colorful birds tweet and sing their beautiful songs. Grandma has so many pretty flowers in her garden that smiled all day, she had flowers that smelled as nice as perfume and fruit that tasted as sweet as candy.

My grandma would sometimes sit, slowly swinging in her silky soft chair. In the evening when the sun would say goodbye, the sky would turn pink and the clouds would look like cotton candy. I loved spending time at grandma's house.

## Appendix G

### Examples of Formative Tests



Dara Academy

Name Narada Ruensorn Level 3/4 No. 9

Kobe Bryant

My favorite celebrity is Kobe Bryant. He was the best basketball player to ever be brought into the NBA. Kobe was an all-star player who shined like a diamond his whole career.

Kobe was an amazing basketball player. He has powerful scoring ability. His most famous game was his last, where he scored an incredible 81 points in one game for the record of the most points scored in an NBA game. His final point was a SLAM DUNK where he jumped as high as a mountain to score on the buzzer. When he did the stadium erupted with screams and the court cheered. Kobe Bryant was a legend.

Sadly, Kobe passed away in 2020 - when the news came out it felt like the world became as dark as night and as cold as ice.

**Dara Academy**

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Name Narada Ruensorn Level 3/4 No. 9

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My Favorite Animal

My favorite animal is my pet dog Duke. Duke is an adorable dark Dobermann dog with a dry nose and droopy ears. Duke's fur is as soft as silk and he's got a smile that says 'I love you.'

I love taking Duke on long walks at the beach, he loves the cold water and the sounds of the angry waves when they CRASH. Duke loves food, especially bones - we give him bones as a tasty treat, but they make his breath smell like trash. Duke is kind and caring, however, if he thinks I am in danger he will quickly come and protect me like a superhero. He will bark and woof loudly to scare away any bad people.

That's why Duke is so amazing to me - because I know that my loving friend will always be there to protect me.

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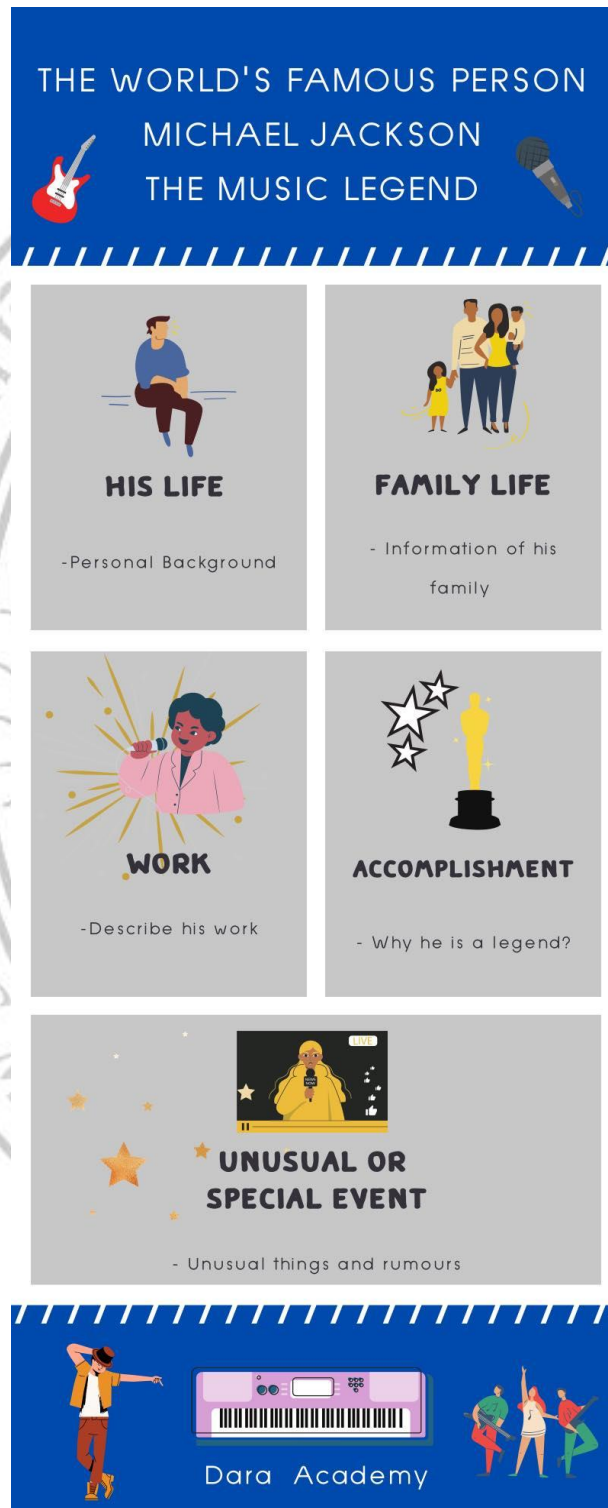
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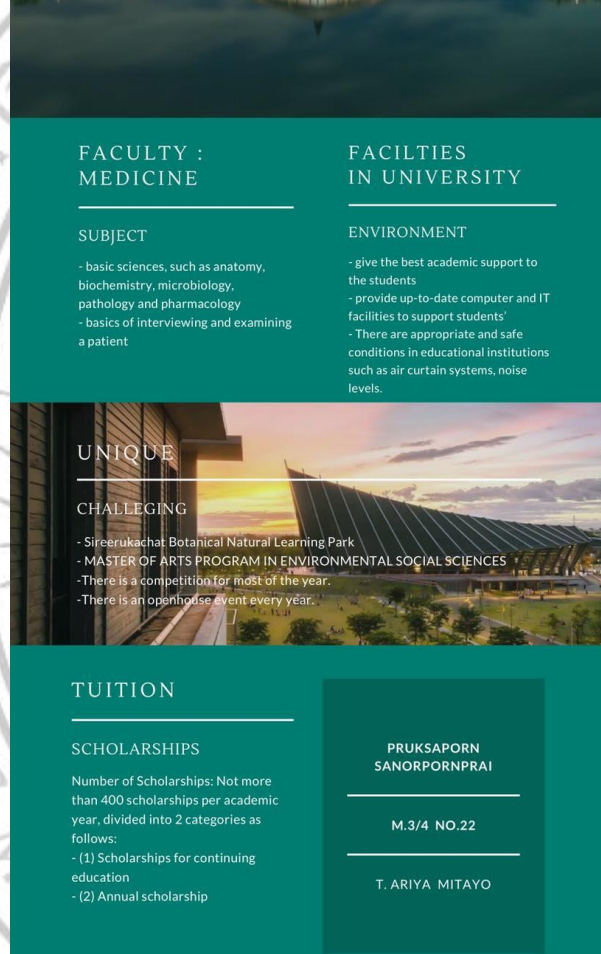
## Appendix H

### Examples of Students Infographics










 FUTURE EDUCATION



# MAHIDOL UNIVERSITY

LET'S GET TO KNOW THE UNIVERSITY

## FACULTY : MEDICINE

### SUBJECT

- basic sciences, such as anatomy, biochemistry, microbiology, pathology and pharmacology
- basics of interviewing and examining a patient

## FACILITIES IN UNIVERSITY

### ENVIRONMENT

- give the best academic support to the students
- provide up-to-date computer and IT facilities to support students'
- There are appropriate and safe conditions in educational institutions such as air curtain systems, noise levels.

## UNIQUE CHALLENGING

- Sireerukachai Botanical Natural Learning Park
- MASTER OF ARTS PROGRAM IN ENVIRONMENTAL SOCIAL SCIENCES
- There is a competition for most of the year.
- There is an openhouse event every year.

## TUITION

### SCHOLARSHIPS

Number of Scholarships: Not more than 400 scholarships per academic year, divided into 2 categories as follows:

- (1) Scholarships for continuing education
- (2) Annual scholarship

PRUKSAPORN SANORPORNRAI

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M.3/4 NO.22

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T. ARIYA MITAYO



## Appendix I

### Pictures of Teaching and Learning Activities

